



**Regional Programme for the Sustainable Management
of the Coastal Zones of the Indian Ocean Countries**

Sustainable Development of Coastal Tourism in the South
West Indian Ocean II:

**STRATEGIC ENVIRONMENTAL ASSESSMENTS AT
NATIONAL AND REGIONAL LEVELS**

**Final Report
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EXECUTIVE SUMMARY

The mission that concerns this report was made in the context of the ReCoMaP programme of the Indian Ocean Commission, financed by the EC. The aim of ReCoMaP is to enhance the sustainable management and conservation of natural coastal and marine resources in order to contribute to poverty alleviation among coastal populations. As part of the programme it was agreed that ecotourism development could be one of the areas that could contribute to achieve the stated objectives. It is in this context that two parallel missions took place. A Tourism Expert evaluated the potentials and feasibilities of coastal ecotourism, whereas the Environmental Expert focused on assessing the tourism-environment linkages, and assessing the environmental regulatory framework in relation to Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA).

The work was based on information gathered through: literature review, semi-structured interviews with key stakeholders and site visits. The interviews and site visits were planned and organised by the respective National Focal Points (NFPs) and ReCoMaP's ICZM officers, with input from the consultants. The following countries were assessed: Comoros, Tanzania (mainland), Zanzibar, Kenya, Seychelles, Madagascar and Mauritius.

The following aspects were assessed, based on a guiding interview protocol (see Annex 2):

1. Appraising the environmental impacts of the coastal tourism sector, addressing both the impacts of tourism on the environment as well as the impact of environmental damage on future tourism development.
2. Appraising the potential environmental implications of tourism policies and plans.
3. Appraisal of the SEA and EIA systems.

The results are synthesised in country chapters, and were discussed with the Tourism Expert (in charge of preparing the "Regional Strategic Action Plan for Coastal Ecotourism Development"). A second output of the mission was the preparation of standard ToR for SEAs for the tourism sector, with country-specific annexes.

Although they share a common geographic area, the countries studied are very diverse in political, social, cultural, economic and environmental terms. Some countries have very limited coastal tourism (Comoros and mainland Tanzania), others are well developed and are mainly targeting mass tourism (Kenya, Zanzibar and Madagascar), whilst others have a well developed sector and mainly target up-market clients (Seychelles, Mauritius). Socio-economic development also differs widely; according to the UN's Human Development Report 2006, GDPs per capita vary from 241 USD (in Madagascar) to 8411 USD (in Seychelles) and HDIs vary from rankings 162 out of 177 (in Tanzania) to 47 out of 177 (in Seychelles)¹.

Although all countries face coastal environmental challenges, the problems are mainly not associated to the tourism industry. Kenya and Mauritius are probably the countries where tourism activity is currently contributing more to environmental degradation, whereas all countries face environmental situations that could act as constraints for future tourism development. The main environmental impacts of tourism are related to solid waste management, wastewater treatment, acceleration of beach erosion, over-fishing, coral reef damage and shell collection. On the other hand the environmental problems that may act as constraints to tourism development are related to sand and coral mining, coastal erosion, beach accretion, mangrove cutting, over-fishing, destructive fishing, and in-land deforestation/soil erosion.

Tables 1 and 2 summarise the key environmental impacts of tourism and the environmental concerns that may act as constraints for tourism development, respectively.

All countries have an EIA framework in place. However its degree of application is variable and its consistency with international good practice is also very different amongst countries. Table 3 summarises the components of the different EIA systems in a comparative manner. In terms of screening some countries implement a catch-all system (e.g. Tanzania, Zanzibar, Madagascar, Mauritius) sometimes risking a saturation of the system with numerous applications of projects with no significant potential environmental impacts, whilst other countries do not clearly require EIAs for any tourism sector project (Kenya, although in practice they do), and often practice is not according to regulations. Most countries have a scoping stage, although in most cases it does not conform to international good practice. For example in the case of Kenya very detailed analyses are required as part of scoping, which would normally be undertaken in the EIA study proper; in most cases the scoping phase is not designed to provide the information that international good practice would require, e.g. identification of key stakeholders, of alternatives to be analysed, of tools and methodologies to be employed, of physical boundaries to be studied etc. The scope of the EIA study is rather standard, although in most cases it fails to adequately address key aspects such as analysis of alternatives and socio-economic impacts. The

¹ GDP per capita (USD) for the studies countries are: 241 in Madagascar, 288 in Tanzania, 481 in Kenya, 623 in Comoros, 4889 in Mauritius and 8411 in Seychelles. HDI and their respective rankings (position amongst 177 countries with data) are: 0,430 (position 162) in Tanzania, 0,491 (position 152) in Kenya, 0,509 (position 143) in Madagascar, 0,566 (position 132 in Comoros), 0,800 (position 63) in Mauritius and 0,842 (position 47) in Seychelles.

review processes generally include consultations with key stakeholders as well as public consultations; however public participation is generally limited to the EIA review phase and often mechanisms in place are not adequate to ensure a meaningful engagement of key stakeholders (e.g. sometimes in contexts of high illiteracy, of lack of organised civil society, of lack of public engagement culture, of badly understood traditional power and decision-making structures). A generally weak point in the EIA systems is the inadequate capacities and resources to undertake effective monitoring of Environmental Management Plan implementation.

Countries with longer experience in the application of EIA (i.e. Zanzibar, Seychelles, Madagascar, Mauritius) would benefit from a stock-taking exercise, in order to assess if EIA is being conducive to better decision-making and better project designs (in environmental terms), as well as identify the success factors and shortcomings.

Most countries do not have an SEA system in place; some have included certain policies, plans and programmes as requiring EIA (e.g. Madagascar); some countries have carried out pilot SEAs supported by donors (e.g. Tanzania, Mauritius) and only Tanzania has started to develop SEA regulations, which are yet to be completed. Table 4 summarises the state of SEA in the different countries. In all countries it is recommendable to first build awareness raising and capacities on SEA before engaging in using the tool, addressing all relevant authorities (mainly environment, tourism and land use planning) at the different levels (national, regional, local) as well as other key stakeholders (e.g. environmental NGOs and consultants likely to engage in the preparation of SEAs. However some countries would need more immediate attention on SEA training/awareness raising (e.g. Mauritius, Tanzania, Seychelles, Zanzibar), others would not be priority as donors are engaged in developing the corresponding SEA systems (Kenya and Madagascar), whereas Comoros would benefit from an SEA in the tourism sector but would need more immediate attention on ensuring effectiveness of its EIA system.

In some cases it is recommended to create a regulatory SEA framework (e.g. Kenya, Mauritius, Madagascar), as the institutional framework for planning and environmental management is more mature, various sectoral planning processes could greatly benefit from SEA and there is already good working experience with environmental assessment tools at the project level, such as EIA. Other countries could best start doing pilot SEAs for the tourism sector, as the development of a full fledged regulatory system may not be a priority (e.g. Seychelles) or the institutional and regulatory systems may first need to be enhanced (e.g. Tanzania, Zanzibar, Comoros), and valuable lessons could be learned from pilot SEAs carried out with donor support and making use of international good practices.

In most cases the lack of adequate land use planning may be a constraint for SEA to be effective, especially with regards to recommendations on preferable land uses based on environmental criteria, as permitting processes may allow activities to take place which clash with SEA recommendations. In absence of transparent and effective land use planning, SEA outputs will not be able to be used effectively. The use of SEA, be it the development of a full fledged framework for the tool or its *ad hoc* use, needs to have clear entry points into sectoral planning and land use planning, and for that to occur the SEA process must be "owned" by the sectoral and land use planning authorities. Working on ensuring these links will be essential for any advances in SEA.

Table 1. Environmental impacts of the tourism sector

Environmental impact \ Country	Accelerated coastal erosion due to structures on beach	Pressure on solid waste management	Wastewater discharges affecting coastal and marine environment	Cutting of mangrove	Coral reef trampling	Anchor damage	Shell collection	Pressure on fisheries	Dolphin harassment	Increases of prices making certain products unaffordable for locals	Conflicts due to take over and restricted access of beach area	Conflicts with cultural values	Child prostitution	Other social impacts (e.g. school drop-out)
Comoros														
Tanzania														
Zanzibar														
Kenya														
Seychelles														
Madagascar														
Mauritius														
Rodrigues														

Key:  = insignificant impacts;  = low level impacts;  = medium level impacts;  = significant impacts

Table 2. Environmental constraints to tourism development

Environmental constraint \ Country	Beach erosion	Beach accretion	Freshwater scarcity	Inadequate solid waste management	Turtle poaching	Siltation (e.g. linked to deforestation, cutting of mangroves) and/or runoff of agrochemical products and nutrients	Destructive fishing – dynamite fishing	Destructive fishing – beach seine	Destructive fishing – poison	Unhealthy or dead coral (normally due to combination of factors)	Sand mining (beach and river)	Coral mining (for lime production)	Impacts of incompatible economic activities (e.g. mining)	Contamination of bathing waters
Comoros	Significant	Insignificant	Medium	Significant	Medium	Low	Medium	Medium	Medium	Low	Significant	Insignificant	Insignificant	Medium
Tanzania	Insignificant	Insignificant	Insignificant	Medium	Insignificant	Low	Significant	Medium	Medium	Medium	Insignificant	Low	Low	Medium
Zanzibar	Low	Insignificant	Insignificant	Medium	Insignificant	Insignificant	Low	Medium	Low	Medium	Low	Insignificant	Insignificant	Medium
Kenya	Significant	Medium	Insignificant	Medium	Insignificant	Medium	Insignificant	Medium	Insignificant	Medium	Insignificant	Insignificant	Insignificant	Medium
Seychelles	Medium	Insignificant	Low	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	Medium	Insignificant	Insignificant	Insignificant	Insignificant
Madagascar	Medium	Insignificant	Insignificant	Medium	Insignificant	Significant	Insignificant	Medium	Insignificant	Medium	Insignificant	Insignificant	Significant	Medium
Mauritius	Significant	Insignificant	Low	Insignificant	Insignificant	Low	Insignificant	Low	Insignificant	Medium	Insignificant	Insignificant	Insignificant	Low
Rodrigues	Low	Insignificant	Significant	Low	Insignificant	Low	Insignificant	Low	Insignificant	Low	Insignificant	Insignificant	Insignificant	Insignificant

Key:  = insignificant impacts;  = low level impacts;  = medium level impacts;  = significant impacts

Table 3. Summary of EIA requirements

Stage of EIA process Country	Screening	Scoping	Contents of EIA study	Analysis of Alternatives	Socio-economic impacts	Review	Public participation	Environmental Management Plan	Decision-making
Comoros	Use of positive list, including hotels >40 beds No coverage of other projects	No scoping required	Only general requirements	Not addressed	Not addressed, except for cultural heritage and impacts on human health	Use of consultative committee Public review	Public enquiry and public consultation, but not clear when each used	Not required	Only rejection to be justified No requirement to take account of input of the public
Tanzania	Use of positive list, covering any hotel and other tourism activities (too broad) Catch-all provision	Review of ToR by NEMC Largely conforming to good practice Not necessarily participatory	Generally conforming to good practice	Required No requirement for zero-alternative	To be addressed	Public review Technical Advisory Committee may be used	Stakeholder consultations, including public meetings, during EIA preparation Public review Option to public hearing	Required, including associated monitoring mechanisms	Take account of results of consultations Justified decision Binding
Zanzibar	Use of positive list, including hotels >100 beds Catch-all provision	ToR prepared by competent authority Authority decides scope Not necessarily participatory	Generally conforming to good practice, but weak on socio-economic aspects and on role of environmental baseline	Required No requirement for zero-alternative	Not addressed	Public review To take account results of public consultations	During public review; affected stakeholders invited to comment Consultations encouraged during EIA preparation	Not required	Take account of consultations in review No obligation to justify decision Final decision lays on Minister
Kenya	Use of positive list and also based on Project Report Tourism projects do not require EIA according to regulations, but do in practice	Not required under regulations, but referred to in EIA Guidelines Too detailed analysis required for scoping purposes	Generally conforming to good practice	Required	Analysis of economic and social impacts required	Consultations with relevant authorities Public consultations	Public consultations during review Option of public hearing if deemed necessary	Required	To address comments by sectoral authorities and other parties, and results of public hearing To be reasoned

Stage of EIA process Country	Screening	Scoping	Contents of EIA study	Analysis of Alternatives	Socio-economic Impacts	Review	Public participation	Environmental Management Plan	Decision-making
Seychelles	Use of positive list, including projects in sensitive areas Includes hotels and many tourism undertakings 2 types of EIA: Class I or Class II	Not reflected in regulations, but scoping in form of targeted consultations of key stakeholders Information gathered could be enhanced to better define EIA scope	Generally conforming to good practice, but weak on socio-economic impacts and analysis of alternatives	Required but treated weakly in reports	Not required	By Authority with help of Env'tl Appraisal Committee Public review Public meetings sometimes but not defined in regulations	In scoping through targeted consultations Public review of EIA report Public meetings start to be organised, but not in regulations	Required	Not binding on sectoral authority No requirement to be justified
Madagascar	Use of positive list, plus projects in sensitive areas, includes hotels > 120 rooms EIA or Environmental Agreement Programme Catch-all examination	In principle through public meetings with stakeholders, but not specified in regulations Not specific what must be outputs of scoping	Weak on role of environmental baseline, analysis of alternatives and socio-economic impacts	Not required	Not required	Public review through different possible modalities By Technical Evaluation Committee To take into account results of public input	Supposedly consultation of stakeholders in scoping During public review may use modalities of: onsite consultation, public consultation or public enquiry	Required	Not requirement to be justified Binding on sectoral authority No requirement to take into account results of public input
Mauritius and Rodrigues	Use of positive list, including hotels close to beach 2 modalities: Preliminary Environmental Review or EIA Catch-all provision	Director may impose ToR based on outline of project Generally no scoping	Generally conforming to good practice but weak in some respects, e.g. environmental baseline study	"Alternative manner or process" to be assessed	Required	Public review, except public undertakings urgent for national economic dev. 3 phases: by Director, EIA Committee and Minister Technical Committee may be set up	Only during public review, except for public undertakings deemed urgent for national economic development Guidelines recommend consultations during EIA report preparation	Required	Key decision made by EIA Committee, based on recommendation from Director Minister gives final "official" decision Not required to take into account public input nor be justified

RESUME EXECUTIF

La mission couverte par ce rapport a été effectuée dans le cadre du programme ProGeCo de la Commission de l'Océan Indien, financé par la CE. L'objectif du ProGeCo est d'encourager la gestion et la conservation durable des ressources naturelles marines et côtières afin de contribuer à réduire la pauvreté parmi les populations côtières. Dans ce cadre, le développement de l'écotourisme pourrait être un des domaines contribuant à atteindre les objectifs prévus. C'est dans ce contexte que se sont déroulées deux missions parallèles. Un Expert en Tourisme a évalué le potentiel et la faisabilité de l'écotourisme côtier, tandis qu'un Expert en Environnement s'est consacré à évaluer les liens entre tourisme et environnement ainsi que le cadre législatif environnemental en rapport aux Etudes d'Impact sur l'Environnement (EIE) et l'Evaluation Environnementale Stratégique (EES).

Le travail a été fondé sur une revue de la littérature disponible, des interviews semi-structurées avec les principales parties prenantes et des visites sur site. Les interviews et visites sur site ont été programmées et organisées par les Points Focaux Nationaux (PFN) respectifs et les agents GIZC du ProGeCo en collaboration avec les consultants. Les pays suivants ont été étudiés : Comores, Tanzanie (continent), Zanzibar, Kenya, Seychelles, Madagascar et Maurice.

Les aspects suivants ont été analysés sur base d'un canevas d'interview (voir Annexe 2) :

4. Estimer les impacts environnementaux du secteur du tourisme côtier, en abordant tant les impacts du tourisme sur l'environnement que l'impact des dégâts environnementaux sur le futur développement du tourisme.
5. Analyser les conséquences environnementales possibles des politiques et programmes touristiques.
6. Evaluer les systèmes EIE et EES.

Les résultats sont synthétisés par pays et ont été discutés avec l'expert en Tourisme (responsable de la préparation du "Plan d'Action Régional Stratégique pour le Développement du Tourisme Côtier"). La préparation de TdRs standards d'EES du secteur du tourisme avec des annexes spécifiques par pays constitue un deuxième produit de cette mission.

Bien qu'ils partagent une zone géographique commune, les pays étudiés sont très variés en termes politiques, sociaux, culturels et environnementaux. Certains pays ont un tourisme côtier très limité (les Comores et la Tanzanie continentale), d'autres sont bien développés et visent principalement le tourisme de masse (Kenya, Zanzibar et Madagascar) tandis que d'autres encore ont un secteur touristique bien développé et cherchent à attirer une clientèle aisée (Seychelles, Maurice). Le développement socio-économique est aussi très différent ; d'après le Rapport 2006 sur le Développement Humain des Nations Unies, le PIB par habitant varie de 241 USD (à Madagascar) à 8.411 USD (aux Seychelles) et l'IDH varie de 162 sur 177 (en Tanzanie) à 47 sur 177 (aux Seychelles)².

Bien que tous les pays soient confrontés à des défis environnementaux côtiers, les problèmes ne sont essentiellement pas associés à l'industrie du tourisme. Le Kenya et l'île Maurice sont probablement les pays où l'activité touristique contribue le plus pour l'instant à la dégradation de l'environnement, tandis que tous les pays sont confrontés à des situations environnementales qui pourraient représenter des contraintes au développement futur du tourisme. Les principaux impacts du tourisme sur l'environnement sont liés à la gestion des déchets solides, le traitement des eaux usées, l'accélération de l'érosion des plages, la surpêche, la détérioration des récifs coralliens et le ramassage de coquillages. D'autre part, les problèmes environnementaux qui peuvent agir comme contrainte sur le développement touristique sont liés à l'extraction du sable et du corail, l'érosion côtière, l'accumulation de sable, l'abattage des mangroves, la surpêche, la pêche destructive, et la déforestation/l'érosion du sol à l'intérieur des terres.

Les tableaux 1 et 2 résument respectivement les principaux impacts environnementaux du tourisme et les problèmes environnementaux qui pourraient agir comme une entrave au développement touristique.

Tous ces pays ont un cadre d'EIE en place. Cependant le degré d'application varie et sa cohérence avec les bonnes pratiques internationales est également différente selon les pays. Le tableau 3 compare les composants des différents systèmes d'EIE. En termes de criblage certains pays appliquent un système exhaustif (p.ex. en Tanzanie, à Zanzibar, Madagascar, Maurice) ce qui entraîne parfois une saturation du système avec de nombreux projets présentés sans impacts environnementaux majeurs, tandis que d'autres pays ne requièrent pas clairement d'EIE pour les projets dans le secteur du tourisme (le Kenya, bien que dans la pratique ils le fassent), et souvent la pratique ne suit pas les réglementations.

La plupart des pays appliquent l'étude de portée, bien que souvent elle ne soit pas conforme aux bonnes pratiques internationales. Par exemple dans le cas du Kenya, des analyses très détaillées exigées lors de l'étude de portée

² Le PIB par habitant (en USD) des pays étudiés est : 241 à Madagascar, 288 en Tanzanie, 481 au Kenya, 623 aux Comores, 4.889 à Maurice et 8.411 aux Seychelles. L'IDH et leur classification respective (position parmi les données de 177 pays) sont : 0,430 (162^{ème} position) en Tanzanie, 0,491 (152^{ème} position) au Kenya, 0,509 (143^{ème} position) à Madagascar, 0,566 (132^{ème} position) aux Comores, 0,800 (63^{ème} position) à l'île Maurice et 0,842 (47^{ème} position) aux Seychelles.

seraient normalement effectuées lors de l'étude d'EIE à proprement parler. Dans la plupart des cas, la phase d'étude sur la portée n'est pas conçue pour fournir les informations que les bonnes pratiques internationales exigeraient, telles l'identification des principaux acteurs, des alternatives à analyser, des outils et méthodologies à utiliser, des limites physiques à étudier, etc. L'envergure de l'étude d'EIE est plutôt générale bien que dans la plupart des cas elle omette de se pencher sur les aspects clés tels l'analyse d'alternatives et l'impact socio-économique. Les processus de révision prévoient généralement des consultations avec les principaux acteurs ainsi que des consultations publiques; cependant la participation publique se limite généralement à la phase de révision de l'EIE et souvent les mécanismes mis en place ne sont pas adéquats pour assurer un engagement significatif des principaux intervenants (p.ex. parfois dans un contexte de fort illettrisme, de manque d'organisation de la société civile, de manque de culture civique, de structures de décision et pouvoir traditionnel mal comprises). Un point généralement faible dans les systèmes d'EIE sont les capacités et ressources inadéquates pour entreprendre un suivi effectif de l'exécution du Plan de Gestion Environnemental.

Certains pays avec une plus longue expérience dans l'application d'EIE (c.-à-d. Zanzibar, Seychelles, Madagascar, Maurice) bénéficieraient d'un exercice d'inventaire, afin d'évaluer si l'EIE conduit à améliorer la prise de décision et l'élaboration de projets (en termes environnementaux), ainsi qu'à identifier les facteurs de succès et les défauts.

La plupart des pays n'ont pas de systèmes EES en place; quelques uns ont inclus certaines politiques et programmes exigeant une EIE (p.ex. Madagascar); d'autres pays ont effectué des EES pilotes avec l'appui de bailleurs (p.ex. en Tanzanie, à Maurice) et seule la Tanzanie a commencé à élaborer des réglementations EES qui doivent encore être complétées. Le Tableau 4 résume l'état des EES dans les différents pays. Il est conseillé dans tous les pays d'avoir recours à la sensibilisation et de renforcer les capacités en EES avant de s'engager à utiliser cet outil, en s'adressant à toutes les autorités concernées (essentiellement l'environnement, le tourisme et l'aménagement du territoire) à différents niveaux (national, régional, local) ainsi qu'à d'autres intervenant clés (p.ex. les consultants et ONG environnementales) susceptibles de s'engager dans la préparation d'EES. Cependant certains pays devraient se consacrer de façon plus urgente à la sensibilisation/formation en EES (p.ex. Maurice, Tanzanie, Seychelles, Zanzibar), d'autres ne seraient pas prioritaires car des bailleurs se sont engagés à développer les systèmes d'EES correspondants (Kenya et Madagascar) tandis que les Comores bénéficieraient d'une EES du secteur du tourisme mais auraient besoin de façon plus immédiate d'attention pour assurer l'effectivité de leur système d'EIE.

Dans certains cas, il est recommandé de créer un cadre réglementaire d'EES (p.ex. Kenya, Maurice, Madagascar) étant donné que le cadre institutionnel pour la planification et la gestion environnementale est plus mûr, que différents processus de planification sectorielle pourraient bien bénéficier des EES et qu'il y a déjà une bonne expérience des outils d'évaluation environnementale tels les EIE au niveau projet. D'autres pays devraient mieux commencer des EES pilotes du secteur du tourisme, le développement d'un système réglementaire à part entière n'étant pas une priorité (p.ex. aux Seychelles) ou les systèmes réglementaires et institutionnels devant d'abord être améliorés (p.ex. Tanzanie, Zanzibar, Comores), et des leçons valables pourraient être tirées d'EES pilotes effectuées avec l'appui de bailleurs et en utilisant les bonnes pratiques internationales.

Dans la plupart des cas, un aménagement du territoire peu adéquat peut être une contrainte pour une EES efficace, spécialement par rapport aux recommandations sur une meilleure utilisation des terres basées sur des critères environnementaux, étant donné que les procédures des permis pourraient permettre certaines activités opposées aux recommandations de l'EES. En l'absence d'un aménagement du territoire transparent et efficace, les résultats des EES ne pourront pas être utilisés effectivement. L'utilisation d'EES que ce soit le développement d'un cadre à part entière pour l'outil ou son utilisation *ad hoc*, exige que l'on ait des points d'ancrage clairs dans la planification sectorielle et l'aménagement du territoire, et pour que ceci puisse se produire le processus d'EES doit être "approprié" par les autorités en charge de l'aménagement sectoriel et du territoire. Œuvrer pour garantir ces liens sera essentiel pour assurer des progrès dans l'EES.

Tableau 1. Impacts Environnementaux du secteur tourisme

Impact Environnemental Pays														
	Erosion côtière accélérée due aux structures sur la plage	Pression sur la gestion des déchets solides	Evacuation des eaux usées affectant l'environnement côtier et marin	Abattage des mangroves	Piétinement des récifs coralliens	Dégâts causés par les ancrages	Ramassage de coquillages	Pression sur la pêche	Harcèlement des dauphins	Augmentation des prix rendant certains produits inabordables pour les populations locales	Conflits engendrés par l'annexion et l'accès limité à des zones de plage	Conflits avec des valeurs culturelles	Prostitution infantile	Autres impacts sociaux (p. ex. absentéisme scolaire)
Comores														
Tanzanie														
Zanzibar														
Kenya														
Seychelles														
Madagascar														
Maurice														
Rodrigues														

Key: = impacts insignifiants; = faibles impacts; = impacts moyens; = impacts importants

Table 2. Contraintes environnementales au développement du tourisme

Contraintes environnementales Pays	Erosion de la plage	Accumulation de sable	Manque d'eau douce	Gestion des déchets solides inadéquate	Braconnage des tortues	Envasement (p.ex. lié à la déforestation et à l'abattage des mangroves) et /ou le ruissellement de produits agrochimiques et d'éléments nutritifs	Pêche destructive – pêche à la dynamite	Pêche destructive – senne de plage	Pêche destructive – poison	Coraux malades ou morts (normalement dû une combinaison de facteurs)	Extraction du sable (plages et rivières)	Extraction des coraux (pour la production de chaux)	Impacts d'activités économiques incompatibles (p.ex. extraction)	Contamination des eaux de baignade
Comores														
Tanzanie														
Zanzibar														
Kenya														
Seychelles														
Madagascar														
Maurice														
Rodrigues														

Key:  = impacts insignifiants;  = faibles impacts;  = impacts moyens;  = impacts importants

Table 3. Résumé des exigences des EIE

Stade du processus d'EIE Pays	Criblage	Etude de Portée	Contenu de l'EIE	Analyse d'Alternatives	Impacts Socio-économiques	Révision	Participation publique	Plan de gestion Environnemental	Prise de Décision
Comores	Utilisation d'une liste positive, comprenant les hôtels >40 lits Ne couvre pas d'autres projets	Pas d'étude de portée exigée	Exigences générales seulement	Pas abordé	Pas abordés, si ce n'est pour le patrimoine culturel et les impacts sur la santé humaine	Utilisation d'un comité consultatif Révision publique	Révision publique et consultation publique mais pas clair quand l'une et l'autre sont utilisées	Non requis	Seul le rejet doit être justifié Pas exigé de tenir compte de la contribution du public
Tanzanie	Utilisation d'une liste positive, couvrant tout hôtel et d'autres activités touristiques (trop vaste) Disposition exhaustive	Révision des TdRs par le NEMC En grande partie conforme aux bonnes pratiques Pas nécessairement participatif	Généralement conforme aux bonnes pratiques	Requis Non requis en cas d'alternative zéro	A étudier	Révision publique Comité Consultatif Technique peut être utilisé	Consultations des parties prenantes, y compris réunions publiques, pendant la préparation de l'EIE Révision publique Possibilité d'enquête publique	Requis, y compris les mécanismes d'évaluation associés	Tenir compte des résultats des consultations Décision justifiée Contraignante
Zanzibar	Utilisation d'une liste positive y comprenant les hôtels >100 lits Disposition exhaustive	TdR préparés par l'autorité compétente L'autorité décide de la portée Pas nécessairement participatif	Généralement conforme aux bonnes pratiques, mais faible quant aux aspects socio-économiques et au rôle de la situation de référence environnementale	Requis Non requis en cas d'alternative zéro	Non abordé	Révision publique Tenir compte des résultats des consultations publiques	Pendant l'examen public, les intervenants affectés sont invités à s'exprimer Consultations encouragées pendant la préparation de l'EIE	Non requis	Tenir compte des consultations dans la révision Pas d'obligation de justifier la décision La décision finale appartient au Ministre
Kenya	Utilisation d'une liste positive et basé également sur le Rapport du Projet Les projets touristiques ne requièrent pas une EIE selon la réglementation mais s'y soumettent dans la pratique	N'est pas requise dans la réglementation, mais reprise dans les directives de l'EIE Analyse requise trop détaillée pour l'étude de portée	Généralement conforme aux bonnes pratiques	Requis	Analyse des impacts sociaux et économiques requise	Consultations avec les autorités concernées Consultations publiques	Consultations publiques pendant la révision Option de l'enquête publique si jugée nécessaire	Requis	Commentaires des autorités sectorielles et autres parties, et résultats des audiences publiques à traiter Doit être expliquée

Stade du processus d'EIE Pays	Criblage	Etude de Portée	Contenu de l'EIE	Analyse d'Alternatives	Impacts Socio-économiques	Révision	Participation publique	Plan de gestion Environnemental	Prise de Décision
Seychelles	Utilisation d'une liste positive comprenant les projets dans des zones sensibles Concerner les hôtels et de nombreuses entreprises touristiques 2 types d'EIE: Classe I ou Classe II	N'apparaît pas dans la réglementation, mais étude de portée sous forme de consultations ciblées des principaux intervenants Information rassemblée pourrait être valorisée davantage pour mieux définir la portée de l'EIE	En général conforme aux bonnes pratiques, mais faible quant aux impacts socio-économiques et à l'analyse d'alternatives	Requise mais pas suffisamment abordée dans les rapports	Non requis	Par les autorités avec l'aide du Comité d'Evaluation Environnementale Révision publique Réunions publiques parfois mais pas définies dans les normes	Dans la portée via des consultations ciblées Révision publique du rapport d'EIE Des réunions publiques commencent à être organisées, mais pas dans la réglementation	Requis	N'a pas de force contraignante pour l'autorité sectorielle Pas d'exigence de justification
Madagascar	Utilisation d'une liste positive, ainsi que des projets dans des zones sensibles, comprenant hôtels > 120 chambres EIE ou Programme d'accord Environnemental Analyse exhaustive	En principe via les réunions publiques avec les intervenants, mais non précisé dans les réglementations Les résultats de l'étude de portée ne sont pas spécifiés	Faible sur le rôle de la situation de référence environnementale, l'analyse des alternatives et les impacts socio-économiques	Non requise	Non requis	Révision publique via différentes modalités possibles Par un Comité d'Evaluation Technique Tenir compte des résultats de la contribution du public	Consultation des intervenants sensée se faire lors de l'étude de portée Pendant la révision publique peut utiliser les modalités de : consultation sur place, consultation publique ou enquête publique.	Requis	Pas d'exigence de justification Contraignante pour l'autorité sectorielle Pas d'exigence de tenir compte des résultats de la contribution du public
Maurice et Rodrigues	Utilisation d'une liste positive, comprenant hôtels proches de la plage 2 modalités: Revue Environnementale Préliminaire ou EIE Disposition exhaustive	Le Directeur peut imposer les TdR sur base des grandes lignes du projet. Généralement pas d'étude de portée.	Généralement conforme aux bonnes pratiques mais faible à certains points de vue, p.ex. étude de la situation de référence environnementale.	« Procédure ou manière alternative » à envisager	Requis	Révision publique sauf entreprises publiques importantes pour le développement économique national. 3 phases: par le Directeur, Comité EIE et Ministre Comité Technique peut être établi.	Seulement pendant la révision publique, sauf pour les entreprises publiques importantes pour le développement économique national Les directives recommandent des consultations pendant la préparation du rapport d'EIE	Requis	Décisions clés prises par Comité d'EIE sur base des recommandations du Directeur Ministre communique la décision finale « officielle » Il n'est pas requis de tenir compte de l'avis du public ni de justifier

PART I

Analysis of Environment-Tourism Linkages, EIA and SEA Frameworks, and Recommendations for Actions

COMOROS

1. GENERAL CONTEXT

The Union of the Comoros is an archipelago composed of 3 autonomous islands: Grand Comore (Ngazidja), Mohéli (Mwali) and Anjouan. The fourth island of the archipelago is Mayotte, which is under French administration. There is a national government and island level governments, with a base in their respective capital cities: Moroni, Fomboni and Mutsamudu. At the time of this mission Anjouan was facing political problems and its island government was not recognised by the national government; thus the situation in Anjouan is not addressed in this report.

Agriculture is the main economic activity, representing 40% of GDP and 80% of the labour force; tourism and other services represent 25% of GDP (UNEP *et al*, 2004). The islands are of volcanic origin and are characterised by a diversity of habitats and ecosystems, including endemic and endangered species. Characteristic and emblematic species include marine turtles, fruit bats, the Livingstone bat, whales, dolphins, the *cœlacanthe*, and dugong.

At the moment tourism is very little developed. Tourism in the Grand Comore was basically associated to a single luxury hotel, the Galawa, around which the industry developed (bungalows, handicraft sellers, bars, etc). However the Galawa hotel closed in late 1990's due to conflict with the government (the specific reasons of which are not clear), it was provisionally reopened by the government and negotiations are taking place for a new hotel to be built by an investment group from Dubai. The closure of the Galawa hotel marked a shift in the island's tourism, from receiving 27,474 tourists/year just before closure (Interface Tourism, 2005) to around 2000 now. On a lower scale smaller developments are taking place in the different island.

2. POLICY FRAMEWORK

2.1. Tourism policy and planning

Tourism policy and planning is based on the Tourism Framework Law, and is responsibility of the Ministry of Tourism. The policy guiding tourism development at national level is the *Plan Directeur de Tourisme*, which proposes developments based on a study prepared by the WTO (1986), and which emphasises the development of tourism compatible with the protection and valorisation of the environment. In spite that the *Plan Directeur* does not foresee the development of large-scale tourism infrastructure, these are currently envisaged and will be highly significant in the context of Comoros' tourism development³.

Tourism policy-making and planning is done by the Ministry of Tourism, with no formally established entry points for the involvement of other sectoral authorities. It does not engage the wider public and draft documents are not made publicly available for consultations. At the moment it is foreseen to create a national Sustainable Development Committee with inter-sectoral representation⁴, but details of how it will work are not yet known. There are no detailed programmes or guidelines on how the *Plan Directeur* is to be implemented; and there are no other written plans or programmes at island level either.

Apart from the refurbishment of the Galawa hotel, other medium to large scale tourism developments are expected to take place, such as the construction of 400 luxury bungalows next to the Lac Salé in the north of the Grand Comore (very close to the Galawa hotel), and a luxury development within the Marine Park in Mohéli (Nioumanchoi). As well low scale tourism developments are sprouting and being planned on beaches in both the Grand Comore and Mohéli.

2.2. Environmental policy

The preparation of environmental policy is the responsibility of the Directorate General for the Environment, under the Ministry of the Agriculture, Fisheries and the Environment. The *National Environmental Policy* was adopted in 1993 through Decree No. 93-214/PR, and is based on a state of the environment report prepared by UNDP (1993). The basic environmental law is the *Framework Environment Law* (No. 94-018/AF, of 22 June 1994, amended by Law No. 95-007/AF, of 19 June 1995). Environmental policy and legislation is implemented at the island level by the respective ministries and directorates general.

At the local level the village 'notables' are key for effective implementation of environmental initiatives; the support of Imams is also important (approving compliance with Islam), as is that of the Mayors (to a lesser extent). Community associations are common in almost all villages, and they often organise environmental awareness-raising and environmental management initiatives to solve their particular problems (normally related to waste management and control of poaching of turtles).

³ In this context it is important to note that this appreciation is based on a summary of the *Plan Directeur*, as the full document was not available for review.

⁴ There used to be an inter-ministerial consultative committee on the environment (CICE – *Comité Interministériel Consultatif pour l'Environnement*), but which does not work any more.

2.2.1. Environmental Impact Assessment

Environmental Impact Assessments are foreseen for development projects by the Framework Environment Law. They are regulated by Decree No. 01-052/CE, of 19 April 2001, relative to Environmental Impact Assessment. However to date the EIA Decree has not been implemented as the Directorate General for the Environment does not have the internal capacities to do so. The only EIA which has apparently been prepared was done in 2001 for the Miningoni-Ouallah road (Mohéli), financed by the World Bank and following World Bank EIA procedures.

The EIA provisions are rather weak when compared to international good practice. Considering that the Decree has never been implemented, only the basic areas of improvement are discussed below, in the context of tourism projects.

Screening

All developments listed in the decree's annex require an EIA; for the case of the tourism sector this includes hotel developments of more than 40 beds. An EIA would also be required for other coastal projects that may be associated to tourism, e.g. roads; ports and airports; land claims. All other development activities will nevertheless require the preparation of a *Notice d'Impact*, the specific contents of which are not clearly described.

The Decree does not foresee the possibility of smaller projects requiring an EIA when they can nevertheless have significant impacts on the environment, e.g. when taking place within environmentally sensitive areas such as the Marine Park in Mohéli. This is an important shortcoming in the context of the Comoros.

Contents of the EIA

The minimum requirements for an EIA are not clearly spelled-out, leaving a wide margin of interpretation as to what should be covered.

Public participation

Public participation is not foreseen for all EIAs. Whether an EIA process requires a public enquiry or simply a consultation is not clearly determined. When the proposed development concerns a protected natural area, the relevant organism has to give its opinion, which is binding on the authority in charge of giving development consent.

A recent UNEP report (UNEP, 2007) confirms the important regulatory and capacity shortcomings on the Comoros' EIA legislation.

2.2.2. Strategic Environmental Assessment

There is no SEA-specific legislation in the Comoros, although the EIA decree also applies to certain plans (agriculture management; water management and sewage). Due to the different nature of SEA it is not adequate to apply the same environmental assessment procedure to a plan as would be applied to a project. In this sense it is desirable to have SEA-specific requirements.

In the context of SEA it is important to notice that there is no systematic elaboration of sectoral policies, plans and programmes, nor clear written procedures for their preparation. For example in the case of the tourism, currently large-scale developments are promoted that will certainly re-shape the sector, but which were not foreseen in the Tourism Development Plan.

It is currently not recommended to develop an SEA framework in the Comoros, as the system is not ready to develop one which is effective:

- There are no clear and transparent procedures for policy-making and planning, thus being difficult to define the linking points between the policy-making and planning processes and the SEA process.
- Existing policies are a mixture of stated policies (explicit) and implicit policies (mainly coming from the highest political levels). Although this is normal in any country, in Comoros it reaches levels where implicit policies dominate the development agenda. In this context a formalised SEA framework is likely to miss evaluating *de facto* policies, if it concentrates only on stated ones.

It should be a priority to enhance the EIA framework and develop the capacities to implement it effectively. Although it is not necessary to have an effective EIA system up and running before attempting SEA, it is necessary to first advance on the EIA front.

However it is recommended to carry out, following international good practice procedures and with the support of donors, an SEA of the tourism sector (preferably as part of a process to develop a tourism planning document). Such an SEA would help identify, from an environmental point of view: physical areas where hotels and other tourism infrastructure may be located; areas where certain infrastructure is not recommended or should be banned; safeguards such as setback limits, guidelines on construction materials, waste and wastewater management, etc.

It is also recommended to deliver awareness raising and basic capacity building on SEA to key staff in the environment and tourism sector, targeting also NGOs and consultants. This will allow them to be updated on developments, know the details and benefits of the SEA system, and start reflecting of how best to develop it in the Comoros.

3. ENVIRONMENT-TOURISM LINKAGES

3.1. Current and potential environmental impacts of tourism policy and activities

Tourism is currently not having a significant impact on the environment since tourism activity is very limited. The written tourism policy (*Plan Directeur de Tourisme*), although it clearly states that tourism in harmony with environmental protection will be promoted, is rather ambiguous in its statements. Moreover the key tourism developments currently foreseen do not conform to the written policy.

Based on the interviews held and the sites visited, we can identify a series of tourism development initiatives in the Comoros, ranging from small-scale to large scale (not comprehensive, but certainly representative). These are broadly described in the following table, and their potential environmental impacts described in general terms further below, based on a quick appreciation.

Site	Description
Grand Comore	
Galawa hotel	Refurbishment of 5-star hotel on Galawa beach. Large beach and presence of coral reef. Possibilities of dolphin and whale watching outings, diving, snorkelling and fishing. Next to <i>Trou du Prophete</i> , a site of cultural heritage, and the former house of Bob Denard. Some existing low-key associated infrastructure nearby (smaller bungalows, night bar).
Maludja	Bungalows on beach next to the Galawa, sold together with the Galawa hotel. 22 bed capacity. Beach with same possibilities for activities as the Galawa hotel.
Chindini	Beach in south of the Grand Comore. Currently no tourism development, but plans to build bungalows. There is entry charge to the beach (€1). Excellent site for whale and dolphin watching, as well as other marine recreational activities. Well-kept mangrove forest and nearby tombs of early sailors.
Male	Village in south of the Grand Comore. Currently no tourism development; two bungalows not completed. Seeking investors to build more bungalows and manage the site. Old mosque close to bungalows. Whale and dolphin watching potential, as well as other recreational activities associated to sea and coral reef.
Itzoundzou	Village in west of the Grand Comore. Site of main habitat of the <i>caelacanth</i> . Close to Singani (village destroyed by eruption of the Karthala in 1977). Plans to build a museum on the <i>Caelacanth</i> . No beach.
Itsandra	Popular beach close to Moroni. Restaurant but no accommodation. Entry charge on Sundays to cover cleaning costs; plans to cordon-off beach for better management. No larger developments envisaged.
Bangoi-Kouni	North of the Grand Comore, between the Galawa hotel site and the Lac Salé. Site of old miraculous mosque, said to have constructed itself overnight; also old tombs of early sailors.
Lac Salé	Crater lake next to the coast in the north of the Grand Comore. Very scenic landscape. Project to build 400 luxury bungalows, including hut on top of the hill to view the sunset. Details of the development not known.
Mohéli	
Miringoni	Site in NW Mohéli. Bungalows overlooking the beach. Associated activities include a mountain chalet (2-3 hour walk), waterfall close by, very green and lush landscape. No aquatic activities.
Hoani	Site in north of Mohéli with two simple bungalows managed by the village association. Nesting beach for marine turtles. Would like to expand.
Itsamia	Site in SE of Mohéli, within the Marine Park. Main marine turtle nesting beach and site of the <i>Maison de la Tortue</i> . Two bungalows on beach. The village is highly environmentally-aware, especially in relation to the marine turtle (in a way they all act as eco-guards against poachers). Activities include watching turtles, visit to nearby lake Bunduni (crater lake which is nesting site of bird species), visit to islets and whale watching.
Nioumachoi – Lake Lodge	Site in south of Mohéli and within the Marine Park. Medium-scale development with various brick bungalows, restaurant and access to two large beaches. Environmentally-aware management; e.g. use of local materials, no use of beach sand as construction material, waste management. Mangrove forest close by. Activities include whale and dolphin watching, boat tour to islets.
Nioumachoi	In same village as above, construction of bungalows next to beach (approximately 3).
Nioumachoi – Tourist village	Luxury development foreseen by a group from Dubai. Apparently includes construction of a harbour and a landing strip. No further details were available.
Tramdrama	Foreseen 4-star hotel by Italian Group. No details of project available.
Ouallah 2 (Sambodjou)	Site in SW of Mohéli within Marine Park. Seven bungalows on very scenic spot with clear water beach. Activities include whale and dolphin watching, waterfall, tour of the islets, spotting of Livingstone bat.
Ouallah 1	Bungalows on large beach and next to the village. Organised activities similar to those of Ouallah 2. Problems attracting tourists.

The potential environmental impacts of such development can be similar, with the exception of the large-scale developments (Galawa and Lac Salé in the Grand Comore, and Nioumachoi and Tram drama in Mohéli). The following potential impact could be envisaged from the small-scale developments:

Potential environmental impact	Cause/conditions
Contribution to coastal erosion	If beach sand is mined to use as construction material
Contamination of groundwater (especially in Grand Comore)	Current practices consist of disposing of sewage in a hole dug in the ground. Sewage may contaminate groundwater, especially in Grand Comore where soil is highly porous.
Poaching of protected shellfish and coral	Exotic shells and coral sold to tourists. This was observed around the Galawa/Lac Salé area in the Grand Comore, where villagers collect them. Increased tourism will increase demand.
Damage to coral	Diving and snorkelling activities currently not frequent (e.g. no association has the resources to buy diving equipment), but likely to develop. This may lead to trampling and picking of coral (and poaching of shellfish).
Disturbance of whales and dolphins	Whale and dolphin watching boat rides will increase with tourism. If proper procedures not used by skippers there is a risk of harassment.
Disturbance of marine turtles	This is one of the main tourism activities in the Comoros, especially in Mohéli, where almost all beaches are turtle nesting beaches. If proper procedures and practices are not followed (e.g. in relation to use of torches and touching of turtles), this may prevent turtles from laying their eggs.
Disturbance of terrestrial fauna	Spotting of the Livingstone bat is a main attraction in Comoros. If done inadequately this may lead to its disturbance (e.g. tourists wanting to see bat active during its day-time rest).
Pollution due to waste production / environmental health	Increased tourism activity will generate a considerable increase in the production of solid wastes in a country that faces a major problem of waste management (discussed below). This will in turn create higher risks to environmental health (inadequate waste disposal leading to health hazards, creation of breeding grounds for disease vectors, nuisance, etc.)
Pressure on scarce water resources	Tourism activities will increase demand of freshwater in a country where it is scarce. This will be especially significant in the context of luxury developments where large water-consuming facilities may be installed (e.g. swimming pools).
Exacerbated conflicts	<p>The unclear land tenure arrangements have led to conflicts between villages that want to exploit certain tourist attractions for themselves. This was identified in Itsandra (Mohéli), where the <i>Maison de la Tortue</i> (local environmental organisation) wants to ensure control over access to nearby Lake Boundouni, forcing visitors to first go through the <i>Maison de la Tortue</i> to pay the entrance fee and guide, in fear that the nearby village of settlers from Anjouan may exploit the site. Another example is the rivalry between Ouallah 1 and Ouallah 2 in Mohéli, where Ouallah 1 claims that the site of the Livingstone bat is in their village's land, and do not want Ouallah 2 offering the activity. This has led to tourists guided by Ouallah 2 guides being stopped by Ouallah 1 from entering the area.</p> <p>These existing conflicts may be exacerbated with increased tourism, and other similar ones may develop.</p> <p>Also conflicts may arise with the local population in relation to access to the beach. It is the policy of the government that seaside hotels may enjoy exclusive access to the beach for their guests, banning the general public from access. Conflicts have already occurred with the local fishermen.</p>

The larger scale developments could generate similar impacts on a larger scale. Other impacts may take place if indeed a harbour and a landing strip is to be built in Mohéli within the Marine Park.

The fact that the EIA legislation is not being implemented is of concern, as there is no other mechanism to ensure that proposed projects will integrate the adequate measures to minimise negative significant impacts on the environment.

Although it is claimed by the Directorate General for the Environment of the Grand Comore that the EIA legislation will be applied in the case of the large developments in the island (Galawa hotel and Lac Salé), it has also been confirmed by the Directorate General for the Environment at the Union level that there are no technical capacities within the DG to implement or enforce the EIA legislation. Moreover such large scale developments (both in the Grand Comore and in Mohéli) are being negotiated at the highest political levels with a high risk of overlooking relevant sectoral authorities.

Local capacities and those of community associations are also very limited to ensure an adequate minimisation of potential environmental impacts of tourism development. This also applies to the management in relation to current environmental concerns that will have an effect on tourism development, as described below.

3.2. Environmental issues potentially constraining tourism development

There are several environmental aspects that will act as constraints for tourism development, and which require attention: waste management, sand mining, coastal erosion, land erosion, sewage treatment, freshwater availability, destructive fishing and poaching.

Waste management

Solid waste management is a major problem in the Comoros. The key issues can be summarised as follows:

- There is no waste management strategy either at the Union or the island levels. However there seems to be a PNUD programme that will start shortly, addressing this problem, as well as an EC project in Mohéli (details of both projects could not be obtained).
- There is no landfill available for proper waste management, nor other waste management facilities. The Grand Comore used to have an open air dump, but it was closed in spring 2007 due to the opposition of the villagers, who complained about odours, flies, mosquitoes and other nuisances and health hazards.
- In the case of Moroni wastes are currently taken to a site close to the old airport (South of the city).
- The traditional, and widely used, waste disposal is on the sea. Litter is found everywhere in the cities and villages, including on beaches, with very few exceptions.
- Many community associations are concerned about waste management and have ventured diverse alternatives, although all invariably complain of lack of resources for adequate disposal. There is no inter-village (or higher level) co-ordination to seek common solutions.
- The most common approach is to find an open air dump close to the village, collect the waste (either by volunteers or paid persons), burn all burnable waste (including plastics) and dump the rest in the selected site.
- Other approaches identified include burial of waste in the beach (done in an area east of Fomboni, in Mohéli – see Photo 1), creating health and safety hazards; collection of waste in an open containing structure for later collection and transport with a truck to disposal site (e.g. in Mitsamiouli in the Grand Comore – see Photo 2); or even the use of a simple incinerator, burying non-burnable waste afterwards and dumping ashes in the river next to the site (done in Djoiezi, Mohéli, but not used since 2005 when the truck broke down – see Photo 3).
- In some tourist beaches a fee is levied on visitors to pay for waste management, with varying results. For example in the beach of Itsandra, north of Moroni, the beach and area are very clean, not only due to the collection of the litter but also due to a high level of environmental awareness amongst the population (Photo 4). However in the beach at Chindini (Grand Comore) a fee is also levied, but only the beach strictly speaking is cleaned, leaving the immediate grounds full of litter (Photo 5).
- In some cases associations have been charging households a waste management fee (e.g. Djoiezi in the past - Mohéli, when their collection truck was working; Miringoni – Grand Comore).
- Most associations seek similar solutions, mainly the purchase of a truck to collect waste and take it to an open air dump, but there are normally limited resources to buy the truck and pay for petrol.
- Few associations have been successful at awareness raising, preventing littering of the public space. The support of the notables seems to be crucial for success in local initiatives, as is the case in Itsandra (Grand Comore).

Sand mining

Beach sand mining is another major problem affecting the environment in the Comoros, being also a potential constraint to tourism development. The key issues are summarised below:

- Traditional construction materials are palm, wood and mud. However nowadays people, seeking more solid and comfortable housing, prefer to use cement bricks. Only the poorer households use the traditional materials.
- Although explicitly forbidden, sand is extracted from the beaches to be used in the mixture to make cement bricks.
- Although alternative construction materials are available (especially crushed sand, available in the Grand Comore) and they are of better quality for construction (beach sand has a high salinity), sand extraction from the beaches is the cheapest alternative.
- In view of the high costs of alternative building materials, authorities hardly enforce the prohibition to mine sand (with some exceptions, see Photo 6). Even highly environmentally aware communities mine sand. One example is Itsamia (Mohéli), where practically the whole village acts as eco-guards against turtle poachers; they have designated a smaller beach from where the population can take sand). In Miringoni (Mohéli), another example of a highly environmentally aware village, their waste management strategy includes the purchase of a truck in Mayotte to transport the wastes, and the truck is also planned to be used for sand extraction.
- In spite of this several communities claim that sand extraction has been reduced or even stopped in their area.

- Sand mining is significantly contributing to the loss of beaches. This in turn contributes to coastal erosion, loss of ecosystems and associated animal resources, and effects on coastal infrastructure. Loss and reduction of beaches limits the area where marine turtles can lay their eggs. Needless to say disappearance of beaches has direct and indirect impacts on tourism development. It is estimated that in the Grand Comore approximately 90% of the sand beaches have disappeared in the last decade, and most remaining beaches only subsist on the immediate area where waves break (UNEP and DGIC, 2002).
- More recently an EU project introduced the use of stabilised earth bricks, which were used to build bungalows in Miringoni (Mohéli) (see Photo 7). These bricks are made with clay and a small amount of sand that provides them structural stability, and are considerably cheaper than cement bricks (100 FC vs 400 FC per brick). A factory to produce similar bricks (although cooked in an oven) is being built in Mohéli (see Photo 8), and another one planned in the Grand Comore, as part of a Union government strategy to reduce sand extraction.
- In spite of the (although as yet limited) availability of stabilised earth bricks, the local population does not trust them and is reticent to use them for their homes. So far these bricks have only been used for tourist facilities.

Coastal erosion

Coastal erosion is a serious problem in the Comores (see Photo 9). Key issues are as follows:

- The causes of coastal erosion are not altogether clear. For a start the Comoros seem to be experiencing increased wave intensity and abnormal tidal ranges (UNEP *et al*, 2004), a phenomenon which may be cyclical.
- In any case sand mining is certainly a contributing factor to coastal erosion.
- Coastal erosion poses a threat to tourism development, as it may affect the stability of tourism and transport infrastructure, as well as the quality of the landscape and beach area.
- Individual erosion containment structures have been built in various parts of the country, some of which are inadequate (e.g. seawalls that do not allow natural recirculation of sand).

Land erosion

Land erosion is directly linked to the problem of deforestation in the Comoros. Soil washed into the sea affects the corals. In turn the health of corals is critical to help contain coastal erosion, serve as a buffer against extreme climate events and sea level rise, maintain fish populations, as well as an asset for tourism.

Sewage treatment and freshwater availability

There are no sewage treatment facilities in the Comoros. Sewage is normally disposed of in pit latrines and septic tanks, a practice which may lead to the contamination of precious groundwater reservoirs in the porous soil of the Comoros (especially in the Grand Comore).

Tourism development, if successful, will significantly increase the number of visitors and thus the quantity of sewage produced. This effect should be added to the fact that the Comoros has a fast growing population, approximately 2.9% per year (UNEP, COI and CEDRISA, 2004). This problem would become magnified due to the scarcity of freshwater.

Freshwater is a scarce resource in the Comoros due to the high soil permeability. Although it is claimed that untapped groundwater resources are available in the Grand Comore, to date large sectors of the populations lack access to freshwater, especially in rural and coastal areas, and the per capita availability of freshwater is below the water stress threshold of 1700 m³/yr (UNEP, COI and CEDRISA, 2004).

Destructive fishing

The use of destructive fishing techniques (dynamite, tephrosia) also has an impact on the coral reef, leading to the indirect effects mentioned under 'land erosion' (including on tourism). On the basis of the interviews held it seems that destructive fishing practices have been significantly reduced, although they still take place.

Poaching

There is an important problem of poaching of sea turtles in Mohéli. Poachers are claimed to come from the island of Anjouan, where they traditionally eat their meat, and they often come armed. The government has no resources to designate guards and vigilance is left on the hands of communities. Turtle poaching is especially significant within the Marine Park in Mohéli, having not only an impact on the conservation of the species, but posing also a potential impact to tourism (not only with regards to reduction of turtle population but also to security issues in light of armed poachers).

Poaching of protected seashells and coral also takes place, to sell as curios to tourists (see Photo 10). This seems to be a reduced activity which was seen only in the north of Grand Comore, but likely to expand with increased tourism.

4. RECOMMENDATIONS

4.1. To enhance environmental integration of tourism policy and planning

- It is highly recommendable to develop clear and transparent procedures for tourism policy-making and planning. These should include timely consultations with other relevant sectoral authorities (including environment) as well as the Committee on Sustainable Development.
- As for implicit tourism policy (i.e. policy elements being followed but not necessarily laid down on paper), the Government of the Comoros should ensure adequate environmental safeguards are established in the pursuance of large-scale developments, such as the refurbishment of the Galawa hotel and the developments in the Lac Salé and Nioumanchoi.

4.2. To enhance EIA framework

- The EIA decree should be enhanced according to international good practice and reflecting the country specific context. Provisions are weak and prone to diverse interpretations; its implementation is bound to be ineffective.
- Key modifications include:
 - EIAs required for smaller projects within environmentally sensitive areas, such as the Marine Park in Mohéli.
 - Integrating a scoping phase, where the key issues relevant to the EIA are identified at an early stage and integrated into the scope of the study.
 - Clearly define the contents of the EIA. In this sense guidance notes may be prepared for key sectors (e.g. tourism, roads, water management and agriculture).
 - Establish clear mechanisms for public participation, which ensure that it takes place at an early stage; is transparent; allows the public and key stakeholders to have an influence on the decision-making process; it integrates all relevant stakeholders, including marginalised groups (e.g. communities from other islands); it reflects the social and political structures (e.g. giving a voice to notables, majors, imams and community associations).
 - It integrates an independent review process.
 - It lays down clear requirements for an Environmental Management Plan, to be monitored.
 - It takes out the plans from the Annex, which could be subject to an SEA and not an EIA.
- Adequate capacities should be developed within the Directorate General for the Environment, in order to be able to critically review EIA studies, make consistent decisions based on them (e.g. establishing conditions for development consent), and monitor the implementation of Environmental Management Plans.

4.3. In relation to SEA

- Prepare an SEA of the tourism sector, preferably as part of a tourism plan preparation process, oriented to identify, *inter alia* adequate areas for infrastructure development and appropriate safeguards.
- Provide capacity building/training on SEA to key staff in relevant sectors, as well as targeting NGOs and consultants.

4.4. To enhance tourism projects

- An Environmental Impact Assessment must be required for all large tourism development projects envisaged (e.g. Galawa, Lac Salé, Nioumanchoi). Due to the weaknesses of the Comorian EIA legislation, the EIAs prepared should conform to international good practice. External capacities should be secured to ensure quality check of EIAs submitted, the definition of possible conditions to the development consent, and the monitoring of the Environmental Management Plan implementation.
- Effective action must be taken to solve the waste management problem in the Comoros, coordinated and complementary to any existing initiatives (e.g. by UNDP). This should include the definition of adequate institutional structures, capacity-building, training, awareness-raising and a policy to minimise production of solid wastes.
- The use of 'stabilised earth bricks' should be promoted amongst the population; at the same time enforcement of the ban to mine sand must take place. Any proposed project must show that beach sand will not be used in the construction of any structures.
- Tourism developments should be encouraged, with the assistance of the relevant authorities, to take adequate actions to contain coastal erosion.

- Actions can be taken to study the type and extent of sewage management and define appropriate remedial, management and awareness-raising actions.
- All tourism accommodation infrastructures should aim at implementing environmental best practices, including, *inter alia*: prohibition to use beach sand as construction material; promotion of the use of local building materials; use of water-efficient devices; avoiding construction of swimming pools, if possible; prohibition of tall infrastructures that interfere with the landscape; installation of sewage treatment facilities, and recycling of water; capture and use of rain water.
- Training and awareness-raising should be provided to personnel that will act as interface between tourists and sensitive natural environment, such as skippers for dolphin-watching boat trips and eco-guides to spot protected species.

TANZANIA (MAINLAND)

1. GENERAL CONTEXT

Tanzania is located in Eastern Africa and has approximately 800 km of coast. Zanzibar falls under the jurisdiction of the Revolutionary Government of Zanzibar, and is dealt with in a separate section. Tourism is one of the leading economic sectors in the country, contributing approximately 13% of annual GDP and directly employing more than 150,000 people (VPO, 2003). However the vast majority of the tourism activity (approximately 90%) focuses on wildlife inland, basically in the Northern Circuit. Coastal tourism remains an untapped resource with vast potential and which is being promoted for three main reasons: to reduce pressures in the Northern Circuit; to spark economic development in other areas; and to diversify the tourism sector away from wildlife tourism.

2. POLICY FRAMEWORK

2.1. Tourism policy and planning

The government has developed a *National Tourism Policy* (1999) and an *Integrated Tourism Master Plan* (2002), guiding both the public and private sectors. The *Tourism Master Plan* of 2002 identifies a large potential for the development of coastal tourism. The tourism policy-making and planning processes have readily addressed the environment, clearly integrating environmental objectives:

- *"To promote and develop tourism that is ecologically friendly and environmentally sustainable;*
- *To promote and develop land for tourism in a co-ordinated manner so as to attract private investment and ensure sustainable tourism development".*

The *National Tourism Policy* also defines strategies for eco-tourism and makes repeated references to Environmental Impact Assessment as a tool for ensuring environmentally sustainable tourism development.

The only coastal areas developed for tourism are the beaches north of Dar es Salaam and Bagamoyo (catering mainly to business people and expatriate residents). Smaller clusters of hotels are found in Pangani, Mafia Island and Mtwara. The *Guidelines for Coastal Tourism Development* summarise the coastal attractions that are being visited in Tanzania:

- Bagamoyo town and the adjacent Kaole Ruins
- Beaches and near-shore islands around Dar es Salaam and Mafia Island
- The Sadaani National Park
- Pangani, for its history, culture and natural beauty
- The expansive beaches south of Dar es Salaam
- World Heritage sites of Kilwa Kisiwani and Songo Mnara
- The unique Swahili coast culture and lifestyles
- Traditional sailing vessels
- Coral reefs for diving and snorkelling

The above report identifies the following sites as having the highest potential for development, and which have been corroborated by the relevant stakeholders:

- Kilwa District, particularly Kilwa Masoko
- Saadani National Park and environs (Pangani to the north and Bagamoyo to the south)
- Mafia Island (Marine Park)
- Dar es Salaam city and surrounding area

Over the longer term the following areas are likely to develop:

- Mnazi Bay area of Mtwara (could be a mini-hub for tourists wishing to explore the Southern Highlands or venture into north Mozambique)
- Certain areas of the Rufiji Delta (eco-tourism and adventure travel)

2.2. Environmental policy

The framework environmental policy is the *National Environmental Policy* (1997). The preparation of environmental policy is the responsibility of the Ministry responsible for the Environment. The National Environmental Management Council (NEMC) is an advisory institution which plays an important role in the review of EIAs.

The Environmental Policy is implemented through the *Environmental Management Act* - EMA (2004). The key institutions dealing with the environment are the Ministry responsible for the Environment, the Director of the Environment and the NEMC. Within each Ministry there must be a Sector Environmental Section designated, which should ensure compliance with the EMA and other environmental requirements, and co-ordinate as necessary with the Director of the Environment and NEMC. These arrangements establish the necessary framework to secure environmental integration into sector activities. At the local level environmental responsibilities fall under the Local Government Authorities, who designate an Environment Management Officer.

It is important to notice that, in case of conflict, the EMA prevails over any tourism laws. The EMA also defines the framework for EIA and SEA, which are described below.

Land Use Plans will be an important component for environmental planning. Currently NEMC prepares plans which are non-binding and on the basis of which local authorities should prepare their own.

2.2.1. Environmental Impact Assessment

Environmental Impact Assessment is regulated by the *Environmental Impact Assessment and Audit Regulations*, 2005 and guidance for their interpretation and implementation are contained in the *Environmental Impact Assessment Guidelines and Procedure* (draft).

The written EIA procedure is very complete and conforming to international good practices, especially in relation to:

- Screening (including opportunity to screen projects that may not have significant impacts on the environment)
- Scoping (including review of EIA ToR by NEMC, identification of stakeholders and their main concerns, identification of main project alternatives, project boundaries, tools and techniques, and likely impacts). In terms of scoping probably the only aspect not conforming to international good practice is that it is not necessarily a participatory stage.
- Impact identification, evaluation, analysis of alternatives
- Preparation of Environmental Management Plan and associated monitoring mechanisms
- Stakeholder consultations, including public meetings, during EIA preparation
- Independent review process
- Opportunities for public involvement in the review process, with option for a public hearing to be organised
- Justified decision-making
- Public availability of all relevant information

A series of tourism development projects are classified as Type A projects, meaning that they will always require an EIA, namely:

- Construction of resort facilities or hotels along the shorelines of lakes, river, islands and ocean
- Hill top resort or hotel development
- Development of tourism or recreational facilities in protected and adjacent areas (national parks, marine parks, forestry reserves etc) on islands and in surrounding waters
- Hunting and capturing
- Camping activities walk ways and trails etc.
- Major construction works for sporting purposes

The list of activities that require a mandatory EIA in the tourism sector is very broad (as can be seen above). This means that the development of any hotel, as small as it may be and even if in an environmentally non-sensitive area, will require an EIA. Under such provisions there is a risk that the competent authorities will be flooded by numerous EIA dossiers, most of probably related to projects with no significant potential impacts on the environment. Due to the limited experience in the country with EIA, it is recommended that NEMC and the Division of Environment focus initially only on those projects which have potential significant impacts of the environment, based on the EIA screening criteria provided

in the Regulations and expanded in the guidelines. Requiring EIAs to such a broad range of activities also entails the risk of converting the EIA process into a merely administrative exercise.

There is also an inconsistency between the EIA Regulations and the EIA guidelines, as the guidelines state that the following tourism activities also require a mandatory EIA: tour operations and development of eco-tourism and cultural tourism centres.

The EIA Regulations are rather new and to date have not been applied to any proposed tourism development project. It is to be seen if NEMC and the Division of the Environment will have the capacities and resources to implement them effectively.

According to NEMC existing tourism developments will be required to prepare an Environmental Audit in order to ensure compliance with the Environmental Management Act of 2004. However it is unclear which will be the actions taken to solve cases of non-compliance for establishments that received development permits prior to EMA 2004.

2.2.2. Strategic Environmental Assessment

The EMA 2004 makes provisions for SEA (Section 7). However the regulations are only in draft form. In spite of this at least one SEA has been carried out in Tanzania with donor support, the *SEA of the Tourism Development in the Northern Tourist Circuit of Tanzania*, prepared in the context of the CBBIA-IAIA Programme. Also an SEA for a *Forest Development Project* (eucalyptus plantation) is being prepared based on the OECD DAC guidelines, as the SEA regulations are not yet in place.

The draft SEA regulations reviewed in the framework of this assignment still had to be further developed. The SEA process applies not only to policies, plans and programmes, but also to Bills and regulations. In broad terms the SEA process described in the draft regulations is rather standard and minor points of improvement will not be discussed here. However there are some fundamental aspects missing both in the draft regulations and in Part VII of the EMA:

- The SEA process applies only to national level Bills, regulations, policies, plans and programmes, leaving out the region and local levels. This is an important shortcoming as there is a decentralisation process going on in Tanzania and many of the on-the-ground actions will be responding to region and local level plans and programmes (e.g. land use plans, tourism development plans).
- The SEA process described does not consider the participation of stakeholders and the wider public, limiting it to consultations between relevant authorities. This is another important shortcoming, as public participation is a key element of effective SEA.

3. ENVIRONMENT-TOURISM LINKAGES

3.1. Current and potential environmental impacts of tourism policy and activities

Coastal tourism in Tanzania is currently very limited, and so are its impacts on the environment. At the moment the coastal tourism activity is mainly concentrated in the Dar es Salaam region and Bagamoyo district, with lower intensity activities taking place in Mafia Island, Mtwara, Kilwa and Tanga, where tourism is expected to expand.

Other coastal areas have a potential for tourism due to their nature and cultural attractions, but which are unlikely to develop in the short term due to their remoteness, difficulty of access and lack of basic infrastructure. Such locations include for example, the Rufiji delta, one of the largest delta systems in Africa containing the largest mangrove forest in East Africa, nesting site of numerous bird species, crocodiles and sunken ships from World War I.

Some initiatives related to sustainable coastal tourism development are taking place, including:

- *Kilwa District Cultural Development project* (French and Japanese Embassies), based on the rehabilitation of the ruins of Kilwa Kisiwani and Songo Mnara (World Heritage Site) to promote local development including tourism;
- *Cultural Tourism Programme* (Tanzania Tourism Board and SNV), to assist locals organise tours in their areas, an initiative that has already worked in the coastal communities of Pangania and Gezaulole;
- *Kinondoni Coastal Area Management Programme* (KICAMP) (Kinondoni Municipal Commission and SIDA), to improve understanding of management of marine and coastal area resources in the Kinondoni district;
- *Marine Action Conservation of Tanzania* (MACT) (NGO based in University of Dar es Salaam), offering historical walking tour of the Kunduchi area and replanting coral at Mbudya Island Marine Reserve;
- *Rehabilitation of German BOMA at Mikindani* (Trade Aid working with local communities in Mikindani), to renovate the German BOMA building into a small luxury hotel.

Some of the environmental impacts that are already arising from coastal tourism include (based on Masekesa, 2005):

- Ocean disposal of sewage from hotels, which has already resulted in contamination of seafood (especially in the Dar es Salaam and Bagamoyo areas);
- Increased urbanisation and pressure on resources;
- Population increase leading to widespread subsistence farming, resulting in nutrient loading and increased sedimentation in the marine environment;
- Accumulation of litter on beaches;
- Over-exploitation of certain marine resources through, e.g. shell collecting, damage to corals, lobster fishing, anchor damage to coral, etc.

We were not able to verify the above observation from Masekesa (2005) but, in corroboration with other interviews, they are likely to be occurring mainly in the urban areas of Dar es Salaam and Bagamoyo, where hotels are largely concentrated. Social conflicts are apparently also starting to develop in Bagamoyo with regards to the access to beaches, as it is claimed that sometimes hotels do not respect the right of passage.

The *National Integrated Coastal Environment Management Strategy* (2003) also identifies potential impacts of coastal tourism development, which are generic potential impacts of the industry:

- Pressure on existing infrastructure and services;
- Beach erosion from poorly sited hotels, and the consequent call for increased government expenditures to rehabilitate and protect private-sector investments as well as downstream areas;
- Localised pollution due to increased waste load;
- Reduction of public access to the beach and other conflicts between villagers and tourists, e.g. cultural issues;
- Degradation of habitats, especially damage to coral reefs due to trampling and anchoring;
- Depletion of resources through collection of trophies, seashells and corals.

An important element that will contribute to the acceleration of coastal tourism (and thus its impacts) is the road being built connecting Dar es Salaam to Mtwara (border with Mozambique), funded by JICA. The completion of this road (expected in approximately two years) will make the whole southern coast more immediately accessible. Also a bridge is being built together with the Government of Mozambique to connect the two countries; considering that the northern coast of Mozambique is already a popular tourism destination, the construction of the bridge will allow tourists to pour into Tanzania's southern coast (and further north with the new road). In this context it is important to consider that coastal tourism may develop more rapidly than otherwise expected.

3.2. Environmental issues potentially constraining tourism development

An initiative led by WWF, the *Eastern African Marine Ecoregion Programme*, has identified a series of sensitive areas on the Tanzanian coast which merit special protection (priority sites) based on: high levels of diversity giving a high degree of representation of the ecoregion's species richness; high levels of endemism; importance for critical stages in the life cycle of threatened species; and importance for maintaining ecosystem function. Some of these coincide with areas of potential tourism development: Tanga, Bagamoyo, Rufiji-Mafia complex and Mtwara. It is thus important to understand the key environmental threats in such sites in order to take them into account in planning tourism developments. These are summarised in the table below (from Tanzania Coastal Management Partnership, 2003 and WWF, 2004) (only those sites more directly related to potential tourism developments).

Site	Threats
Rufiji-Mafia complex (including the Songo Songo archipelago and Kilwa Masoko)	<ul style="list-style-type: none"> • Marine environment damaged due to dynamite fishing (up to 1998), coral mining for lime production, extensive coral bleaching in 1998 • Increasing fishing pressure (use of small-mesh seine nets) <p><u>Medium-level threats</u></p> <ul style="list-style-type: none"> • Increasing artisanal and industrial (trawling) fishing for prawns • Rufiji Delta susceptible to sea-level rise and increase in storm frequency, wave energy and anomalous high rainfall in catchment area <p><u>Low-level threats</u></p> <ul style="list-style-type: none"> • Potential land-based impacts on large catchment area (drains > 20% of Tanzania) • Impacts of trawling in Rufiji not well known, nor sustainability of mangrove harvesting • Potential threats to Songo Songo Island from gas extraction through habitat disturbance around pipeline

Site	Threats
Mtwara (including Mnazi Bay). Mainly on Mozambique territory but covers the Tanzanian area of Mtwara)	<ul style="list-style-type: none"> • Outer reefs in good condition but degradation of inner reefs and mangroves • Some impact on fish community structure close to urban centres • Coral bleaching impacted inner and outer reefs <p><u>Medium-level threats</u></p> <ul style="list-style-type: none"> • Threats from Mtwara corridor project and improved infrastructure for gas extraction, harbour expansion and up-river effects expected to impact habitats • High potential for tourism • Harbour expansion and increased shipping <p><u>Low-level threats</u></p> <ul style="list-style-type: none"> • Forest clearance may increase siltation in area • Localised pressures from unsustainable resource exploitation (e.g. use of small mesh seine nets, excessive sea cucumber collection, mangrove pole cutting, damage from previous dynamite fishing) • Mangrove clearance for timber
Msambweni-Tanga (includes an area in Kenya)	<ul style="list-style-type: none"> • Area south of border to Tanga town degraded due to reefs destroyed by dynamite fishing • Dugong population virtually extinct • Erosion of Maziwe Island (due to deforestation) has severely reduced turtle nesting • Coral bleaching with 35-95% coral mortality in some areas • Over-fishing and continued use of small mesh seine nets maintains high pressure on resources • Mangrove cutting for salt production (increasing through population pressure) • Proposed titanium mining may accelerate habitat destruction (e.g. from port dredging, shipping accidents, oil spills and introduction of invasive species) • Tanga town sewage disposal directly to sea • River-borne pollutants due to poor upstream agricultural practices and/or developments
Bagamoyo	<p><u>Medium-level threats</u></p> <ul style="list-style-type: none"> • Area impacted by dynamite fishing, coral bleaching, prawn farms and hotel construction • Some impact of agrochemical pollution from Ruvu and Wami Rivers • Degradation due to seining, diving activities, mangrove clearing for charcoal and salt pans, trawling, sand, coral mining and shrimp trawling • Sewage discharges from hotels and urbanisation around Bagamoyo Town

From the above we can see that the potential areas for coastal tourism development and expansion of tourism activities (i.e. Bagamoyo, Tanga, Rufiji Delta, Kilwa, Mtwara, Mafia Island) also coincide with areas of special ecological interest. As the main attraction in those areas is their natural beauty and opportunities for leisure and eco-tourism, any environmental threats (described above) will also act as threats to tourism development.

Key issues of concern are: dynamite fishing; small mesh seine fishing; over-fishing; coral mining; clearing of mangroves; sewage management; other industrial activities (e.g. gas exploration, mining). These issues will have to be kept on check in order to guarantee the conservation of the sites and their attractiveness for ecotourism activity.

4. RECOMMENDATIONS

4.1. To enhance environmental integration of tourism policy and planning

- The mechanisms for environmental integration into sectoral policy making are generally adequate. It is important to ensure close co-ordination between the environmental and tourism authorities in order to address the areas of concern identified through the Marine Ecoregion project in any EIAs and tourism planning. It is also important to address the effects that the Dar es Salaam – Mtwara road will have on tourism inflows and environmentally-damaging activities.
- In the decentralisation process ensure local authorities (district and local levels) will have capacities and mechanisms at their disposal to ensure an adequate degree of environmental integration into tourism policy-making and planning as well as in the preparation of land use plans.
- The coastal tourism development guidelines are a good initiative to secure sustainable tourism infrastructures. The government should ensure these are followed and monitor their effectiveness.
- SEA will contribute to ensure a good degree of environmental integration once it is in place. Recommendations re the proposed SEA framework are given below.

4.2. To enhance EIA framework

- The screening process should be revised in order to require an EIA only for those projects with potential significant impacts on the environment. Otherwise the administration will not be able to focus its resources on addressing key concerns and conditions will be established for the EIA system to become a mere administrative exercise.
- Capacities will need to be enforced, also at the local level, especially with regards to monitoring and enforcement of EMP implementation.

4.3. In relation to SEA

- The current draft SEA regulations should be revised in order to ensure a participatory process.
- Capacity building will be needed to ensure a thorough understanding of SEA within NEMA and sectoral authorities, and targeting also other actors such as NGOs and consultants.

4.4. To enhance tourism projects

- Address key issues affecting the coastal environment, mainly coral mining, destructive fishing, sewage treatment and cutting of mangroves as issues that may affect tourism potential, including through relevant awareness-raising at the local level.
- Pay special attention to key sensitive areas as identified by the Marine Ecoregions project, in order to ensure their respective Conservation Plan is compatible with tourism development.
- Promote the implementation of the Coastal Tourism Development guidelines for all projects.

ZANZIBAR

1. GENERAL CONTEXT

Zanzibar is one of two sovereign nations that integrate the United Republic of Tanzania. It is formed by two islands, Unguja and Pemba, and various islets. Zanzibar has 2400 km², 1500 in Unguja and 900 in Pemba. Tourism started developing around 1984 as a strategy following the decrease in the price of clove, on which the economy of Zanzibar depended. Since then tourism has increased rapidly, from 56,415 tourist arrivals in 1995 to 137,111 arrivals in 2006. Although there are no official figures of the contribution of tourism to the GDP, it is estimated to be around 20%.

2. POLICY FRAMEWORK

2.1. Tourism policy and planning

Zanzibar's *Tourism Policy Statement* (1997, unadopted) recognises that the environment is a key component of Zanzibar's development and that *"the adoption of an environmentally compatible quality policy with the tourism sector is favoring the strengthening of the country main economic sector and the creation of a true mark of quality inside a market which 'everyday' is becoming more and more demanding with regard to environmental questions"*. Environmental protection is further reflected as a key component of the tourism policy objectives. With regards to the environmental-specific objectives, these address: the use of EIA as a key planning instrument; establishment of Marine Parks; research programmes for resource use and environmental protection; programmes to monitor project development trends and tourist attractions that will lead to understand the status of the environment; encouraging clean energies and adequate waste management; offshore boundaries to be earmarked in order to avoid poaching from game fishing boats; and emphasis on sustainable and environmentally friendly projects.

The policy statement promotes a gradual growth, not only in terms of tourist arrivals, but also in the quality and variety of attractions offered. It promotes smaller accommodation establishments, in the form of eco-lodges, catering for higher-spending tourists which economically benefit the local communities and engage them in tourism development. Currently Zanzibar receives mainly low-spending mass tourism. As well it seeks the establishment of buffer zones between tourism infrastructure and villages (300m) to minimise impacts, e.g. congestion. The *Indicative Tourism Master Plan for Zanzibar and Pemba* (2003) is not yet adopted. This document also emphasises the need for environmental protection, including the development of a participatory Integrated Coastal Zone Management Plan.

Tourism development is guided by the *Tourism Strategy Plan* and the *Tourism Zoning Plan*, the latter being a type of sector land use plan prepared in 1996 and revised in 2006 (approval by Cabinet is pending). This Plan determines, for each of six regions (4 in Unguja and 2 in Pemba), the areas where tourism structures may be built, their capacities and priority actions. It also defines guidelines for tourism developments, such as setback limits from the high water mark. The Department of Environment participated in its elaboration and revision, as part of a multi-sectoral team.

There are currently 218 hotels in Zanzibar, mainly concentrated in Unguja (especially in Nungwi and the east coast). Tourism is mainly related to beach and sun, although other activities take place, e.g. snorkelling; diving; forest walks and spotting of wildlife (e.g. the Jozani Chwaka Bay National Park, where the Red Colubus monkey can be spotted); dolphin watching (Kizimkaki); and cultural/historical/archaeological heritage (mainly Stonetown). Accommodation ranges from guest houses to luxury hotels. With regards to Pemba Island, government official often refer to it as being targeted for ecotourism development, although this is not stated in the tourism policy or planning documents.

2.2. Environmental policy and planning

The framework environmental policy is the *National Environmental Policy* (1992). The Department of the Environment is responsible for environmental management in Zanzibar, which is guided by the *Environmental Management for Sustainable Development Act*, 1996 and its Regulations. Land Use Plans are prepared by the Department of Survey and Urban Planning, but the case of tourism is special, as it is guided by a sector land use plan, the *Tourism Zoning Plan*. On the basis of the above plans, Detailed Land Use Plans are elaborated at the local level.

As all land belongs to the Government, developers must compensate the former users and must then lease the land, for a maximum of 49 years. As of 2007 the land lease requires hotels to build a wastewater treatment plant as well as facilities to burn their solid wastes⁵. Hotels built before this will (apparently) be given five years to comply.

⁵ It was not possible to see a copy of the standard land lease form to verify the wording of these requirements, nor to see the legal basis where these requirements are described. A concern is that the concept of "hotel" may be loosely stated, not being clear the threshold (e.g. number of rooms) to which such requirements would apply.

2.2.1. Environmental Impact Assessment

Environmental Impact Assessment is regulated by the *Environmental Management Act* and the *Environmental Impact Assessment (Procedures) Regulations, 2002*. The EIA procedure according to the Environmental Management Act and the EIA Regulations integrates some elements of good practice in relation to:

- Screening (including opportunity to screen projects that may not have significant impacts on the environment).
- Scoping (including preparation of ToR by the environmental authority, identification of stakeholders to be consulted during EIS preparation, and methodologies to be used).
- Impact identification, evaluation, analysis of alternatives.
- Independent review process.
- Opportunities for public involvement in the review process.
- Public availability of EIA report.

In broad terms the EIA process consists of the following steps:

- Screening. On the basis of background information provided by the developer, the environmental authority decides if an Environmental Impact Statement needs to be prepared (mandatory for Schedule 2 projects, non-mandatory for Schedule 1 projects, and the rest decided on a case-by-case basis).
- Scoping. The environmental authority defines the scope of the EIS in terms of specific issues that need to be emphasised, persons to be consulted during EIS preparation, methodologies to be used in collecting and analysing information, and other matters as deemed necessary. The environmental authority prepares the ToR and selects the experts to be involved based on CVs submitted by the developers.
- EIS preparation in charge of the developer, addressing impact identification and evaluation, analysis of alternatives, definition of mitigation measures, indications of knowledge gaps and mention of persons and communities contacted. Submission to the environmental authority together with a summary document.
- Review by the environmental authority, based also on public review and consultations with relevant authorities.
- Public participation in the form of allowing the public to review the document and express their comments. Directly affected persons are to be invited to provide their comments in writing.
- Decision. The environmental authority issues an EIA Certificate, which may contain conditions and which is binding on the developer and the sectoral authority. Sectoral authority cannot issue any development consent in absence of an EIA Certificate when required.
- Follow-up by the environmental authority based on periodic audits.
- Timing. It is clearly stated that the EIA should take place at an early stage so that it contributes to decision making, and is not used to rationalise or justify decisions already made.

Schedule 2 activities require a mandatory Environmental Impact Statement (EIS), which includes the development of hotels or resorts of 100 beds or more. It also includes other tourism-related activities, such as ports, harbours and marinas, as well as developments in environmentally-sensitive areas (including forests, mangroves, small islets and water catchments). Tourism activities directly excluded from requiring an EIA Certificate (Schedule 1 activities) include operating tours, other than dives, and travel agencies.

In terms of EIA procedure some aspects could be improved to bring it closer to international good-practice, mainly:

- Scoping. The scoping phase could also be used to agree on the (technically feasible) alternatives to be studied and compared, the stakeholders to engage in the EIS preparation and the mechanisms to engage them.
- Opportunities for public participation are very limited and could be expanded to engage stakeholders during EIS preparation (e.g. in the identification and evaluation of impacts and in the definition of mitigation measures), and motivate their active involvement in the EIS review (e.g. giving special attention to directly affected stakeholders and marginalised groups and using two-way communication participatory mechanisms).
- It could be required that the developers prepare, as part of the EIS, an Environmental Management and Monitoring Plan showing how the mitigation measures will be implemented and its effectiveness guaranteed.
- Ensure transparency of EIA screening and scoping, making sure that the full EIA dossier is publicly available.

- Similarly ensure that sectoral decision-making is transparent, making publicly available the Interim Certificates and any environmental conditions attached.
- Actively promoting public participation of key stakeholders and the wider public, by engaging them in EIS preparation and review and reinforcing actions conducive to the strengthening of civil society.
- Strengthening capacities (technical and material) to ensure EIA follow-up of key projects with potential significant impacts on the environment.

Through interviews with various actors it could be discerned that the EIA system is not effective, highlighting that:

- EIAs are not always required for projects with potential significant impacts on the environment.
- Development consent has sometimes been granted to developers by-passing the EIA process.
- Conditions issued by the environmental authority as part of the EIA Certificate are not always integrated in the conditions for development consent.
- Public participation is very limited or non-existent.
- The government lacks the resources to undertake EIA follow-up.
- Procedures for development decision-making are not transparent.

Probably the most important concern relates to the way sectoral decision-making takes place, often dominated by strong political and economic interests linked to proposed tourism developments by financially strong investors.

Development consent is given by the Zanzibar Investment Promotion Agency (ZIPA), operating under the Zanzibar Investment Promotion and Protection Act, 2004. ZIPA acts as a one-stop centre for permitting. The developer submits a business proposal to ZIPA, who then distributes copies to all relevant sectoral authorities, including the Department of Environment. It is then that the Department of Environment begins screening for EIA.

Normally all proposed tourism developments have to conform to the Tourism Zoning Plan, but if not, they are assessed on a case-by-case basis, through negotiations. Final development consent is given by ZIPA in the form of an Interim Certificate which, in theory always states that EIA conditions as defined in the EIA Certificate must be complied with.

ZIPA interacts with other sectoral authorities internally and according to Internal Regulations; however these regulations are of a confidential nature and not publicly available. This is an important shortcoming in the system as it does not allow the public to follow how investment projects are authorised and on which basis, especially since the door is open for the approval of tourism development projects not conforming to the Tourism Zoning Plan. Some interviewees claimed that ZIPA has the final say in granting development consent; however as ZIPA's Internal Regulations could not be reviewed nor any case study followed in-depth, it is not possible to judge this objectively. Until recently one of the noted shortcomings in the system was that ZIPA was screening for EIA, and not the Department of Environment (see Zanzibar State of the Environment Report 2004/2005). This problem has been solved recently, but shows the type of issues that may be created around opaque decision-making.

2.2.2. Strategic Environmental Assessment

There are no SEA provisions in place nor plans to develop them. Environmental integration into sectoral policy-making and planning is done through the involvement of the Department of Environment in multi-sector working groups.

Although it is probably premature to develop a full fledged SEA system in Zanzibar, tourism development in the country would benefit from an SEA of the tourism policy, including the Tourism Zoning Plan, in light of increase of tourism and potential impacts. Such an SEA should explicitly address social and cultural aspects, as well as the institutional capacities and decision-making procedures to ensure protection of the environment. It should ensure wide engagement of civil society and stakeholders also as an exercise to promote the culture of public participation.

It would be necessary to ensure the necessary mechanisms and political will are in place to effectively integrate the results of the SEA into the relevant policies, plans and programmes. Prior capacity building/training on SEA should be provided to relevant public officials and civil society to ensure general knowledge of the tool.

3. ENVIRONMENT-TOURISM LINKAGES

3.1. Current and potential environmental impacts of tourism policy and activities

Tourism has been increasing rapidly since the mid-1980's; this is reflected in the number of hotels built, increase in associated services (e.g. tour operators, catering facilities) and pressure on the environment and natural resources. The key impacts that tourism is already having on the environment are summarised below.

Solid waste production and management

Solid waste management is a major problem in Zanzibar. There is no government strategy for solid waste management and only Zanzibar City has an open air dump which can be used by others paying a fee. Solid waste is normally disposed of along the roads and in irregular dumps.

The increase of tourism has aggravated this problem, as tourists produce considerably more waste than locals. As well the composition of waste produced by tourists is dominated by non-degradable waste (80%) as opposed to 20% for the waste produced by locals. Plastic bags, plastic bottles and tins are items mainly consumed by tourists; an interviewee said that, whereas Zanzibar was previously referred to as the 'green island' it now starts to be referred to as the 'blue island', in reference to the blue plastic bags found dumped all over.

Hotel operators would normally pay someone to take their waste away, but transporters are not controlled by the government and the waste usually ends up in irregular dumps or along the road. Under the new land lease agreements hotels are supposed to have an 'incinerator', but it is not clear to what degree burning of waste will be controlled (e.g. in relation to production of toxic fumes by burning plastics, particulate matter and other atmospheric pollutants).

Waste management does not seem to be a priority for the government, but it is an issue which required immediate attention and needs coordinated central action for it to be effective, rather than relying on a multitude of individual producers (e.g. hotels, villages) finding small-scale solutions.

Sewage management

The production and management of sewage is another major problem. For the most part Zanzibar does not have any sewage treatment plants (except for Zanzibar City), and sewage is usually disposed of through pit latrines and septic tanks. The lack of sewage treatment also poses a risk of groundwater contamination. Discharge into the sea affects not only the quality of bathing waters but also the health of corals and marine flora and fauna, and poses a health risk to the population.

Very few hotels have sewage treatment, but under the new land lease agreements all hotels will be required to have one. Existing hotels that do not have them will, apparently, be given five years to comply with the new requirements.

Freshwater sources

Freshwater is a scarce resource in Zanzibar and tourism is having a strong pressure on it. Tourists consume considerably more freshwater than locals, even more so if hotels have swimming pools and bathtubs. There are areas where freshwater is very scarce, such as the eastern coast of Unguja, where hotels are nevertheless being built. The pressure on freshwater resources should be carefully monitored by the government, in order to ensure the state of groundwater resources and prevent their overexploitation and the intrusion of saline water.

Nesting of turtles

The east coast of Unguja as well as Mnemba Island are turtle nesting beaches; however the construction of hotels along the beaches has caused a decline in the number of nesting sites (in the east coast of Unguja there were 22 hotels in 2003, whereas in 1988 there were none) (UNEP and DGIC, 2003).

Coastal erosion

Many hotels have not respected the 30m setback limit from the high-water mark. This is especially the case in north Unguja (around Nungwi), where this is claimed to be a factor contributing to coastal erosion. Other anthropogenic factors are also contributing to beach erosion, such as sand and coral mining, dynamite fishing and climate change.

Harassment of dolphins

South Unguja (Kizinkazi) is an area for dolphin watching, an activity which began in 1991; by 1993 a second company started to operate and currently there are around 25 boats offering dolphin-watching. Although efforts have been made to develop dolphin-watching guidelines, they are not always communicated to tourists, or respected either by tourists or boat skippers. Skippers, in trying to please their clients would often chase dolphins. This has already resulted in behavioural changes in dolphins which show impact due to harassment, as studied under a SIDA-funded project.

Conflicts and social impact

Some conflicts have also arisen due to tourism activity. Some of these are isolated events or conflicts that have apparently been solved (e.g. opposition to the building of a jettie in the Gema del Este hotel in Nungwi, conflicts over access to beaches by locals, especially fishermen).

Nevertheless there is growing concern by villagers and authorities that mass tourism in Zanzibar is not benefiting the population as it should. Few are the hotels that buy their supplies locally (in part due to the uncertainty in availability of certain products in the local market) and there is also shortage of qualified local staff (so personnel are brought from

abroad, especially from mainland Tanzania). Prices of certain products (especially squid and octopus) have increased dramatically due to their increased demand by tourists, making them practically inaccessible to locals (although fishermen are certainly earning more from their sales).

Moreover these conflicts have to be assessed also in light of the cultural context of Zanzibar, where the majority of the population are conservative Muslims. Many see tourism as incompatible with their culture, creating a rejection towards tourism (e.g. semi-naked people on the beach, consumption of alcohol, eating and drinking in public during Ramadan, associations between tourism and prostitution). For many working in hotels is not regarded as a socially prestigious occupation. Increased tourism, especially mass tourism will exacerbate the above conflicts and possible fuel new ones.

3.2. Environmental issues potentially constraining tourism development

An initiative led by WWF, the *Eastern African Marine Ecoregion Programme*, has identified a series of sensitive areas on the Tanzanian coast which merit special protection (see section on mainland Tanzania for further details). These priority sites include Unguja Island and Pemba Island. It is thus important to understand the key environmental threats in these areas in order to take them into account in tourism developments. These are summarised in the table below (from Tanzania Coastal Management Partnership, 2003 and WWF, 2004).

Site	Threats
Unguja Island	<p><u>High-level threats</u></p> <ul style="list-style-type: none"> • Habitat threatened from hotel construction along east coast, urbanisation and harbour construction • Mangrove clearing for charcoal making and salt pans • Coral mining at Mwangapwani • Increased shipping leading to increased likelihood of oil spills • Planned tourism development • Increase in fishing pressure • Some large mangrove areas have been cleared • Coral damage in southwest and exacerbated by coral bleaching <p><u>Medium-level threats</u></p> <ul style="list-style-type: none"> • Small-scale industries and domestic sewage from Zanzibar town affecting water quality • Over-fishing, over-harvesting of mangroves and destructive fishing practices • By-catch of turtles and dolphins, with turtle nesting sites on beaches of east coast disturbed by hotel construction and compounded by high rate of erosion
Pemba Island	<p><u>Medium-level threats</u></p> <ul style="list-style-type: none"> • Threat of habitat destruction through hotel developments and harbour construction • Oil spill potential from tanker route • Dynamite fishing and dragged beach seine nets • Clearing for prawn farming • Destructive fishing practices • Some coral mining for lime, mangrove harvesting and clearing for salt production <p><u>Low-level threats</u></p> <ul style="list-style-type: none"> • Possible fish farming and continuation of seaweed farming

Key issues of concern are:

- Waste management (discussed above);
- Freshwater availability (discussed above);
- Sand and coral mining, common for their use as construction material (although beach sand mining was not referred to as being of high concern, it was claimed that, for example in Kizimkazi-Kungoni beach approximately 5 to 10 tonnes of beach sand are mined per week);
- Sewage disposal in pit latrines and septic tanks, and disposal into sea (discussed above);
- Cutting of mangroves for firewood and construction material. In Pemba mangroves are being cut down for the construction of salt pans;
- Destructive fishing mainly with dynamite, an activity that seems to be controlled to a certain extent and that is usually blamed on mainlanders;
- Low environmental awareness, including of those dealing with tourists (e.g. offering dolphin-watching tours).

All of the above issues are having a pressure on the local environment, on which the tourism industry itself depends, as well as on natural resources which are essential to locals and to the survival of the tourism industry. These issues will have to be kept on check to guarantee the conservation of the sites and their attractiveness for ecotourism activity.

4. RECOMMENDATIONS

4.1. To enhance environmental integration of tourism policy and planning

- To guarantee adequate environmental integration it is imperative that decision-making by ZIPA is made transparent, establishing clear and transparent Internal Regulations. As approval of projects that do not comply with the stated policies and plans should be exceptional, such decision-making processes should be as transparent as possible and all decisions reasoned and justified.
- Tourism policy-making and planning could benefit from Strategic Environmental Assessment, oriented to clearly defining the type of tourism that will be promoted, determining carrying capacities, defining government actions to address potential significant environmental impacts, defining specific issues that should be addressed by project-level EIAs and determining critical restrictions to tourism development that should not be open to negotiation by ZIPA due to their potential significant impact on critical natural capital.
- Public participation in Zanzibar is very limited, due both to limited opportunities for public engagement and also to a lack of culture towards participation. Public participation could be further encouraged and opportunities open to exercise it, as it is a key element of effective EIA and SEA processes.

4.2. To enhance EIA framework

The EIA system could be carefully assessed and enhanced in order to make it effective. The discussion above points out some procedural areas of improvement. However Further aspects of improvement could be identified by carrying out a stock-taking exercise, in order to assess the effectiveness of the EIA system (i.e. assess if it is leading to better decisions and better project designs, in environmental terms).

4.3. In relation to SEA

- Provide SEA capacity building/training to key stakeholders, to ensure knowledge of the tool and its benefits.
- Carry out an SEA of the overall tourism development policy, including the Tourism Zoning Plan, in light of increase of tourism and potential impacts, and define the necessary institutional arrangement to ensure the results of the SEA are effectively integrated in the relevant policies, plans and programmes.

4.4. To enhance tourism projects

- Appropriate actions should be taken to address (controlling and monitoring) coral mining, destructive fishing, wastewater treatment, mangrove cutting and waste management. This could be done in the framework of the Management Plans for the marine ecoregions priority areas, and should include elements of awareness-raising.
- Develop and implement dolphin-watching guidelines, together with training of boat and tour operators.
- The policy of restricting mass tourism and concentrating on smaller luxury developments will allow a more environmentally sustainable tourism development, and should be pursued.
- Any tourism developments should adhere to the Tourism Zoning Plan and to the recommendations that an SEA of the tourism policy may provide.

KENYA

1. GENERAL CONTEXT

Kenya has 640 km of coastline, all in the Coast Province. The two major urban centres in the Province are Mombasa and Malindi. Tourism is now the second largest foreign exchange earner after agriculture and a major economic activity in the coastal area, accounting for 45% of GDP in the region. Tourism has increased rapidly since the 1970's, attracting many workers from hinterland Kenya and causing pressure on the natural resources, especially fishing. Although tourists visit many parts of Kenya coastal tourism is of key importance, concentrating over 50% of all classified hotels and tourists enterprises in the country, and receiving 60% of the tourists that visit the country.

Three coastal types are found in Kenya: the fringing reef shoreline in the south; the deltaic shoreline of Sabaki and the Tana River; and the ancient delta area of the Lamu Archipelago. Extensive mangrove forests are found in the Lamu Archipelago, as well as extensive wetland systems. The largest remaining patch of coastal indigenous forest in Eastern Africa is the Arabuko Sokoke forest in Kenya. The coral reef is critical to the fishing industry, supporting 70% of the offshore fishery. The coastal area is also critical for migratory and local birds, as well as a number of endemic and protected species such as the dugong, sea turtles and the Palearctic migrant waders.

2. POLICY FRAMEWORK

2.1. Tourism policy and planning

Tourism policy-making and planning is the responsibility of Ministry of Tourism and Wildlife. The first National Tourism Policy dated from 1969 and will now be replaced by the *National Tourism Policy* of 2006, which is pending approval. The stated Vision emphasises that advances in the economic and social fronts will enable environmental protection:

"Kenya's tourism shall be dedicated to providing high quality facilities and services for enjoyment by citizens and visitors alike, while being at the same time an instrument for improving the economy and livelihood of the people of Kenya... In this way, tourism shall become a rational basis for safeguarding the sustainable conservation of Kenya's unique assets of beaches, wildlife and culture for enjoyment by present and future generations". (National Tourism Policy 2006, final draft)

From an environmental point of view this is not an adequate starting point. Although certainly an improvement of livelihoods will create the right conditions for more effective environmental protection (e.g. no need to poach to secure food), this social and economic improvement might become sustained on inadequate environmental management (e.g. taking large numbers of tourists snorkelling and diving to the Marine Protected Areas, income of fishermen due to high prices of seafood obtained by overexploitation of the resources, income relying on sale of shells). It is thus important to bring the environmental dimension at the forefront of the tourism policy, at the same level as the economic and social dimensions in order to ensure its consistency with the principles of sustainable development.

The stated objectives are consistent with the wording of the vision, leaving the environmental dimension at the backstage. The stated economic objectives will be promoting the expansion of tourism activities with potential significant impacts on the environment, e.g.:

- *"Maximise tourism revenues by increasing the number of holiday tourist arrivals, and their average lengths of stay and expenditure"*, and
- *"Spread tourism earnings widely throughout Kenya, including previously neglected regions, with maximum participation of local communities"*.

These objectives will encourage further pressure on natural resources associated to tourism (e.g. over-fishing, pressure on coral reef, pressure on turtle nesting beaches). On the other hand some of the stated environmental objectives are ambiguously worded for them to effectively guide tourism policy, for example:

- *"Make the tourism industry in Kenya a leader in responsible and sustainable environmental practices"*;
- *"Develop facilities and products in national parks and game reserves in accordance with well-designed park management plans"*.

Although these are positive statements, the use of wordings such as "responsible and sustainable environmental practices" and "well-designed park management plans" remain ambiguous if not qualified.

The strategy proposed in the National Tourism Policy follows the approach that environmental sustainability of tourism development will be achieved by adequately implementing the existing environmental policy framework, mainly EMCA and the EIA regulations. Although the environmental policy framework must be implemented, the government has been facing many challenges to do so in an effective manner, due to issues such as lack of enforcement capacities.

Taking the above into account the National Tourism Policy should also be promoting the creation of a framework for environmentally sustainable tourism development. This could include for example, the identification of areas where construction of tourism infrastructure should be discouraged due to the sensitivity of the natural environment, areas where only small-scale developments should be promoted (e.g. eco-tourism initiatives) and promotion of corrective measures to be carried out (e.g. in relation to tourism structures not respecting the 30 metre setback from the high water mark and other structures contributing to coastal erosion).

The objective to develop integrated environmental management principles for all tourism projects is a good initiative, as is the promotion of EMCA awareness. Other aspects of the Policy are also welcome from an environmental point of view, such as working on awareness-raising amongst communities and tourists, promotion of eco-tourism, including the introduction of an eco-rating scheme and a shift away from mass tourism.

Environment seems to be well integrated in tourism policy-making and planning through inter-sectoral committees, with representation of all relevant authorities.

2.2. Environmental policy and planning

The framework environmental law is the *Environmental Management and Co-ordination Act, 1999*. The National Environment Council (NEC) is responsible for policy formulation, whilst the National Environment Management Authority (NEMA) is the principal instrument of the government in the supervision, coordination and implementation of environmental policies. At the Province and District levels the Provincial and District Environment Committees (PECs and DECs) are responsible for proper environmental management within their areas of competence.

The National Environmental Action Plan Committee is in charge of preparing, every five years, a National Environment Action Plan. Provincial and District Environment Committees must prepare Provincial and District Environmental Action Plans respectively. The District EAPs feed into the preparation of the Provincial EAP, and Provincial EAPs feed into the preparation of the National EAP, in a bottom-up approach. In the case of the Coast Province District EAPs have been prepared as well as a Province EAP (in draft form), outlining the key areas of concern and proposing specific actions.

An ICZM Plan is also to be prepared by NEMA, based on a survey containing an inventory of structures and natural resources and an estimation of environmental impacts, but is yet to be completed and a copy of the draft was not available for review. In this context a DANIDA project is working on the development of the ICZM strategy.

The Kenya Wildlife Service (KWS), a para-statal body, manages the Marine Protected Areas and thus plays an important role in the sustainable management of the coastal area.

2.2.1. Environmental Impact Assessment

Environmental Impact Assessment is regulated by EMA 1999 (Part VI) as well as the *Environmental (Impact Assessment and Audit) Regulations, 2003*. Guidance for their implementation is contained in the *Draft Environmental Impact Assessment and Audit Administration and Review Manual*; draft EIA guidelines have also been prepared for the tourism sector under the TTF (Tourism Trust Fund), but the draft was not available for review.

The EIA procedure according to the EMA and the EIA Regulations integrates some elements of good practice in relation to:

- Scoping (including guidelines for the scoping phase, consultations with stakeholders, identification of alternatives, preparation of ToR and identification of methodologies)
- Impact identification, evaluation, analysis of alternatives
- Public consultations during the preparation of the EIA Study
- Independent review process, including the possibility of setting up a Technical Advisory Committee
- Public consultations in the review process and option for a public hearing to take place
- Preparation of an Environmental Management Plan with mechanisms for monitoring and evaluating compliance and environmental performance
- Justified decision
- Public availability of EIA dossier

In broad terms the EIA process consists of the following steps:

- Screening. Projects listed in Schedule 2 of the EMCA, as well as those that fall under Parts IV and V (activities in relation to a river, lake or wetland) are subject to EIA. The proponent prepares and submits a Project Report, containing basic information about the project, as well as details on potential environmental impacts, mitigation measures and environmental management plan. NEMA, in consultation with the relevant sectoral authorities and

the District Environment Committee (the Provincial Environment Committee in case it affects more than one District) determines the need for an EIA.

However the screening process is not clear for projects not falling under Schedule 2 or Parts IV or V of the EMCA.

- Scoping. The proponent undertakes a scoping study to define the scope of the EIA Study and its ToR. The EIA Guidelines provide details on what to address in the scoping study, including public consultations, analysis of alternatives, identification of key concerns, definition of assessment methods, identification of affected persons, etc. The ToR are approved by NEMA, who also approves the experts that will participate. However the scoping phase, is an unnecessarily exhaustive exercise and not working properly (see below).
- EIS Study in charge of the developer, addressing, *inter alia*, impact identification and evaluation, analysis of alternatives, definition of mitigation measures, indications of knowledge gaps, public consultations, economic and social analysis of the project and preparation of an Environmental Management Plan. Submission to the environmental authority together with a non-technical summary. The results are submitted in the form of an Environmental Impact Assessment Study Report.
- Review by the environmental authority, based also on consultations with other relevant authorities and the public. A public hearing may also take place if deemed necessary by NEMA (presumably for more controversial projects).
- Public participation during the preparation of the EIA Study and also by allowing the public to review the document and express their comments in the review phase. A public hearing may be organised. The Regulations and Guidelines give detailed criteria on how to notify the public (through use of the media and using both the official and local languages). At least three public meetings must be held with the affected parties and communities.
- Decision. NEMA, after consultations with the competent sectoral authorities issues an EIA License, which may contain conditions and which is binding on the developer and the sectoral authority. The decision must be reasoned and must take into account the comments made by the sectoral authorities and other interested parties and the results of the public hearing.

There are some basic aspects that could be improved in order to bring it closer to international good-practice, mainly:

- Screening. The list of activities that require EIA do not include tourism developments; this is an important shortcoming as tourism developments are a major contributing factor to environmental degradation along the coast and tourism is a key component of Kenya's economy.

It is true that the EIA Regulations specify (Art 4.1) that *"no proponent shall implement a project likely to have a negative environmental impact..."*. This provision could be interpreted to mean that other activities beyond those for which EMCA and the EIA Regulations explicitly require an EIA could also be subjected to one; however this is contradicted by Art 3 of the EIA Regulations which does not open a window for the EIA Regulations to apply to other activities than those "specified in Part IV, Part V and the Second Schedule of the Act". Even if it could be argued that other activities with potential significant impacts on the environment could be subject to EIA, neither the Regulations nor the Guidelines define an adequate screening mechanism for such cases.

In spite of this there seems to be an implicit understanding that tourism developments require to submit a Project Report for NEMA to determine the need of an EIA, and EIA guidelines for the tourism sector are even being prepared. In any case it would be important to review the regulations in order to ensure a more transparent screening process and to reflect current practices.

The philosophy to address all development proposals on a case-by-case basis in order to determine if they may result in significant impacts on the environment is adequate, however it should integrate the following elements in the regulations and guidelines:

- Clearly specify that all projects with potential significant impacts on the environment are subject to EIA;
- Define a 'negative' list of activities that do not require an EIA, in order not to obstruct the system with vast numbers of Project Report submissions for activities that are clearly not a risk to the environment;
- Establish clear and transparent criteria to evaluate the likelihood of potential significant impacts on the environment (e.g. based on nearness to an environmentally-sensitive area, production of large amounts of polluting substances, uptake of large tracts of land, etc.)
- Scoping. The EIA regulations are not explicit about the scoping phase or the preparation of a scoping report; they merely indicate that the ToR should be an output of scoping. The EIA Guidelines provide details as to what should be included in the Scoping Report. However the extent of the information requested and level of analysis expected from a scoping report is unnecessarily complex. Such a degree of detail from a scoping study is inconsistent with the purposes of scoping, which are to define boundaries to the EIA Study and identify the key issues to focus on

(e.g. identification of key stakeholders, alternatives to be studied, methodologies), in order for the EIA Study to be as efficient as possible.

Not surprisingly this has led to confusion amongst developers who in some cases presented exhaustive scoping reports (almost full EIA Studies) and in others where scoping was by-passed. This problem is recognised by NEMA and is apparently being addressed in the revision of the regulations and guidelines.

It is recommended to make the scoping phase explicit in the regulations. However it is important to ensure the scoping study will focus only on defining the scope of the EIA Study, mainly in relation to the following aspects: geographical boundaries of the EIA; tools and methodologies to be used; identification of alternatives to be studied and compared; identification of key stakeholders and public participation modalities; and identification of key issues to address in the EIA Study.

- **Decision.** At the moment the EIA Licences can only be given by NEMA at the central level (in Nairobi); this has led to cases where, according to various interviewees, an EIA Licence would be granted in spite of recommendations from local stakeholders (including province offices of NEMA and KWS) against the project. There may be several issues that have played in generating such situations, e.g. political pressure, economic lobbies or mere detachment from the local context. The government is planning to decentralise EIA decision-making, transferring the powers to issue EIA Licences to the NEMA Province offices; this process is also being supported by a SIDA programme and will require building of capacities at the province level, as well as possibly getting more human resources to accomplish the task effectively.
- **EIA monitoring.** The EIA system requires the preparation of an Environmental Management Plan, whose implementation would be monitored by NEMA through annual audits. However the responsibilities of monitoring fall under NEMA at the central level, and would need to be decentralised to make it more effective. As well NEMA lacks the resources to carry out adequate monitoring and auditing. In this context NEMA is currently working with DFID, under the 'Risk-based Environmental Management in Kenya' programme to develop a system where development projects would be classified according to their degree of environmental risk in order to focus resources on those with larger risks, making a more efficient use of scarce resources.

2.2.2. Strategic Environmental Assessment

EMCA 1999 does not explicitly cover SEA. However under the activities requiring EIA it includes some policies and plans related to natural conservation areas: 'formulation or modification of forest management policies'; 'formulation or modification of water catchment management policies'; and 'policies for the management of ecosystems'.

It is the EIA Regulations that address SEA in a more explicit manner, although ambiguously in Part VI on "Miscellaneous Provisions". The screening for SEA is determined in Article 42(1) in a very ambiguous manner:

"Lead agencies shall in consultation with the Authority subject all proposals for public policy, plans and programmes implementation to a strategic environmental assessment to determine which ones are the most environmentally friendly and cost effective when implemented individually or in combination with others."

The above wording is weak on the following accounts:

- It refers to proposals for the "implementation" of policies, plans and programmes (PPPs) and not to proposals for their development. The wording used could well be interpreted to mean that SEA could apply to already adopted PPPs, in which case SEA would not have an influence on their substantive contents.
- The purpose of carrying out an SEA is stated as being *"to determine which ones [policies, plans and programmes] are the most environmentally friendly and cost effective when implemented individually or in combination with others"*. The purpose of SEA should be to enhance PPPs in environmental terms, minimising negative environmental effects and ensuring they will contribute to advance environmental objectives, not only to determine their environmental-friendliness.

The issues that the SEA should address is also not adequate, being limited to "use of natural resources; protection and conservation of biodiversity; socio-economic factors and protection, conservation of natural physical surroundings of special scenic beauty as well as protection and conservation of built environment of special historic or cultural significance". It is clearly missing many dimensions which will not be discussed here in detail, but which include: consistency with environmental policies and objectives; protection of the natural environment (beyond areas of special scenic beauty); natural hazards and climate change; etc.

The EIA regulations require the PPP to contain a series of elements (under Art 43(2)) which are clearly elements of an SEA Report, and not of the PPP itself. Such wording, amongst other in the EIA regulations (see Art 42(3)), are confusing

in the best case but can also be misleading⁶. There is also confusion on the information required from the SEA Study (quite limited according to Art 43(1)) and what the regulations state should be included in the proposed policy plan or programme (Art 43(2)).

From interviews with stakeholders there is confusion about whether SEAs are required or not, as they appear under the section on Miscellaneous Provisions.

Chapter 4 of the EIA Guidelines refer to SEA. For a start the guidelines are not consistent with the regulations (e.g. with regards to screening the regulations state that "all proposals for policy, plans and programmes implementation" require an SEA; thus an explicit screening would not be required. Nevertheless the guidelines propose aspects to address in screening, although they do not provide guidance as to how it will be determined if an SEA is required).

The guidelines require enormous amounts of information and analyses in phases where these are not necessary, e.g. "prediction and evaluation of impacts and comparisons of alternatives" or "preparation of a draft environmental management plan" solely to determine if an SEA would be required. In comparison to international good practices this is by all means disproportionate.

The Guidelines propose a scoping phase for SEA, which is not required under the Regulations but welcome. The activities suggested for the scoping phase are reasonable although they could be enhanced by integration elements such as: stakeholders to be consulted (not only agencies); public participation and consultation strategy; methodology and tools; alternatives to be analysed; and proposed ToR.

The guidelines also propose contents for the SEA Study, which are, in general terms, adequate (these were not analysed in detail). The guidelines also make reference to the submission and review of the SEA Study as well as decision-making. However the regulations do not address such critical stages of the SEA process.

SEA Regulations are in the process of being developed, but we did not have access to any draft versions for their review. The DANIDA Environmental Support Programme is providing assistance in their development as well as capacity building for SEA and it would be interesting for ReCoMaP to follow advances on this front.

3. ENVIRONMENT-TOURISM LINKAGES

3.1. Current and potential environmental impacts of tourism policy and activities

Tourism started to develop in earnest in the 1970's and currently Kenya's coast is a popular "mass tourism" destination, with approximately 300 hotels. The construction of hotels and other tourism facilities has put pressure on natural resources, due in part to an inadequate environmental and planning framework, pressure from large number of tourists and migrant workers settling in the area, and the activities associated to tourism. Environmental impacts of the tourism sector in Kenya's coastal area are mainly related to: damage to coral; sewage management; impacts on marine fauna; over-fishing; waste management and coastal erosion. Social impacts are also occurring, mainly in relation to beach management and prostitution.

Damage to coral

The coral reef runs parallel to the coast and supports 70% of offshore fishery. It was badly damaged by the 1998 coral bleaching and it is in very bad condition along Diani beach in the south. The establishment of Marine Protected Areas has been key to its protection.

However boat operators which take tourists snorkelling and diving are not always aware of the importance of observing a code of behaviour, and often fail to communicate the do's and don'ts to tourists. As well boat operators are said to allow any behaviour by tourists in order to keep them happy and possibly get a tip at the end. This has often resulted in damage to coral through trampling as well as the collection of shells. These damages are exacerbated by other anthropogenic activities not directly linked to tourism, such as the dragging of seine nets across the reef, the deposition of sediments due to inland deforestation and inadequate sewage management of coastal communities.

A NEMA initiative to certify boat operators is being developed by under the TTF, which will be very welcome to control damage to coral. Unfortunately draft documents of such project were not available for their review.

Actions to control damage to the marine environment should be accompanied by an aggressive communication campaign oriented to tourists (e.g. clearly spelling out the activities that are illegal, such as trampling on coral in the MPAs, picking of coral, collection of shells). At the moment the little information provided is through sporadic communications and positive notes (e.g. messages in the line of 'avoid stepping on the coral because it could kill it, and then you will not be able to observe colourful tropical fish when diving/snorkelling').

⁶ For example Art 42(3) states that "The Government, and all the lead agencies in the development of either sector or national policy, shall incorporate a chapter on strategic environmental assessment". Does this refer to a "chapter" on SEA in the PPP? Or a "chapter" in the sense of an institutional cell dealing with SEA?

There is need for the KWS to enhance the oversight of MPAs, for which resources are needed. In this sense the awareness-raising and empowerment of boat operators would be very helpful.

Wastewater management

The sewerage network is limited and normal practice is to use pit latrines and septic tanks. Although many hotels have wastewater treatment plants, it has been reported that some hotels discharge directly to the sea (State of the Environment Report, 2003). The combined pressure from illegal discharges from hotels and those from the communities may be impacting not only the quality of bathing waters but also the health of the marine environment. Details of nutrient load and damage were not available.

Impacts on marine fauna

Turtle nesting beaches have been reduced dramatically due to construction of hotels on the beach, not only through the up-taking of the physical space but also due to the security lights on shore at night, the construction of walls and other structures, and the presence of solid wastes.

There are some organisations and projects dealing with the protection of turtles, including initiatives by some hotels (e.g. Turtle Beach Hotel), but these initiative seem to be ineffective in securing high impact outputs (e.g. preventing new hotels from setting up in sensitive turtle nesting beaches, passing regulations for lighting of beaches). The current tourism policy, which seeks to develop new hotels in empty beach areas is a threat to the protection of marine turtles.

Over-fishing

The large number of tourists and migrants generate a pressure on marine resources, which has led to over-fishing in some areas (e.g. Mida Creek). The depletion of fisheries is also due in part to the damaged coral reef.

Waste management

Solid waste is taken to open air dumps, and there is no clear strategy for its adequate management. Waste generation has also increased with the large number of tourists, which generate more waste per capita than the local population, as well as a larger percentage of non-degradable waste.

Coastal erosion

Coastal erosion is mainly due to natural causes, including the natural coastal dynamics. However in some cases it is exacerbated by anthropogenic factors, such as hard structures interfering in the dynamic beach zone (e.g. hotels, restaurants, sea walls).

There is a 30m setback limit (from the high water mark) which was published as a "gazette notice", and thus it is not considered to be mandatory. But on the other hand the "Survey Act" refers to a 60m setback. Currently there is confusion as to the legal status of a setback limit; some actors claim that it only applies to areas within Marine Protected Areas, whereas others maintain that it is applicable to any coastal area. This ambiguity has resulted in projects being authorised that do not implement a setback limit, and which are contributing to accelerated erosion. For example in the case of Diani beach (south of Mombasa) erosion is changing the shoreline (see Photo 11) at a rapid pace; although the main causes are natural, hard structures on the beach are a contributing factor (Ballot *et al*, 2006).

It is thus important that any beach structures, including any erosion control structures, are subject to an appraisal to determine their adequacy.

Conflicts and social impact (beach boys, prostitution, access to beaches)

One of the key social problems pointed out by stakeholders is the presence of "beach operators" (commonly called "beach boys"). These are local people that engage in microeconomic activities on the beach, selling diverse services (e.g. boat trips, camel rides, photos) and products (see Photos 12 and 13). They are seen as a nuisance as they hassle tourists. Many of the beach operators are grouped in community associations.

In many cases access paths to beaches have been closed by hotels, and many hotels would not allow beach operators on the beaches in front of their premises. There is a legal issue involved in controlling beach operators, as beaches are public spaces. In tackling this issue Beach Management Regulations are being developed under the TTF (the draft was not available for its review).

Prostitution is also an issue in the coastal area. Many female sex workers belong to the community, although many also come from the hinterland and some have allegedly been brought under false promises of a job in the tourism industry. Underage girls are also involved, although Kenya's coast is not considered a destination for child sex tourism.

Many tourists, especially European middle aged men and women, sometimes end up marrying young locals. This is perceived as a problem in the communities as it has resulted in a large degree of school drop-out, especially by young boys seeking to marry middle aged European women.

3.2. Environmental issues potentially constraining tourism development

The National Tourism Policy promotes further tourism developments in currently untouched areas. Although the potential impacts of such developments should be carefully explored there are some environmental concerns which may also act as constraints for future tourism development.

Coastal erosion and beach accretion

Two key issues are coastal erosion and beach accretion. Erosion is taking place along different parts of the coast, threatening tourism and other structures (e.g. roads), whereas accretion is mainly found in the Malindi area. In the case of beach accretion a key problem is that there is no legal framework to determine ownership rights of new land; this is affecting tourism facilities such as the Eden Rock hotel, which has experienced rapid accretion since 1975, sometimes at a rhythm of 6 m of new beach per year (see Photos 14 and 15). This is apparently due to the transport of sediments by the river which is next to the premises, due in turn to deforestation inland.

Other issues that are degrading the environment and may act as constraint for future tourism development are sewage management; cutting of mangroves for firewood and construction material and waste management (discussed above).

The planning of new tourism developments must take into consideration the protected areas (Marine Protected Areas) and limit developments in them. Apart from the MPAs it is recommended to also take into account the Marine Ecoregions defined under the *Eastern African Marine Ecoregion Programme* (see description in section on Tanzania) (although not formally taken up by the Kenya government). In Kenya the marine ecoregions include: the Lamu Archipelago, Tana River Delta, Mida Creek-Malindi and Msambweni-Tanga (this last region shared with Tanzania). These are summarised in the table below (from Tanzania Coastal Management Partnership, 2003 and WWF, 2004).

Site	Threats
Lamu Archipelago	<ul style="list-style-type: none"> • North Banks degraded but with some level of productivity • Mangrove and seagrass beds of Lamu degraded • Certain large species (e.g. sea turtles and dugongs) decreasing in abundance • Limited control over land-use resulting in mangrove clearance • Mangrove channel dredging for shipping channels • Damage to reefs and seagrass beds due to use of beach seines • Uncontrolled coral and mangrove harvesting for lime production • Unsustainable harvests of lobster, prawns and finfish • Over-fishing by foreign fleets • Oil spills • Litter pollution
Mida Creek Malindi	<p><u>High-level threats</u></p> <ul style="list-style-type: none"> • Habitat destruction caused by prawn trawlers in northern areas • Use of beach seines and other seine nets • Mangrove clearance at Mida Creek • Prawn trawling in Malindi Bay <p><u>Medium-level threats</u></p> <ul style="list-style-type: none"> • Conversion of habitats due to urbanisation • Siltation from Sabaki river and sewage seepage from neighbouring urban developments • High population density and growth • Construction of tourism facilities • Trampling of corals and damage by divers • Tourist demand for shells and corals • Harbour development and coastal erosion
Tana River Delta	<p><u>High-level threats</u></p> <ul style="list-style-type: none"> • Deforestation in catchment area • Poor agricultural practices in catchment and delta • Clear cutting of mangroves for use and salt production • Bottom trawling has caused extensive damage in Tana Bay • Limited mangrove-harvesting controls • Oil pollution potential threat very high due to high tanker traffic • Plastic litter extensive along beaches • Limited controls on land tenure and development <p><u>Medium-level threats</u></p> <ul style="list-style-type: none"> • Water quality threatened due to reduced water flow from mismanaged dams • Increased salt-water intrusion to mangrove habitat • Aquaculture activities south of the delta • Over-harvesting of prawns and by-catch of turtle, dugongs and damage to benthic habitats

Site	Threats
	<u>Low-level threats</u> <ul style="list-style-type: none"> • Potential increased salination if increased use of Tana River upstream and/or drought
Msambweni-Tanga	<u>Medium-level threats</u> <ul style="list-style-type: none"> • Mangrove cutting for salt production, increasing through population pressure • Beach seine fishing

4. RECOMMENDATIONS

4.1. To enhance environmental integration of tourism policy and planning

- The National Tourism Policy should be revised in order to make it consistent with the concept of sustainable development. To do this it is important to ensure the environmental pillar is addressed at the same level as the economic and social pillars.
- SEA could be used as a tool to review and enhance the National Tourism Policy, leading to the definition of building blocks for the preparation of appropriate plans and programmes. Such an SEA could be prepared in the context of the SIDA/DANIDA Environmental Support Programme.

4.2. To enhance EIA framework

- Amend the EIA regulations and guidelines in order to bring them closer to international good-practice, as discussed above.
- Proceed with the decentralisation of EIA related decision-making, so province offices will have a central role. This will need to be accompanied by adequate capacity building and securing sufficient resources at the regional and local levels. The DANIDA Environmental Support Programme could be used to these effects.
- Also decentralise responsibilities for EIA follow-up (in the form of regulation monitoring and auditing), based on the classification of activities according to their degree of environmental risk.
- Adopt the tourism sector EIA guidelines, after careful review by all key stakeholders.

4.3. In relation to SEA

Before engaging in any SEA-related activities, the SEA Regulations being developed should be reviewed, in order to identify opportunities for improvement. Only when the SEA Regulations are approved will it make sense to develop accompanying guidelines.

It is recommended to follow advances on the SEA system (regulations, guidelines, capacity building) together with the Environment Support Programme. It would be desirable to carry out an SEA of the National Tourism Policy, in order to provide recommendations, not only for the enhancement of the policy itself, but also for the development of associated plans and programmes, as well as for the identification of institutional strengthening and capacity building inputs necessary to address any key issues that may be identified by the SEA.

4.4. To enhance tourism projects

- Support may be provided to ensure adequate land use plans are in place, clearly stating areas where tourism developments are acceptable and those where they are not, taking into account environmental criteria such as sensitivity of the natural environment. The marine ecoregions should be taken into account in defining land use plans.
- Tourism development would need a qualitative rather than quantitative shift. Although it is not possible to get rid of the mass tourism hotels it is recommended that new developments focus on smaller establishments catering for higher-spending tourists and the upgrade of existing hotels, in order to maximise potential of existing structures and minimise need to build on empty areas.
- Support audits of hotel infrastructures to ensure compliance with current regulations (e.g. in relation to wastewater treatment), and help define mechanisms to implement corrective measures (this may require financial incentives for appropriate investments to be made, as well as an agreement of concrete action plans between owners of structures and the environmental authorities).
- Any new establishments must comply with a setback limit from the high water mark. Setback limits must be clearly and unambiguously defined in the appropriate regulations as well.

- Pass the Beach Management Act in order to control beach activities, including certification of boat and beach operators, but ensure it respects the rights of access to the beach and that its provisions are widely disseminated and discussed with stakeholders.
- Create awareness of boat operators on do's and don'ts when taking tourists out. This should be an integral part of the implementation of the future Beach Management Act.
- More aggressive awareness raising campaigns targeting tourists on do's and don'ts, e.g. posters at airports and hotels clearly stating the shells that are illegal to purchase due to their CITES status and notifying risk of confiscation/penalties at customs.
- Ensure any erosion/accretion control structures require a permit, to be granted after an assessment of the adequacy of measures proposed (e.g. to avoid exacerbating erosion in neighbouring areas).
- Measures should be taken to provide a legal framework to deal with new land created through beach accretion, developed in consultation with directly affected stakeholders. It should mainly be oriented to define land ownership and permitted land uses.

SEYCHELLES

1. GENERAL CONTEXT

The Republic of Seychelles is made up of approximately 115 coral islands covering an area of 455 km² and with a population of around 81 000 inhabitants. Coastal tourism is the major economic activity, accounting for 46-55% of GDP, 70% of foreign exchange earnings and employing 20% of the population (UNEP, COI and CEDRISA, 2004). Tourism started in the Seychelles with the opening of the airport in 1971; tourist arrivals peaked in 1996 at 130,955 after which they declines gradually but started to recover from 1999 (they were 130,046 in 2000). Tourism activities are mainly concentrated in the islands of Mahé, Praslin and La Digue; total beds were estimated at 5426 by 2000 (Vision 21), with approximately 60% located in Mahé, 27% in Praslin, 8% in La Digue and 5% elsewhere.

Tourism is sustained on its natural resources. Its main attractions are its beaches, clear waters and marine resources (corals, sport fishing). Other attractions such as cultural and adventure tourism are gaining popularity.

2. POLICY FRAMEWORK

2.1. Tourism policy and planning

The key policy document guiding tourism development is *Vision 21, Tourism Development in Seychelles 2001-2010*. This policy puts forward eight strategic directions for tourism, including:

1. Re-defining tourism, to get away from the traditional "sun, sand and sea" destination image and reposition Seychelles as an exclusive and quality destination.
2. Expanding capacity and increasing yields, gradually increasing bed capacity to accommodate nearly 260,000 visitors by 2010. The strategy also foresees redeveloping existing hotels to upgrade quality standards.
3. Enhancing the tourism product, including development of a hotel classification scheme (including an eco-label or certification and publication of environmental performances by establishment); establishment of a Tourism Standards Board and improvement of service quality. Currently the eco-labelling scheme has been dropped in favour of a wider "sustainable tourism", as it was felt that most establishments would not qualify for an eco-label. Eco-tourism is a key element of Vision 21 and is further developed in an eco-tourism strategy.
4. Promoting eco-tourism and community benefits, as it is acknowledged that long-term economic sustainability of the tourism industry is closely linked to the continued health of the natural ecosystems on which it depends.
5. Integrating tourism for environmental sustainability, ensuring that tourism takes account of environmental carrying capacity and sustainability. The strategy includes components related to the management of National Parks and other protected areas; management of coastal zone and marine resources; tourism planning and development standards; improving infrastructure for tourism (including on water supply and waste management); and promotion of environmental conservation by tourism enterprises.

The eco-tourism aspects of the policy are developed in an eco-tourism strategy (*Towards and Ecotourism Strategy for the 21st Century*, 2003 – SETS-21). In May 2000 a multi-stakeholder *National Ecotourism Committee* (NEC) was created, which agreed on wider definition of "ecotourism" than that of the International Ecotourism Society:

"...a speciality segment of the larger nature tourism or "eco-travel" market, which covers a variety of travel industry segments, including adventure, heritage, culture, educational and sports, all linked together by an emphasis on fun, environmental sensitivity and social responsibility".

SETS-21 puts forward a series of activities which reflect the elements of Vision 21, including the compilation of baseline information on existing initiatives; the review of the environmental regulatory framework; establishing a management process (done through the NEC); the preparation of "detailed project appraisal and approval procedure" for ecotourism project proposals; the establishment of a monitoring structure and a certification scheme; continuation of a public awareness programme; training; and identification and implementation of pilot projects.

Potential environmental impacts of implementing Vision 21 and SETS-21 have to be assessed also in the wider context of demographic growth and urbanisation in the Seychelles. A key aspect is competition for space needed for: tourism developments, recreational areas for local population, urbanisation and protection of the environment. Urbanisation in the Seychelles has already led to major land-reclamation schemes in Mahé; Vision 21 has acknowledged the need to develop recreational beach areas for the local population as well as the need to preserve natural resources.

The challenge is how to ensure an appropriate balance between competing land uses, which has to occur through the use of key planning and decision-making instruments, mainly land use planning and environmental assessment. These are discussed further below.

Any proposals must take into account the particular political and socio-economic context of the Seychelles: it is a centralised political system; local authorities (District Administrators) are appointed; there is a practical absence of community-based organisations (in the sense of members of the community that formally group themselves to pursue specific goals independently of government initiatives); Seychelles has the highest GDPs per capita in the region; and poverty is not a key concern.

2.2. Environmental policy and planning

The framework environmental legislation in the Seychelles is the *Environment Protection Act* of 1994, and implementation is responsibility of the Department of Environment in the Ministry of Environment and Natural Resources (MENR). The MERN is entitled to coordinate the activities of other agencies concerned with certain aspects of environmental protection.

The key environmental policy document is the *Environmental Management Plan of Seychelles 2000-2010*, which is steered by the multi-stakeholder Environmental Management Plan Committee. The EMPS is divided into thematic areas and contains a section devoted to "Tourism and Aesthetics".

2.2.1. Environmental Impact Assessment

Environmental Impact Assessment is regulated under Part IV of the *Environment Protection Act* of 1994 and the *Environment Protection (Impact Assessment) Regulations*, 1996. Guidance for its implementation in the tourism sector has been prepared under the EMPS 2000-2010. The Department of Environment has been enhancing the EIA process by the development of working procedures and internal guidance which have become standard practice, but which are not reflected in the Environment Protection Act or the EIA Regulations. The EIA process as practiced is described below, indicating clearly those aspects which are not officially regulated.

The EIA procedure according to the Environmental Management Act and the EIA Regulations integrates some elements of good practice in relation to:

- Screening, leaving the option to require an EIA for activities with potential significant impacts on the environment
- Impact identification, evaluation and mitigation measures
- Independent review process, including the possibility of setting up an Environmental Appraisal Committee
- Public consultations in the review process
- Preparation of an Environmental Monitoring Programme with mechanisms for monitoring and evaluating compliance and environmental performance

In broad terms the EIA process consists of the following steps:

- Screening. All projects or activities listed under Schedule 1 ("projects or activities requiring environmental authorisation") or taking place in areas specified in Schedule 2 ("protected and ecologically sensitive areas") of the EIA Regulations require an Environmental Authorisation, which is granted based on an EIA Study. The proponent makes a request to the Authority or the ministry responsible for the Town and Country Planning Act (in case of developments within such Act); in the latter case the ministry responsible forwards the application to the Authority.

For large projects development consent is granted by the Seychelles Investment Bureau (SIB), who receive the application from the developer, and who in turn send it to the environmental Authority. This practice is not reflected in the EIA Regulations.

In the case of the tourism sector the projects/activities that require an EIA is very broad. Under Schedule 1 it includes: "new hotels or extension of existing hotels; facilities such as golf, swimming pools...; and restaurants". Other tourism-related developments are also covered such as harbours, sea defences and sea walls. Schedule 2 specifies the protected or ecologically sensitive areas which, if a development is to take place in them, will also require an EIA. These include the following categories (further details are given in the Regulations):

Under Protected Areas: national parks, special nature and wildlife reserves and other protected areas; historical sites and areas surrounding the National Monuments; remarkable natural landscapes; viewpoints; inter-urban buffer zones; water catchment areas; industrial risk areas; natural risk areas; any area where average slope within 50 metres on each side of the proposed development is higher than 1:2 gradient; earth erosion areas; high elevations; and skyline.

Under Ecologically Sensitive Areas: natural habitats for rare, protected or endemic species for fauna and flora; marshes and wetlands habitats; streams and surroundings; coastal strips; beaches and inter-tidal zones; seabed; and small islands and outlying islands.

However the Minister may waive a required EIA for a specific project, with approval of the Cabinet and stating the grounds for the decision. This is a prerogative of the Minister which may be prone to abuse if no adequate regulatory mechanisms are in place, but which seems to be common to legislation in other sectors.

The Authority decides, based on guidelines and likely impact, if the undertaking is subject to EIA Class I or Class II. It is not clear in the Regulations what is the substantive difference between these two categories, apart that Class I EIAs have to be prepared by the proponent based on ToR prepared by the Authority, and Class II EIAs may be developed by the Authority or by the proponent based on their own ToR. The practice (not reflected in the EIA Regulations) is that Class II are required for projects with non-significant potential impacts on the environment, whereas Class I projects would require a full EIA. In determining the Class under which the project falls, the Authority not only considers the type of project and its location, but may also do site visits and talk with stakeholders if deemed relevant.

In case of Class II projects the EIA consists of a rapid appraisal exercise done (usually) by the Authority and based on a checklist to determine compliance with regulations. The checklist is a standard format and the results are compiled in an "Appraisal Form". The checklist and appraisal form have been developed by the Authority for internal use and not reflected in the Regulations. A Class II EIA must be completed within 14 days.

- Scoping. There is no formal scoping phase foreseen in the EIA Regulations, but a scoping phase has nevertheless been established in practice and required by the Authority. Scoping consists of consulting various stakeholders (a standard list of consultees exists – "Scoping List" –, and additional stakeholders may be added by the Authority). In the "scoping list" consultees (stakeholders to be "scoped") find a standard text mentioning the issues that they should comment on (mainly related to how the proposed project may affect their area of concern), and they have to write down the issues they consider relevant. The proponent compiles the written comments and prepares a summary, in the form of a "Scoping Report".

Since approximately 2004 the Authority may also require the organisation of a "Public Meeting" as part of the scoping exercise. The Authority has developed "Guidelines for Public Meetings" instructing how notifications are made and how the meetings are conducted. Minutes of the meeting are kept and included in the Scoping Report. Although public meetings during scoping are generally found useful they are not required on a systematic basis.

The whole scoping procedure, including the public meetings and all associated documents (e.g. "scoping list", "guidelines for public meetings") are not reflected in the EIA Regulations.

On the basis of the Scoping Study the Authority prepares ToR for the EIA Study, which are often discussed with the consultants.

- EIA Study. The EIA Study is prepared either by the developer or by the Authority itself, based on whether it is a Class I or a Class II EIA. The contents of the EIA for Class II projects, and the way they are conducted are described above. For Class I projects contents of the EIA Study are specified in the EPA and the EIA Regulations. These address roughly normal issues covered by most EIA systems, e.g. environmental baseline, identification and analysis of impacts, mitigation measures, description of impacts according to their characteristics, and analysis of alternatives. However the analysis of alternatives seems to be poorly treated in the EIAs.

An "Environmental Monitoring Programme" is also required as part of the EIA Study. However in practice a full "Environmental Management Plan" is requested, of which the environmental monitoring programme is a component.

One aspect which is not addressed in the EIA Study are the socio-economic impacts, an omission which is unfortunate in the context of the Seychelles, as it is explained below.

- Review. The EIA Study is reviewed by the Authority with the aid of an Environmental Appraisal Committee, if deemed necessary. Two phases are foreseen: the first in reviewing if the EIA and other documents are comprehensive enough or if information needs to be completed (in this case the Authority may consult with individuals, organisations or agencies); the second is after the Authority is satisfied with the EIA Study submitted, in which case it is made available for the public to review and to submit written comments. During the public review the EIA Study has to be available for a period of time specified by the Authority.

Although not specified in the Regulations the Authority is sometimes requiring that a Public Meeting be organised. This is new practice which is yet to be fully implemented, and a public meeting would be organised if there is a request from a member of the public. The relevant District Administrator would be consulted to see if there is a need for it.

- Public participation. During scoping participation is limited to the consultation of specific stakeholders, who express their concerns in writing. During the review period of the EIA Study comments may also be made by any Seychelles national in writing. More open opportunities for public involvement start to be developed, such as the public

meetings during the scoping and review phases. From all of the opportunities for public participation described above only the public review of the documentation is explicitly provided for in the Regulations.

- Decision. After the public review the Authority decides on whether or not to grant authorisation, issuing either a "Notice of Acceptance" or a "Notice of Refusal". Normally the Notice of Acceptance is accompanied by conditions. The planning authority (e.g. Town and Country Planning, or the SIB) have to take into account the decision of the Authority, but it is not binding on them. In case of conflicts negotiations would normally take place.
- Follow-up. The ToR would normally require the preparation of an Environmental Management Plan and the designation by the proponent of an "environmental officer" who would be responsible for its implementation, and who would be responsible for liaising with the Department of Environment and reporting results of monitoring on a regular basis. The Authority would also carry out inspections to verify compliance with the EMP.

There are some aspects that should be improved in the EIA system to bring it closer to international good-practice and enhance its effectiveness, mainly:

- General. It is highly recommended that the EIA regulations are revised so they integrate current EIA practice (e.g. elements in relation to the way Class II EIAs are conducted, procedures for scoping, public hearings during scoping and EIA review, etc).
- Screening. The list of projects/activities requiring EIA is very broad. Although the criteria under Schedule 2 may be reasonable indicators of potential significant environmental impacts, the list of activities under Schedule 1 is very broad and includes many facilities from which significant environmental impacts would normally not be expected if not present in environmentally sensitive areas (e.g. small hotels and restaurants). There is a risk of numerous and unnecessary EIAs being prepared, saturating limited financial and human resources within the competent environmental authorities, which could be better employed to ensure adequate and comprehensive reviews and follow-up of EIAs of projects with potential significant potential impacts on the environment.

Although developments that are not likely to have significant impacts on the environment would be classified as Class II and thus not require a full-fledged EIA, the Authority has full discretion to designate the Class. The current screening system may be currently working in practice, but with the rapid increase of large projects subject to EIA (approximately 20 per year as opposed to 2 or 3 a couple of years back, according to information from the Department of Environment) it may be desirable to have clearer screening criteria (e.g. based on thresholds and transparent criteria). For the case of projects where it is debatable whether they should be classified as Class I or Class II, it would be desirable for the Authority to have an obligation to state the reasons for its classification.

Although not used to date, the prerogative of the Minister - after approval of the Cabinet -, to exclude a certain project from EIA, is prone to abuse if not well regulated, in spite reasons for the decision must be given. Under international EIA practice this is normally accepted for developments concerning issues related to defence, national security and emergency response, but is not considered good practice to leave the prerogative open to be applied to any development.

In other systems certain mechanisms have been developed to be able to grant development consent in spite of significant negative impacts on the environment. One such mechanism in place in the European Union is based on the concept of "Imperative Reasons of Overriding Public Interest" (IROPI) used to justify developments affecting highly protected natural sites (in this case, Natura 2000 sites). But in any case an adequate EIA is necessary to provide necessary information to appraise and make a case for IROPI.

- Scoping. International good practice dictates that a scoping phase is necessary in order to ensure the EIA is correctly focused from the start. The scoping phase should be participatory and used to determine key aspects to be addressed in the EIA study.

The scoping, as carried out in the Seychelles, is oriented to identify key issues to address in the EIA Study. However it does not address some key aspects: identification of alternatives to be analysed, identification of key stakeholders and public engagement mechanisms, tools and methodologies to be employed for impact identification and evaluation.

- EIA Study. Two key aspects seem to be absent in the EIA Studies: adequate analysis of alternatives, and addressing socio-economic impacts. The EIA should be a process oriented to enhance, in environmental terms, the design of development projects as well as inform the decision-making process. For this to be effective it is important that EIA takes place early in the planning phase, so findings can be readily incorporated. "Early" means that options for the project should still be open to discussion and analysed from an environmental point of view (i.e. the analysis of alternatives), exploring possible variations in relation to, e.g. location, technologies used, routings for lineal projects, construction materials, etc. The analysis of alternatives in the Seychelles should be strengthened in order to reinforce this principle.

Secondly explicit attention should be given to socio-economic impacts. As it is explained below some of the major concerns of new tourism developments are their potential socio-economic impacts, especially for large hotels that will bring in large numbers of expatriate workers and tourists, putting pressure on natural resources such as freshwater as well as social services such as housing, education and health. This dimension should be particularly developed under EIA, as there are no other mechanisms in place to assess these impacts.

- Review and Public participation. Effective public participation has been widely recognised as key to effective EIA worldwide, and for public participation to be effective it must be based on two-way communication mechanisms, take place from the early phases of the EIA process and be inclusive. Currently two-way communication mechanisms start to be employed in the Seychelles, in the form of public hearings, but these are not reflected in the regulations and are not organised on a systematic basis. The same occurs for "early" participation, as the only public involvement foreseen in the regulations takes place once the EIA Study has been completed.

Other problems with public participation are that people are often unaware of notifications, as they often do not notice advertisements in the media (UNEP, 2007) and non-technical summaries are not provided for the consumption of the general public. The Department of the Environment has at some point suggested the preparation of non-technical summaries which explicitly explain the impacts known to be of concern to the general public (more specifically on issues such as access to beaches), but for some reason this initiative has not taken off. Also there is no feedback system to tell the public how their comments have been addressed, which would contribute to motivate participation.

Public participation in Seychelles must be appraised on its particular context. It is a small State with a small population which only gained independence thirty years ago; moreover it was ruled under a single-party system until 1995. These factors have contributed to the development of a social system where the organised civil society is practically absent and where public involvement is very limited. In the case of EIA very few persons make comments to the EIA Studies during the review phase.

A recent review of public participation in environmental assessment in Africa (SAIAE, 2003) as well as a review of environmental assessment in the West Indian Ocean (UNEP, 2007) revealed the following particularities for Seychelles (independent of the EIA process), which have been confirmed in the present mission:

- People do not expect to be able to influence decisions perceived to have been taken at a political level;
- Being a small country it is difficult to achieve anonymity, so people are unwilling to make comments against the government for fear of negative repercussions;
- People feel intimidated to comment on technical reports when they do not have the technical capacities to assess them properly;
- People are not motivated to be involved as they do not understand the EIA process.

Other specific drawbacks of the public participation provisions are explored in UNEP (2007), but not detailed in this report as they are of a more specific nature (e.g. in relation to timings and places where reports are available for public review).

Ways could be found to encourage and facilitate public involvement through e.g.

- Requiring a non-technical summary which, apart from summarising the overall findings, explicitly mentions aspects of key concern for the population, such as potential impacts on access to public spaces.
- Actively promoting public involvement, in order to gain the confidence of the public in the system. Find complementary mechanisms to notify public hearings and other opportunities for public involvement apart from notices in the newspapers, e.g. through the use of radio and TV, postings and direct invitations.
- Implement a feedback mechanism so the public sees the results of their input. This should be part of a requirement for the Authority to justify its decision and explain how results of public involvement were incorporated.
- Decision. In bringing the system closer to international good practice it is desirable for the decision on the EIA to be justified, explaining how the results of public participation were integrated, and made publicly available together with the full EIA dossier. This will contribute to create a transparent and accountable decision-making system.

The clause that gives the prerogative to the Minister and the Cabinet to waive the requirement of an EIA should clearly indicate the cases where this may happen (e.g. defence, emergency response). In case it is felt necessary to have mechanisms to approve projects affecting critical natural capital, it is recommended to develop an appropriate mechanism (based, *inter alia* on the EIA system), such as the concept of 'Imperative Reasons of Overriding Public Interest').

2.2.2. Strategic Environmental Assessment

No SEA mechanisms are in place nor under development in the Seychelles. Although it may not be necessary to develop a full framework for SEA in the Seychelles, the country could benefit from carrying out an SEA of their tourism policies, plans and programmes, in order to ensure they are environmentally sound. Prior to carrying out any SEA it would be advisable to provide capacity-building/training on SEA to sectoral authorities, NGOs and consultants, and agree on the mechanisms that would be used to ensure the results of any SEA are integrated in the policy-making and planning processes.

3. ENVIRONMENT-TOURISM LINKAGES

3.1. Current and potential environmental impacts of tourism policy and activities

In broad terms it can be said that tourism is not having any significant impacts on the environment in Seychelles. This has been a result of the Government's policy which has always emphasised nature conservation as a key component of development, and where tourism infrastructure has been tightly controlled in terms of e.g. location, design, height of buildings. Being a faraway destination, and thus expensive, Seychelles from the beginning targeted a small but high-spending segment of the market, avoiding mass tourism; this helped minimise negative environmental impacts.

This is not to say that tourism has not had any impacts on the environment, which have certainly been taking place, e.g. in relation to construction of hotels on turtle nesting beaches, oil discharges from boats, damage to coral and collection of shells. However these impacts are not considered to be significant.

The main challenge for the Seychelles is probably related to the competition for scarce physical coastal space. It is estimated that more than 90% of the population is concentrated on the narrow coastal strip (Payet, 2006), especially in the east coast of Mahé. The coastal plateau land area is only 4,8% of the total land area in Mahé, 5,1% in Praslin and 16% in La Digue (Payet, 2006), which gives an indication of the competition for coastal space.

Four main land uses compete for the coastal space: (1) urbanisation; (2) tourism infrastructure development; (3) recreational use by the local population; and (4) nature conservation. Urbanisation has already led to four major land reclamation projects in Mahé (see Photo 16) and new hotels are seeking available beach areas, whereas the local population is increasingly concerned about the reduction of beach areas available for recreation (e.g. in Port Launay) and sensitive nature areas start to be threatened (e.g. wetlands, turtle nesting beaches, dynamic beaches).

By the end of 2000 there was a capacity of 5426 beds on Seychelles, hotels with approximately 2062 beds had been approved for development and hotels with approximately 1568 beds were proposed and waiting for approval, all of which would raise total bed capacity to approximately 8900 beds, a 64% increase (Vision 21). Vision 21 sets a target to reach an average of around 168,500 visitors per year by 2010 (as opposed to approximately 130,000 in 2000).

To this it must be added that Seychelles is promoting the establishment of 4 and 5 star hotels, which usually have a high employee-tourist ratio (approx. 4 employees per tourists). As Seychelles has near full-employment this means that there might be a considerable inflow of expatriate workers.

Land Use Planning would normally be a key instrument to ensure balance between competing land uses, clearly indicating the appropriate land uses based on a series of criteria which should include environmental protection. A Land Use Plan is yet to be developed, but meanwhile large hotels have already been authorised. It is recommended to prioritise the development of a Land Use Plan and carrying out an SEA for it, in order to ensure it adequately integrates the environment. SEA would also be a useful tool to help identify cumulative impacts of tourism developments, as well as elements of cumulative impact assessment that would need to be addressed by individual EIAs.

The second key challenge concerns socio-economic impacts of the growing tourism industry. The inflow of tourists and expatriate workers will have an important pressure on socio-economic services such as housing, freshwater, education and health services. Currently there are no mechanisms in place to assess such socio-economic impacts of tourism development projects and there is a risk that a point will be reached where pressure on services may force quality to diminish. It is recommended to address this dimension, preferably by integrating it within the EIA system, or alternatively through the development of a Social Impact Assessment (SIA) mechanism.

An SEA of the tourism policy would also be recommended to ensure expected growth will not imply exceeding carrying capacities of the natural environment and socio-economic services. Such an SEA would allow the assessment of cumulative impacts which is overseen through project-level EIAs, and provide valuable information on issues that should be addressed by project-level EIAs.

3.2. Environmental issues potentially constraining tourism development

Probably the key environmental concern that acts as a constraint for future tourism development is coastal erosion, which is important in various parts of Seychelles (see Photo 17). As Comoros, Seychelles has been experiencing unusually high spring tides, which have accelerated erosion. Land use planning must adequately address the dynamic of the shoreline and coastal erosion control structures must be clearly controlled by the authorities.

Coastal areas needed for the protection of sensitive ecosystems and biodiversity should also be a constraint to tourism development, and reflected in a Land Use Plan.

4. RECOMMENDATIONS

4.1. To enhance environmental integration of tourism policy and planning

- Develop a Land Use Plan that clearly integrates environmental criteria, both in terms of environmental protection and availability of natural resources (e.g. freshwater)
- Contrast tourism policy to the physical areas available for coastal tourism development in order to adjust expectations to carrying capacities of the natural environment, in order to avoid aiming for increasing numbers of arrivals and tourism infrastructures which may only be met at the expense of the degradation of critical natural capital

4.2. To enhance EIA framework

- Revise the EIA Regulations in order to integrate the current practices, e.g. in relation to:
 - Screening: determination of a project as Class I or Class II, e.g. based on site visits
 - Scoping: define the scoping procedure and the public hearing during scoping
 - Review: integrate the use of public hearings during the review phase
 - Environmental Management Plan: integrate clearly the requirement for an EMP
- Amend the EIA Regulations to bring them closer to international good practice, as described above.
- Carry out a stocktaking assessment of the EIA system in Seychelles, in order to assess the effectiveness of EIA as a tool to enhance decision-making and project design from an environmental point of view, and be able to propose ways of improvement.

4.3. In relation to SEA

- Carry out an SEA as part of the preparation of the Land Use Plan for Seychelles, as a necessary exercise and also as a pilot SEA. Establish the necessary conditions to ensure a best practice SEA will be carried out, clearly defining the objectives and procedures and using a team of internationally recognised experts with wide experience in SEAs of land use plans. It is critical that such an SEA provides useful outputs, not only to guarantee a good environmental integration into the Land Use Plan, but also to show the benefits of SEA and identify key elements needed to develop an SEA framework for Seychelles.
- Carry out an SEA of the tourism policy in order to ensure it is consistent with the carrying capacities of the natural environment and socio-economic services, assess cumulative impacts and provide valuable information on the issues that should be assessed under project-level EIAs. The same recommendations mentioned in the above paragraph are needed to ensure the quality of the SEA.
- Provide capacity-building/training to staff of relevant authorities, as well as targeting NGOs and consultants in order to gain a good understanding of the tool, its benefits, and the way it should be integrated into the policy-making and planning processes.

4.4. To enhance tourism projects

- Actively promote public participation and the involvement of organised civil society in any initiative
- Ensure recreational space for locals, especially in beach areas, is maintained and/or enhanced
- Ensure land use planning integrates sound environmental criteria to define appropriate land uses and ensure an adequate balance between urbanisation, tourism development, recreational space for the local population and nature protection.

MADAGASCAR

1. GENERAL CONTEXT

Madagascar is considered the fourth largest island in the world and has more than 5000 km of coastline, comprising diverse habitats and ecosystems. Due to its size and isolation from mainland Africa it hosts a wide variety of endemic and rare species of flora and fauna, which provide one of the key attractions for tourism.

The main coastal ecosystems are mangroves, lagoons, sand beaches and coral reefs. Madagascar has the largest and most important extension of mangrove in the West Indian Ocean (around 3300 km²), most of it (98%) on the west coast. However some mangroves, especially those close to urban centres, are badly damaged or have disappeared altogether (especially around Tulear). Sand beaches are extensive and cover most of the west coast. South of Morombe there are important turtle nesting beaches. As for coral reefs the most important are found in the south-west (e.g. the 'Grand Recif' in front of Tulear), but generally these are still not well studied (especially in the east coast).

The main economic activity is agriculture, accounting for 34% of the GDP and 80% of the labour force. Tourism is an economic activity that is only kicking off, but it is already the second source of foreign revenue after coffee. The lack of infrastructure (especially transport) is a key limiting factors for tourism development.

According to the Tourism Master Plan 82% of the tourists coming to Madagascar come for reasons related to nature: 55% for ecotourism; 19% for 'sun and beach' and 8% for sports/adventure. These tourists would mainly go to the national parks and the beach areas. 'Sun and beach' tourism is mainly concentrated in the North-West (Nosy Be) and North-East (Sainte Marie island), where most of the mass tourism and up-market resorts are found. However many tourists also visit the South-West (the beach areas around Tulear, mainly Ifaty-Andavakoa to the North and Anakao to the South), frequented mainly by low-budget travellers but where up-market hotels are also being established.

2. POLICY FRAMEWORK

2.1. Tourism policy and planning

Tourism policy-making and planning is the responsibility of Ministry of Tourism. The framework Law is the *Tourism Charter* (Law No 90-033) and the key planning document the *Tourism Master Plan* (2003), which includes (in Part III) the *Tourism Director Plan for Madagascar*.

The Master Plan identifies approximately 170,000 tourist arrivals in 2003 (although it is also mentioned that maybe only 60-66% of those can be considered 'real' tourists), and foresees an increase in tourist arrivals of more than 500,000 for 2013. In terms of coastal tourism it recognises that infrastructure is well developed only in the main tourism centres. There is no policy to target a specific type of tourism (e.g. upmarket), although it is mentioned that the classification of establishments has to be consistent amongst establishments and with the quality/price ratio offered.

There is a policy however to further develop the 'sun and beach' tourism, taking it from 19% of the market currently to 40%. This increase would mainly centre around Nosy Be in the NW, Sainte Marie in the NE, Tulear/Ifaty in the SW and Fort Dauphin in the SE. To this it must be added that coastal areas are also destinations for other types of tourism. For example, the Tourism Director Plan proposes the development of five circuits: Circuit 1 ('Marvels of Nature') includes the coastal town of Tulear and the beaches around Ifaty; Circuit 2 (the west, 'Marvels of Madagascar') includes the beaches around Morondava, although beach tourism is not specifically targeted; Circuit 3 (in the north, 'Paradise Islands and the Coast of Spices') includes Nosy Be and the northern beaches; Circuit 4 ('Discovery of the Jungle') includes Sainte Marie and the whole coast from Maroantsetra to Manakara; and Circuit 5 (the 'spiny') includes the south coast, from Fort Dauphin to Ifaty, as well as Morombe, emphasising the beaches in Ifaty and Morombe/Andavadoaka. Thus coastal issues are a direct concern to tourism development in the whole of Madagascar.

The Tourism Master Plan emphasises the importance of environmental protection and sound environmental management. However due to the nature of the threats to the coastal environment, it will be key to ensure adequate inter-sectoral coordination (especially tourism-environment-mining) in a context of land use planning to guarantee sound management of the coastal area and its resources, as well as the sustainability of coastal tourism.

The National Association for the Management of Protected Areas (ANGAP) is a not-for-profit private association of public interest, with a mandate under the Ministry of Environment to establish and manage natural protected areas. ANGAP is meant to play an important role in the development of ecotourism within the protected areas, as defined in the *Madagascar Protected Area System Management Plan*.

In 1999 ANGAP developed an *Ecotourism Policy* for protected areas, and the *Protected Area System Management Plan* selects and proposes a classification of protected areas for ecotourism development, establishing four levels of priority for parks and reserves: Level 1 – those with exceptional potential; Level 2 – those with important potential; Level 3 – those with potential limited to specialist visitors; and Level 4 – those where the ecotourism potential is not economically viable or not yet known. Coastal areas include Priority 1 sites (Nosy Ve off Anakao in the SW and Nosy Mitsio in the

NW), Priority 2 sites (Masoala in the NE) and Priority 3 sites (Kirindy Mitea and Baie de Baly in the W). ANGAP is supposed to develop Ecotourism Development Strategies for each of the priority levels, as well as Ecotourism Plans for each of the sites. These plans have not yet been developed and ANGAP is facing some constraints in this front due to their weak institutional status (e.g. no enforcement capacities) and problems in finding the right formula for inter-institutional and inter-stakeholder cooperation (e.g. between ANGAP, SAGE – Support Service for Environmental Management, local associations and traditional authorities).

Other important instruments for tourism development include the *Tourism Territorial Reserves* (RFTs – *Reserves Foncières Touristiques*), some of which are classified as *Zones of Ecotouristic Interest* (ZIE – *Zones d'Intérêt Écotouristique*) foreseen under the Tourism Master Plan. The idea of creating RFTs is to simplify administrative and judicial procedures for investors, providing them with a series of areas where land tenure is guaranteed and for which development guidelines are provided (e.g. in relation to admissible architecture and use of green areas), and for which investors must provide the necessary infrastructure. Studies addressing land tenure, social, economic, cultural and environmental aspects are carried out to define guidelines. In spite of the attraction of the concept various problems have been encountered; from the investors point of view selected RFTs have been criticised due to issues of distance, lack of infrastructure and lack of attractiveness of sites. RFTs have sometimes also encountered problems due to opposition from local and traditional authorities

Although tourism development has been studied and is being planned, the system is facing difficulties in implementation. Adding the problems described above to the lack of land use planning and the risks this conveys (e.g. potential for incompatible activities being authorised in a same spatial area) there is a risk that tourism development will remain largely anarchic. From an environmental point of view it will be important to undertake actions at a strategic level that will guarantee an orderly development and inter-sectoral compatibility, both to ensure adequate coastal zone management as well as to ensure the sustainability of coastal tourism.

2.2. Environmental policy and planning

The framework environmental law is Law No 90-033, the *Environment Charter*. The Ministry for Environment, Water and Forests is the central environmental authority in Madagascar, under which various agencies and services operate. The key instrument for environmental planning and management is the *National Environmental Action Plan* (PNAE), adopted in 1991 and which was one of the first to be developed worldwide. The PNAE covered a period of 15 years and was divided into three phases (PE1: 1991-1996; PE2: 1997-2001 and PE3: 2002-2007).

The institutional framework for environmental management was created under PE1, and included, *inter alia*:

- the creation of national specialised institutions (e.g. ONE and ANGAP);
- the creation of Environmental Cells within sectoral ministries, key for environmental integration;
- the elaboration of environmentally-integrated sectoral policies.

The role of ANGAP in the creation and management of protected areas has been described above in relation to tourism. The other key institution is the National Environmental Office (ONE), which is the executive organ of the PNAE, in charge of the management, coordination, monitoring and support of public and private environmental programmes. In terms of the subject of this analysis ONE is important due to its role in the EIA system. With respect to the coastal areas, an ICZM Plan was foreseen to be developed under the PE2, but is yet to happen.

2.2.1. Environmental Impact Assessment

Environmental Impact Assessment is regulated by the MECIE decree (No 99-954 – *Mise en Compatibilité des Investissements avec l'Environnement*). General Directives for EIA have been developed as well as sectoral EIA guidelines for tourism projects, both with support of USAID.

The EIA procedure according to the MECIE decree integrates some elements of good practice in relation to:

- Screening based on thresholds and allowing case-by-case consideration based on scope of the project, sensitivity of the receiving environment and generally the potential environmental impacts of the proposed project.
- Scoping in the sense that the ToR are discussed with stakeholders, who have an opportunity to influence them.
- Allowing for public participation during the EIA review phase, in the case of projects with likely significant impacts on the environment, based on a two-way communication process (public enquiry).
- Preparation of an EMP for the effective implementation of the mitigation measures, and compliance of which is monitored by the competent environmental and sectoral authorities with support of the local authorities.

Other aspects of international good practice are reflected in the General Directive on EIA, but only in the form of recommendations, e.g.:

- suggesting that the EIA should take place at the same time that the project is being elaborated, so the results of the EIA can be integrated in its design;
- recommending an analysis of alternatives;
- recommending public engagement during the preparation of the EIA study.

In broad terms the EIA process consists of the following steps:

- Screening. There are two environmental assessment modalities: Environmental Impact Assessment (EIA) or an Environmental Agreement Programme (PREE) depending on the significance of potential environmental impacts. All developments under Annex I of the MECIE decree require an EIA, as well as all activities or their modification, taking place in designated sensitive areas. Furthermore the Ministry of Environment or the sector Ministry may decide, in consultation with the sectoral environmental cell concerned, that other projects may have significant impacts on the environment and thus would require an EIA.

According to Annex I the following tourism projects require an EIA: hotels with more than 120 rooms; any recreational-touristic development with a combined surface of more than 20 ha; and restaurants with capacity for more than 250 clients. Other infrastructures associated with tourism would also require an EIA (e.g. roads, ports).

All developments falling under Annex II would require a PREE. In the case of tourism these include: hotels between 50 and 120 rooms; any recreational-touristic development with a combined surface between 2 and 20 ha; and restaurants with capacity between 60 and 250 clients.

- Scoping. The MECIE decree establishes that any physical or moral person may contribute to define the scope of the EIA and that the ONE has to take such inputs into account in preparing the ToR, together with the relevant sectoral environmental cells and the promoter. According to the ONE it is normal practice, in the case of large projects, to hold a meeting with stakeholders in the affected locality in order to present the ToR (this is reflected in their "Procedure Manual", but which we did not have an opportunity to examine).
- EIA Study is in charge of the developer. The MECIE decree only specifies that it must include, *inter alia*: a description of the project; an analysis of the environmental system potentially affected by the project; an analysis of potential environmental impacts from the foreseen interventions; an EMP and a non-technical summary in both Malagasy and French (addressing the initial state of the environment, modifications caused by the project and mitigation measures envisaged). The EIA study must be accompanied by an EMP stating how the mitigation measures will be implemented, and which the developer has an obligation to implement and report on.
- Review. The EIA dossier is subjected first to public participation (see below) and is then reviewed on administrative and technical terms by an *ad hoc* Technical Evaluation Committee (CTE), designated by the Ministry of Environment based on proposal by the ONE and the sectoral ministries concerned. It is normally integrated by the relevant sectoral environmental cells, the ONE and the Ministry of Environment (who chairs it). It may also integrate other experts. The MECIE decree also allows the CTE responsibilities to be decentralised.
- Public participation can take three forms, or a combination of them: (1) on site consultation (*consultation sur place*); (2) public consultation (*enquête publique*); or (3) public enquiry (*audience publique*). The modality (or combination) to be used is decided by the CTE based on the scope of the project, the sensitivity of the receiving environment and the potential environmental impacts. Projects with no major significant potential impacts would only be required an online consultation; projects with medium-level impacts a public consultation and projects with major impacts a public enquiry. A public consultation would always be complemented with an onsite consultation, whereas a public enquiry would be complemented both with an onsite consultation and a public consultation.

The onsite consultation refers to allowing the EIA dossier to be accessible for public review in a designated site, and given them an opportunity to express their comments in writing. The MECIE decree allows a consultation time between 10 and 30 days. The notification is made by the Mayor and often a half- or one-day meeting would take place between the developer, the ONE and the local population, as illiteracy is often a problem. If the affected area is highly inaccessible then the Head of the Fokotany (local authority) is asked to explain the dossier.

The public consultation is carried out by the ONE based on a survey of the affected population during a period between 15 and 45 days. Interested stakeholders may be designated as *enquêteurs*.

The public enquiry is a formal process based on the simultaneous consultation of the stakeholders according to regulated procedures and monitored by auditors. It takes place during a period between 25 and 70 days.

- Decision. Based on the EIA report, the results of the public participation and the review of the CTE, the Ministry of Environment decides whether to issue the Environmental Consent.

There are some basic aspects that could be improved in order to bring it closer to international good-practice, mainly:

- Scoping. The scoping only refers to the preparation of the ToR and giving an opportunity to the public to have a say. It would be advisable to spell-out the issues that should be addressed in a participatory scoping phase, such as: the geographical delimitation of the area to be studied, the alternatives to be analysed, the tools and methodologies to be employed, the public engagement strategy, the identification of key stakeholders and the key environmental issues to be addressed.
- EIA Study. The scope of the EIA study is also very limited, omitting key aspects that should be covered, especially: an analysis of alternatives, and addressing socio-economic and cultural impacts. This last aspect is rather important in the context of Madagascar. Issues such as *Fady* (taboos), traditional power structures and decision-making processes, and culturally significant areas (e.g. inhabited by spirits) may be threatened by development projects and lead to conflict and instability. Often these aspects may only be properly addressed by the involvement of social scientists in the EIA (e.g. anthropologists), who may also help to find the appropriate communication mechanisms between traditional authorities, local authorities, national authorities and developers.

Some issues relating to socio-economic impacts are addressed under the sector EIA Guidance for the tourism sector, but only as recommendations and without guidance specific to the Malagasy context.

- Public participation. The criteria to decide the modality of public participation to be used are left to the discretion of the competent authorities. This aspect could be amended to ensure effective participatory processes. It would also be useful to promote public engagement during the preparation of the EIA study.

Madagascar poses a particular challenge for public participation due to the complexity of its traditional structures and cultural dimensions (as described above). As clearly pointed out by Blanc-Pamard and Fauroux (2004), western-style public consultations are often ineffective as communities and traditional leaders may actively engage in participatory processes and even reach agreements, but these may never be implemented as 'real' decision-makers may often be 'hidden' in the formal participatory processes.

In some cases it has been claimed that the public participation which takes place does not reach all stakeholders, often leaving out actors such as heads of lineage in the communities. The use of the presidents of the Fokotany is also claimed not to be the most adequate channel to express concerns, as under the new Constitution these local authorities are no longer elected but designated by the Government. It is feared that often presidents of Fokotany may not represent the interests of their localities. Social scientists could be engaged to guarantee adequate representation of the affected stakeholders at the local level.

- Decision. The decision on the EIA, both the report issued by the CTE and the Environmental Consent should be justified, e.g. in relation to how the results of the public participation were integrated.
- EIA monitoring. The EIA system requires the preparation of an EMP, whose implementation would be monitored by the competent authorities through audits. However in many cases distances and lack of resources make monitoring inefficient. Mechanisms could be devised to ensure adequate monitoring of key high-risk projects.

2.2.2. Strategic Environmental Assessment

No specific SEA legislation exists in Madagascar, although the MECIE decree also applies to policies, plans and programmes. Under Annex I an EIA is required for "any plan, programme or policy which may modify the natural environment, the use of natural resources and/or the quality of the human environment in an urban or rural environment". This is a broad definition which could imply that any policies, plans or programmes are subject to EIA. International good practice has shown that it is not adequate to apply EIA procedures and tools (meant for the assessment of projects where technical details are known) to policies, plans and programmes (where uncertainties are larger and qualitative assessments more adequate).

There is some confusion between EIA and SEA, mainly triggered by the scope of application of the MECIE decree, but the ONE is currently preparing – with assistance of USAID - Guidelines for SEA.

There are two key obstacles to develop an SEA framework. The first is that the ONE has the legal capacity to prepare SEAs, but they would also be assessing them; a decision will have to be made on the role of the ONE. The second obstacle refers to the potential incompatibility of land use planning and sectoral planning. Apparently land use plans will be prepared for the regions, but sectoral authorities will also have their own plans which imply the designation of land uses. Thus a decision needs to be made by the government on how consistency will be ensured, a necessary first step before the application of the SEA process.

According to the ONE it is felt that SEA could be useful to assess cumulative impacts of small projects which would not be subject to EIA. It is in this context that an SEA for the Isaly Tourism Area as well as another for mining activities in sensitive areas (addressing cumulative impacts) are planned.

3. ENVIRONMENT-TOURISM LINKAGES

3.1. Current and potential environmental impacts of tourism policy and activities

The impacts of tourism on the environment have not been well studied but are apparently not significant. The key coastal tourism areas are Nosy Be, Sainte Marie and the area around Tulear. The mission did not have an opportunity to visit the first two coastal tourism clusters, where much of the sun and beach mass tourism concentrates and interviews only revealed generic impacts and no particular specific concerns. As for the area around Tulear, which hosts the most important coral reef in Madagascar, impacts of tourism on the environment are not significant.

The generic environmental impacts from tourism relate to:

- sewage (most hotels do not have sewage treatment, although many use septic tanks);
- solid wastes (normally disposed off in open air dumps and there is no waste management strategy in the country);
- contribution to coastal erosion by structures built on the dynamic areas of beaches;
- increased pressure on fisheries due to increased demand, exacerbated by use of destructive fishing methods;
- collection of shells, including protected shells, for sale as curio to tourists (national and international);
- damage to the coral reef, e.g. through anchoring, trampling.

Most of these impacts are also identified in general terms in the *Monographie Nationale sur la Biodiversité*, as well as in the EC's Country Environmental Profile.

Sewage and solid waste management

A key problem is the absence of adequate infrastructures and strategies to deal with sewage and solid wastes. The Tourism Master Plan recognises this problem and puts emphasis on the need for hotels to manage their own wastes. It was not possible in this mission to appraise the degree to which new tourism establishments are dealing with these issues, and EIA is supposed to be a key instrument to that effect.

Coastal erosion and coral reef damage

Coastal erosion seems to have accelerated recently in Madagascar, especially in the west coast where the difference between low and high tides is considerable (up to 5 metres). This is due to various natural and anthropogenic factors, which could include coral damage due to the 1998 coral bleaching event, but also to sedimentation caused by deforestation inland, coral damage from destructive fishing, etc. In certain beach areas solid structures built on the beach may contribute to exacerbate the problem, and there is no mandatory setback limit from the high water mark, which should be defined.

As mentioned above coral reef damage is mainly due to causes external to tourism, although tourism activity remains a threat. Impacts may be caused by trampling on coral, anchoring of diving boats, and collection of shells and coral, if not properly regulated. In the coast around Tulear the awareness raising on diving do's and don'ts as well as notifying on the types of shells that are protected and thus cannot be sold/bought is mainly done through NGOs such as Reef Doctor and WWF, which have reaches tourists and curio sellers (see Photos 18 and 19).

However most of the impacts on the coastal environment are not due to tourism but rather to other socio-economic activities, including destructive fishing, mining, deforestation, and cutting of mangrove for construction material and fuel wood. These aspects are described below.

3.2. Environmental issues potentially constraining tourism development

The coastal environment is threatened by a series of natural and anthropogenic causes. Moreover the land use and sectoral planning frameworks in the country do not seem capable of addressing the key issues, but may even exacerbate them. As tourism in Madagascar is directly related to its natural resources, any threats to the environment are also direct threats to tourism development. Key concerns on the coastal environment are described below.

Coastal erosion

Coastal erosion is a phenomenon that has multiple causes, anthropogenic and natural. Madagascar's west coast is more prone to erosion due to the large differences between the low and the high tides (up to 5 m), and thus any degradation of ecosystems that help protect the coast (mainly coral reef and mangroves) will have an impact on coastal erosion. As described below coral reefs and mangroves are indeed subject to large anthropogenic pressure.

Beach erosion threatens tourism infrastructures such as hotel and restaurants built on or close to the beach, as it is already happening around Ifaty (Photo 20 shows beach erosion in Ifaty, and Photos 21-24 show different attempts to control beach erosion by hotel owners). Where beach erosion is already happening, the hard structures on the beach may promote further erosion; thus it is important that the construction of tourism structures on the seaside be subject to setback limits from the high water mark.

The setback limit should be studied according to the characteristics of each particular stretch of coast. Also the construction of erosion control structures should be subject to authorisation and approval, as they may promote increased erosion in contiguous areas. For cases such as Ifaty, where beach erosion is becoming a serious problem, it is recommended that the Government take a coordinated action, to ensure the whole affected area is addressed and that existing erosion control structures are compatible and well designed.

Over-fishing

Population growth has led to pressure on fishing resources, especially in the lagoon. This pressure is exacerbated by the increasing demand of fish and seafood by the tourists, and fishermen often do not have the resources to fish beyond the reef barrier (e.g. motor boats). Also the decline in fisheries is exacerbated by the loss of spawning grounds, such as the coral reef and mangroves.

Coral reef damage, destructive fishing and deforestation

Key anthropogenic causes of coral reef damage include: destructive fishing (dragging of nets over the reef and reef trampling); deforestation inland causes high levels of sediments to be washed into the sea, both as runoff and transported by the rivers, damaging the coral reef; cutting of mangroves (as fuel wood and for construction material) eliminates capacity to retain sediments, thus indirectly affecting coral health.

Mining and land use planning

A key problem is the lack of adequate land use planning. Initiatives to protect certain natural areas and create favourable conditions for tourism development may be doomed by authorising a large-scale mining operation. Impacts of mining on tourism have many dimensions, including visual impact, increase of overall prices, socio-economic impacts due to the inflow of large number of foreign miners, and impacts on the environment, e.g. increased sedimentation, accelerated erosion, wastewater discharges (BOD and/or COD), etc.

Some of these effects are already seen in Fort Dauphin, where ilmenite (titanium dioxide ore) is being mined at large scale, and where socio-economic effects (especially the increase of prices) is already evident. Other large scale coastal mining operations are envisaged in the area around Ifaty, where it is foreseen to build a loading station for ships inside the lagoon (which is already under a delicate ecological balance).

Concessions for exploration (including oil & gas) have apparently already been given for most of the coastal areas in the country. This is a situation that is of concern due to the absence of land use plans that would effectively safeguard certain geographical spaces for specific uses (e.g. nature conservation, tourism).

4. RECOMMENDATIONS

4.1. To enhance environmental integration of tourism policy and planning

- Links between the Ministry of Tourism and ANGAP in development and promotion of ecotourism are unclear. Coordination mechanisms between these institutions may be revised and/or developed to ensure an effective approach.
- SEA may be an adequate tool to ensure that coastal tourism developments are environmentally sound, especially in terms of determining safeguards for smaller projects not subject to EIA but which could nevertheless have significant cumulative impacts on the environment. However SEA would only be effective in a framework of clear and transparent land use planning, where conflicting land uses are solved in an agreed context of deliberation.

4.2. To enhance EIA framework

- Amend the EIA regulations to reflect international good practice, as described above.
- Carry out a stocktaking assessment of the EIA system, to assess its effectiveness as a tool to enhance decision-making and project design from an environmental point of view, and be able to propose ways of improvement.

4.3. In relation to SEA

- The MECEI decree needs to be amended in order to withdraw reference to policies, plans and programmes, which should not be assessed according to an EIA procedure but rather under SEA-specific regulations.

- For SEA to be effective it is imperative that the mechanisms are in place to ensure that the SEA process can have a meaningful influence in the contents of policies, plans and programmes. In the case of tourism it is necessary first to ensure that an appropriate framework is created for meaningful PPPs to be developed, preferably based on Land Use Plans to which any sectoral PPPs should conform. In this sense a comprehensive SEA should be part of the process for the preparation of Land Use Plans, addressing not only the potential environmental impacts of land uses based on the sensitivity of the receiving environment, but also according to the institutional and regulatory framework in place.

4.4. To enhance tourism projects

- A land use planning framework that ensures compatibility between the different land uses should be developed. Well-developed tourism clusters (e.g. Nosy Be and Sainte Marie) may not be highly threatened by the encroachment of incompatible activities such as mining, as they have shown their importance for revenue generation. Areas such as the Tourism Territorial Reserves (RFTs) may also enjoy a large degree of security, as could be (at a lesser extent) ecotourism within National Parks. However local level initiatives may be at high risk, as may be the case in the Tulear/Ifaty area.
- Strategic actions on inland deforestation need to be effectively undertaken, as they are having a large impact on the coastal environment.
- There is a need to strengthen the enforcement capacities in the protection of natural resources, especially those of ANGAP within protected areas. Currently the impacts of tourism on the environment do not seem to be very significant, but the large trade in protected shells shows that tourism is already having an impact. In this sense the government institutions do not have adequate structures and capacities to ensure enforcement.
- Awareness-raising on key issues such as management of fisheries and conservation of mangroves, is also needed. Some initiatives are taking place (e.g. an environmental training centre is being built in the Tulear area), but could be expanded.
- Clear setback limits from the high water mark need to be established for coastal protection purposes. As well erosion protection structures should be subject to authorisation in order to ensure that they are adequate. Areas with wide-spread erosion should be studied to find an integrated solution. This will require capacity-building and institutional strengthening of the competent authorities.

MAURITIUS

1. GENERAL CONTEXT

The territory of Mauritius includes the Agalega Islands, Cargados, Carajos Shoals and Rodrigues and has a coastline of about 496 km². The country has experienced an accelerated economic growth in the past 20 years, with an accompanying social development, and is one of the most densely populated countries in the world (about 600 persons/km²). Tourism is the second largest foreign exchange earner after agriculture and a rapidly growing sector; in 2004 hotels and restaurants contributed 7,5% of GDP (as opposed to 4,6% in 1995). With the decline of the textile and sugar sectors emphasis is being placed on strengthening tourism. In 2006 Mauritius received 1,016,864 arrivals, out of which 712,620 were visitors on holiday (Handbook of Statistical Data on Tourism 2006). By the end of 2006 there were 98 operational hotels with 10,666 rooms. The vast majority of hotels are located along the coastline.

The main tourism attractions in Mauritius are its beaches and marine environment. Mauritius is rich in flora, marine life and fauna and is almost completely surrounded by coral reef. However less than 2% of the island is covered with endemic plants and these struggle to survive due to the presence of invasive species. The same applies to wildlife, where only a few endemic species remain such as the Mauritius kestrel, the echo parakeet and the pink pigeon, some of the world's rarest birds.

2. POLICY FRAMEWORK

2.1. Tourism policy and planning

Tourism policy-making and planning is responsibility of the Ministry of Tourism, Leisure & External Communications. However since tourism is a sector of strategic importance to the country its planning is closely monitored and influenced by the top-most levels of Government.

A *Tourism Development Plan* was developed in 2002 with support of the European Commission, but was never adopted by Cabinet; nevertheless it still serves as a reference document and some of its recommendations have been integrated in the National Development Strategy. The main policy currently guiding the tourism sector is the decision by the Government, announced by the Prime Minister in the General Budget speech of June 2006, to have 2 million tourist arrivals by 2015. Achieving this objective which will require the creation of an additional 15000 hotel rooms and the construction of more than 80 new hotels. It is also part of the policy to target up-market tourism, constructing only 4- and 5-star hotels; applications for the construction of lower-category hotels are being rejected.

Although Mauritius is far from the density of hotels found in other small island destinations (4 hotel rooms/km² as opposed to e.g. 115 in Caymans, 77 in Bermuda, 13 in Barbados and 7 in Martinique), in environmental terms its pressure must also take into account the population density, which for Mauritius is comparable to Barbados but much higher than other similar destinations (except for Bermuda which has an exceptionally high density of more than 1000 persons/km²). Mauritius is facing problems of coastal area shortage, where hotel developments are already competing with other land uses such as public beaches, scenic sites and nature protection. This is evident in the constructions along the South coast (around Bel Ombre), an area which was meant to be left undeveloped to maintain its scenic beauty; the applications for hotel developments in the Barachois (sea enclosures traditionally used for aquaculture and recreational purposes); and the growing discomfort of the population on the restriction of access to beaches.

This expected growth in the tourism sector must also give due consideration to the added pressure it may create on the environment: the already fragile coastal systems, scarce freshwater resources, contamination of bathing waters due to inadequate sewage treatment and proliferation of motor boats, noise pollution, traffic congestion, etc. The 2 million tourists by 2015 objective will also imply developing other infrastructures apart from hotels, such as a possible expansion of the airport, the construction of a Cruise Terminal in the port and the upgrading/construction of roads.

A *Sector Strategy Plan on Tourism (2008-2015)* will be prepared, with support of donors, to guide this development. Unfortunately however, the draft ToR for this study do not ask for the environmental implications of the Strategy Plan to be addressed in an explicit manner; this is an unfortunate omission. It is highly recommended to integrate the development of an SEA as an integral element of the preparation of the Sector Strategy, to ensure that the strategy defined will not only minimise environmental impacts but also guarantee its environmental sustainability.

Tourism planning must respond to the *National Development Strategy* (2003), which defines a new and more flexible approach to land use planning. This approach allows flexibility to consider proposals on a case-by-case basis, thus potentially opening up the whole coastal area for tourism development. Although the NDS does not encourage environmentally sensitive areas (ESAs) from being developed, it allows any proposal to be considered and valued.

Apart from the new Sector Strategy Plan, the NDS calls for the preparation of *Action Area Plans* for the Tourism Zones as defined in the NDS, and for District authorities to produce *Outline Schemes* (land use plans at the District level). If tourism development is to be sustainable every effort must be made to ensure effective environmental integration into

these planning processes; this can be achieved through the use of inter-sectoral working groups and SEA. SEAs would allow the establishment of permissible land uses, definition of areas that should be left undeveloped due to their environmental sensitivity, and the establishment of safeguards for individual projects in the zone.

It is especially important to clearly define Mauritius' critical natural capital, which no development should have a negative impact on. In this sense it is worth considering the use of instruments regulating development affecting critical natural capital, such as the concept of IROPI (Imperative Reasons of Overriding Public Interest) used in the European Union in the context of Natura 2000 sites (see further discussion in section on Seychelles).

2.2. Environmental policy and planning

The *National Environmental Policy* of 1999 includes the pursuance of tourism development with minimum impact to the natural environment, and undertakes "to keep beaches open and providing access for the enjoyment of all Mauritians", and regulating the growth of hotels along beaches. A new NEP is currently being prepared, the draft of which emphasises the need to strengthen ICZM planning and promoting a sustainable tourism industry, including working towards Mauritius getting "Green Destination" status (something already addressed in the Tourism Development Plan of 2002). The Policy is to be implemented through a revised National Environmental Strategy and Action Plan.

The framework environmental law is the *Environmental Protection Act* (EPA) of 2002, which includes EIA requirements and defines the responsibilities of key institutions, such as the National Environmental Commission, the Department of Environment and the National Network of Sustainable Development. The Department of Environment is the key institution responsible for policy implementation.

Under the National Environmental Action Plan 2 (NEAP2) Environmentally Sensitive Areas (ESAs) were to be defined. These areas and their management requirements should be a key input for consideration in the preparation of Outline Schemes and Action Area Plans under the NDS, and an important source of baseline information for SEAs.

Environmental standards for coastal developments are also defined in Policy Planning Guidelines (PPGs), such as the definition of a 30 metre setback distance for structures from the high water mark, and the requirement for large hotels (> 80 rooms) to have their own wastewater treatment plants.

In terms of coastal zone management an ICZM Plan will be prepared. Other authorities with competence on the coastal area are the Ministry of Fishing (fisheries, water quality and health of the coral reef), the Mauritius Tourism Authority (licensing of tourism activities), and the Beach Authority (dealing with developments on public beaches).

Currently the Second National Environmental Strategy (NES2) is being updated and the NEAP2 reviewed.

2.2.1. Environmental Impact Assessment

The basic requirements for EIA are defined in Part IV of the Environmental Protection Act 2002. Its implementation is supported by EIA guidelines, including guidelines specific to tourism sector projects. The activities requiring Preliminary Environmental Reports and EIAs were modified by Government Notice No 142 of 2006.

The EIA procedure according to the Environmental Management Act and the EIA Regulations integrates some elements of good practice in relation to:

- Screening, allowing for any undertakings with significant potential impacts on the environment to be subject to EIA
- Impact identification, evaluation and addressing social, economic and cultural impacts
- Possible use of an advisory committee for EIA review and use of an independent EIA Committee
- Requirement to produce a non-technical summary
- Opportunity for the general public to express their comments on the EIA report.
- Preparation of an Environmental Monitoring Plan
- Public availability of EIA dossier and of decision

In broad terms the EIA process consists of the following steps:

- Screening. There are two modalities of environmental assessment: the Preliminary Environmental Report (PER) and the EIA. Undertakings listed in Part A of the First Schedule of the EPA require a PER, whereas those listed in Part B require an EIA. Hotels with their first boundary within 1 km of the high water mark, as well as other tourism related undertakings (e.g. jetties, marinas, golf courses, developments on barachois) require a full EIA. However an undertaking that requires a PER may, based on the results of the PER, still be required a full EIA, and any undertakings not listed may also require an environmental assessment (PER or EIA) by reason of its nature, scope, scale and sensitive location. As the PER review allows for public participation, it can be said that public input may have an influence on screening for a full EIA.

- Scoping. Before submitting an application for an EIA licence the proponent submits an outline of the proposed undertaking, including aspects related to its location, nature and scope. Based on this outline the Director may impose ToR for the EIA (but in the majority of cases ToR are not prepared and the developer refers directly to the requirements stated in the EPA). The EIA Guidelines make reference to a scoping phase, but don't provide any details as to how it should be translated into practice.
- Preliminary Environmental Report procedure. If a PER is required, the report contains a detailed description of the undertaking, with particulars relating to aspects such as its location and surrounding area, process, design, size, as well as information and data to identify effects on the environment, people and society and mitigation measures proposed. A non-technical summary must also be presented and stakeholders and the public may submit written observations. Based on the PER conditions may be imposed for the undertaking and a full EIA may be required.
- EIA Report. Prepared by the developer. It includes information relating to the general description of the proposed undertaking, as well as an assessment of impacts on the environment and social, economic and cultural effects on people and society; a proposal of mitigation measures; an indication of alternative "manner or process" to carry out the undertaking with less harm on the environment; an Environmental Monitoring Plan and an Environmental Management Plan for the construction phase of new infrastructure proposals.

The EIA Guidelines also recommend analysing the "do nothing alternative", which is important for an adequate analysis of impact significance. According to the environmental assessment unit of the Department of Environment, this recommendation is being followed.

- Review. The EIA report is subjected to public inspection for a period not exceeding 28 days (which may be extended) and notification using the media is made by the Director of Environment (including a summary description of the project). The Director reviews the EIA report and refers it, together with the public comments and his own comments and observations, to the EIA Committee. The Director may request stakeholders to submit observations in writing and may also set up an advisory Technical Committee to help in the review. The EIA licence is given by the Minister. However, if the Minister declares an undertaking by a public Department to be "urgently needed in the national interest for the economic development of Mauritius", then there is no requirement for public consultation. This provision seems to be under revision.
- Public participation only in the form of public inspection of the EIA report during the review phase.
- Decision. Once the Director refers an EIA report, together with the public comments and his own observations, the EIA Committee reviews it and in turn submits its recommendations to the Minister, who may then approve or not the EIA licence (the Minister may also make use of the technical advisory committee). Public notification must be made of the application, including a summary of the decision, and the full decision is publicly available. There is no stated obligation to take into account the results of the public consultation or to justify the decision.

There are some basic aspects that could be improved in order to bring it closer to international good-practice, mainly:

- Scoping. There is no explicit scoping phase in the EIA process, except for the preparation of an outline of the undertaking, on the basis of which the authority may define ToR (but which does not normally occur). When ToR are prepared by the competent environmental authorities, it is not required to consult stakeholders, and the ToR used are often of poor quality (UNEP, 2006). The EPA presents the basic elements that should be contained in an EIA, but careful preparation of ToR is necessary to ensure the EIA report will address key issues and concerns associated to the particular undertaking and receiving environment.
- EIA Report. The requirements for the EIA report are weak mainly on the following accounts:
 - A study of the environmental baseline is not required, something which is necessary to carry out an adequate analysis of potential environmental impacts. The inadequate analysis of the environmental baseline has been pointed out as a key weakness of EIA reports in Mauritius, e.g. the background study for the preparation of the Tourism Development Plan for Mauritius, based on the analysis of a series of tourism EIAs (Republic of Mauritius and EC, 2002); UNEP (2006) and Ramjaewon and Beedasy (2004).
 - No clear analysis of alternatives is required, except for consultants to indicate alternative means to carry out the undertaking with less harm to the environment. Ramjaewon and Beesasy (2004) identified that alternatives are generally not addressed in the EIA reports, although in practice this seems to be changing recently. The EIA should take place at an early stage such that its results can influence project design; in this sense it is important that the developer shows that alternatives are still open and that they will be analysed from an environmental point of view through the EIA.
- Public participation. Public engagement should take place from the earliest stages of the EIA process, ideally from scoping, but it should also be encouraged during preparation of the EIA report. As well the review should allow for two-way communication processes, apart from the public inspection of the EIA report. The EIA Guidelines

encourage public participation throughout the preparation of the EIA report; in the case of the tourism guidelines consultations with fishermen are particularly encouraged. According to the Department of Environment such consultations are taking place.

The regulations define a maximum period of 28 days for public review, but do not define a minimum period. In practice the 28 days are normally given for review, and sometimes extended, but for the sake of a well designed regulation the 28 days should be defined as a minimum period for public review.

Inadequate public participation is normally pointed out as one of the key weaknesses of the EIA system in Mauritius (e.g. UNEP, 2006; Ramjaewon and Beedasy, 2004; UNEP, 2007). Although NGOs are becoming more militant and challenging EIA reports and decisions (see SAIEA, 2003), the general public is hardly engaged in public reviews. The reasons are not clear and may have to do with insufficient number of notifications published but mainly with lack of knowledge of the EIA system. Any improvements in public participation should be accompanied by strategies to actively encourage it.

- Decision. It is not mandatory to take account of public views in making the decision, or to justify it. Also considering that it has been recognised that in some cases there is political pressure to give favourable reviews to certain projects (UNEP, 2006), full transparency in the decision-making process must be guaranteed.

There are three moments in the decision-making process: the review by the Director and preparation of its recommendations; the review by the EIA Committee; and the decision by the Minister. These three phases move from a technical to a political level.

- EIA monitoring plans and Environmental Management Plans are often not included in the EIA reports (Ramjaewon and Beedasy, 2004; UNEP, 2006). In spite the EIA Guidelines have proposed a format for EMPs it is necessary to ensure the competent authorities push for adequate environmental monitoring and management plans to be an integral part of EIA reports, and their compliance should form part of the conditions attached.
- An important weakness of the EIA procedure is the requirement for the developer to show proof of ownership of the land proposed for development as a condition to apply for an EIA licence. In the case of coastal tourism this means that most developers would need to secure the lease of State land before applying for an EIA licence. In practice a Letter of Intent (stating that the land is being reserved for lease) is presented. However if proof of ownership/lease is indeed required, this creates a situation which is not conducive to an objective and impartial review of the EIA report, since the State would have already leased the land and it may be politically difficult to reject an EIA licence on the basis of unacceptable impacts on the environment.
- The EIA procedure has been in place for since 2002, and been modified in some occasions. It would be convenient for the Department of the Environment to carry out a stocktaking exercise to assess the degree to which EIA is having an impact in improving project design and decision-making. This exercise could address issues such as the quality of the EIA reports being produced, the effectiveness of the EIA process, the degree of public participation, the degree to which public input and input of other stakeholders is incorporated into decisions, the degree to which the analysis of alternatives results in changes to project designs, the incorporation of mitigation measures and conditions in project design and implementation, and the effectiveness of the environmental monitoring and management plans.

2.2.2. Strategic Environmental Assessment

The First Schedule (Part C) of EPA 2002 used to specify plans and programmes which would require an SEA, but this Part of the Schedule was withdrawn in the 2006 revision. At the moment there are no regulations for SEA. Nevertheless at least two SEAs have been prepared in Mauritius (SEA for the identification of potential sites for marinas, ski lanes and bathing areas, and the SEA for the sugar reform adaptation strategy).

Due to the high pressure that development in Mauritius is likely to have on the environment, especially due to growth in the tourism sector and associated sectors (especially transport), it is highly recommended to ensure adequate mechanisms are in place to ensure environmental integration in the policy-making and planning processes, for which SEA can be a key tool. But SEA must respond to a clearly defined framework, rather than to *ad hoc* and spontaneous initiatives. The following elements should be addressed:

- Clear regulations for SEA, addressing all stages of the SEA process;
- Establishment of the necessary institutional and administrative structures to ensure effective and objective SEA processes and their links to policy-making and planning, clearly identifying responsibilities for, e.g. preparation of ToR, undertaking of SEA studies, independent review process;
- Ensure SEA is an integral but independent part of policy-making and planning; integral in the sense that the SEA and the policy-making and planning processes are in constant communication, and independent in the sense that

the results of the SEA are not subject to political negotiation. These aspects are further described in the regional ToR for SEAs of the tourism sector (Part 2 of this report).

An SEA of the *Strategy Plan on Tourism* is particularly encouraged, to be undertaken in parallel to its preparation.

3. ENVIRONMENT-TOURISM LINKAGES

3.1. Current and potential environmental impacts of tourism policy and activities

Beach erosion

Beach erosion is a serious problem in many parts of Mauritius. The 2003 "Baird" report (W.F. Baird & Associates Coastal Engineers Ltd, 2003) identified areas where irreversible erosion has set in. They identified four high priority erosion sites (Flic en Flac public beach, Belle Mare/Palmar, Riviere des Galets and Grand Baie), as well as eight medium-priority sites and five low priority sites. The reasons for the erosion are due to both natural and anthropogenic causes, and tourism has played a part in it as well.

The main contributions of tourism to beach erosion are (other causes are described in the next section on constraints): damaged lagoon coral (main source of sand) by impact of motor boats and by fuel emissions and leakages; removal of coral and dredging associated with the creation of water ski lanes within lagoons; constructions interfering with the dynamic beach zone (e.g. sea walls, groynes, jetties and breakwaters); dunes levelled for development; trampling and compaction of dunes by vehicles and heavy pedestrian traffic (see Photo 25).

Tourism activity also contributes indirectly to beach erosion, through the destruction of corals, the contamination of lagoons by inadequate sewage treatment of smaller hotels and restaurants. This is mainly related to the contribution of overflows of septic tanks and the contamination due to unplanned overflows during heavy rain events.

The expected growth in the tourism sector may further accelerate beach erosion, through the construction of more than 80 hotels (mostly on the coast), the demand for construction of coastal structures (e.g. marinas and jetties), the intensification in the use of motorboats, and the creation of water ski lanes. It is imperative that the authorities take appropriate measures to ensure environmental safeguards are in place and careful planning takes place.

Some measures recommended in the Baird report have started to be implemented, such as the launching of a beach nourishment programme in Flic and Flac public beach and the definition of a mandatory setback for constructions along the coast (30 m as stipulated in the Policy Planning Guidelines). Other recommendations are still to be further implemented, e.g. removal of illegal structures interfering in the dynamic beach zone (see Photo 26 of partially removed seawall in Sofitel, Flic en Flac). As well an SEA was carried out which identified adequate sites for marinas, water ski lanes and bathing areas, and provided guidelines for their construction. It is important that the personnel in the Department of Environment receive adequate training and capacity building on coastal erosion at a technical level.

In terms of sewage management, the PPGs have stipulated a mandatory requirement for hotels with more than 80 rooms to have their own wastewater treatment plant, and AHRIM (Association des Hôteliers et Restaurateurs - Ile Maurice) is working on options to provide common wastewater treatment facilities for smaller hotels and restaurants (see Photo 27).

Coral damage (other than above) and shell collection

Tourism activity is also causing damage to the coral reef, mainly in the form of anchor damage, damage from boat poles, trampling during seawalks and damage caused by diving and snorkelling. No specific studies were identified assessing these impacts, however they are acknowledged. The authorities are setting up mooring buoys, especially in the Marine Protected Areas, to prevent anchor damage. Sea walks are being regulated by the Mauritius Tourism Authority as an activity and an EIA would normally be required (although the activity is not listed in EPA's first Schedule); currently there are approximately 10 licences for this activity.

The dimension of a problem associated to the collection of sea shells could not be fully discerned. It is common to find protected shells, such as triton and casque rogue being sold openly in beach markets and shops (e.g. in Grand Baie and Ile aux Cerfs) (see Photo 28), but it is not clear whether these shells are collected locally or imported, or what are the specific permitting procedures regulating their trade.

Contamination of lagoon

The contamination of the lagoon (and thus the degradation of bathing water quality) is not only the result of the tourism industry. The contribution of tourism is mainly due to: inadequate wastewater treatment and management; emissions from vessels; and possibly runoff of freshwater and agrochemicals from golf courses.

In the case of sewage this is due mainly to the overflows of septic tanks and unplanned overflows of septic tanks and pit latrines during events of heavy rains, mainly from the smaller establishments. Emissions from vessels come from oil bilge water, solid waste and sewage by ships which use harbours, bays and shelters not supplied with waste collection facilities. In Mauritius there are approximately 2000 licences for pleasure crafts, the majority of which have over-board

motors (see Photo 29). The environmental impacts of motor boats have not been studied, but due to their proliferation measures are being taken to limit their impacts, e.g. defining no-speeding zones (maritime signalling project), limiting the number of licences, and ensuring only low-emission engines are imported.

Finally golf courses are large consumers of fresh water, as they need to be continuously irrigated; as well agrochemicals are used in large quantities to prevent growth of weeds, and eventually make their way into the groundwater through seepage and into the lagoon through runoff. Currently there are about 15 golf courses in Mauritius (see Photo 30). There is no monitoring of lagoon contamination due to runoff from golf courses.

These combined point and non-point emissions may contribute to eutrophication of the lagoon, impacting on the health of the coral reef, bathing water quality and coastal biodiversity. However the main source of contamination is probably from other sectors, e.g. inefficient sewage treatment from urban centres and runoff of agrochemicals from agriculture.

Land encroachment and social conflict

Tourism infrastructure is concentrated along the coast. This has resulted in many cases in the construction of hard structures interfering with the dynamic beach area (promoting accelerated erosion). Land encroachment is also affecting the quality of the landscape; for example, the south coast, which was meant to be left undeveloped due to its high scenic value, is now being developed for tourism and the construction of villas. Tour operators have already expressed their concern about the densification of tourism in the island.

Tourism development is also encroaching into public spaces and there is concern about the reduction in the number of public beaches (at the moment only around 26 km), although public beaches are designated as such thus protected from development. The legal status of the beaches on leased State lands is unclear. According to some interviewees the leaser has the obligation to allow the public to walk through the beach but may ban them from using the beach (e.g. sunbathing), as the land is leased up to the high water mark. However other interviewees maintain that any person has the right to enjoy any beach, be it on leased land or not. In any case there is certainly a pressure by hotel managers to allow only their hotel guests to make use of the beaches.

Development proposals have already been made to build hotels and villas within and around barachois, which are sea enclosures often used for recreational purposes, and which are being given serious consideration by the Ministry of Housing and Lands).

A more rigid and transparent planning system is needed to ensure the protection of public spaces along the coast. For example land use planning of the barachois may be done in order to clearly define those suitable for development, those that need to be protected due to their environmental sensitivity (many are located in mangrove areas) and those that would remain for public use (see Photo 31). The current approach, whereas each site is examined on a case-by-case basis based on incoming applications, may not be adequate to guarantee environmental protection and the protection of the public space.

Dolphin harassment

Dolphin watching is a very popular activity in the south-west coast, offered by some 150 boat operators. It is very successful in economic terms and has increased dramatically in the last seven years. Moreover it is a source of income for hundreds of former fishermen.

However this activity is having an important impact on dolphins, which are continuously harassed, being chased by motor boats (sometimes up to 25 boats chasing two dolphins). The Mauritius Marine Conservation Society (MMCS) is carrying out a project to study the impacts on dolphin watching and is also working with the authorities to better regulate the activity. Guidelines for dolphin watching have been produced and skippers have been trained on their implementation; nevertheless they remain largely unimplemented. Actions are also planned to raise awareness amongst tourists on the impacts of dolphin watching and appropriate behaviour, e.g. through panels and through a video to be shown on hotel TV channels.

A basic problem is that dolphin watching is not regulated as an "activity", thus anyone with a licence from the Tourism Authority for "excursions" can offer outings. A first step the government is working on is to create a licence specific for dolphin watching, which would allow effective enforcement of regulations.

3.2. Environmental issues potentially constraining tourism development

Beach erosion

Beach erosion has various causes, both direct and indirect, and not all relating to tourism. Some key causes identified in the Baird report include: harvesting in the past of corals for the lime industry (especially in the Flic and Flac area), causing a reduction in lagoon corals which are the main source of sand; excess of nutrients in the lagoon causing algal bloom at Palmar, destroying lagoon corals and risking long-term erosion to set-in; and over-fishing of fish species critical for protecting the reef from predators and maintaining health of coral. Other identified causes include the removal of coral

rubble (a source of sand), especially after cyclones; substitution of native coastal vegetation which is adapted to the conditions needed to retain sand in dunes, by Filao or Casuarina trees, Filao trees exacerbating erosion; dunes trampled and compacted by vehicles and heavy pedestrian traffic; and dunes levelled for development.

Beach erosion affects tourism directly and is thus an important potential constraint for growth of the industry. Hotels may find their beaches are disappearing, lowering the attractiveness of their once privileged location, and in some cases hotels may have to engage in expensive works to relocate threatened structures.

The Ministry of Environment is implementing the recommendations of the Baird report. It is also important to ensure the new ICZM Plan defines adequate procedures to develop integrated solutions to beach erosion problems in specific areas. The implementation of a setback for new constructions must be strictly followed, although it is highly recommended to examine each application on a case-by-case basis rather than apply a fixed 30 metres setback limit (in some cases more than 30 metres may be needed to avoid intrusion in the dynamic zone).

Contamination of lagoon

The contamination of the lagoon has been described above, and has various causes including urban sewage management, agriculture, chemical industry and tourism. Degrading quality of the bathing waters would have a direct impact on the tourism industry, and if not controlled may lead to the need to close certain areas for bathing, which would damage the image of Mauritius as a world class destination. All efforts should be made to control polluting activities, including ongoing monitoring of bathing water quality and of the key sources of pollution.

Freshwater availability

In Mauritius the second largest user of freshwater is the domestic sector, accounting for 25% of all withdrawals, and which is largely to support the tourism industry. According to the Atlantic and Indian Oceans Environment Outlook the per capita share of freshwater in Mauritius is falling, and the country is expected to reach water stress levels by 2025. This forecast was based on a 2002 report; with the current expected growth in the tourism industry, the water stress levels may be reached sooner (e.g. water consumption in hotels, swimming pools, golf courses).

Freshwater shortages will increasingly force tourism facilities to build desalination plants, which should be carefully controlled to avoid contamination of the lagoon (e.g. discharges of highly concentrated brackish water). Increased consumption of fresh water by tourism facilities will also put pressure on the sources available to the population.

4. RECOMMENDATIONS

4.1. To enhance environmental integration of tourism policy and planning

- Carry out an SEA as a parallel but integrated exercise for the preparation of the *Sector Strategy Plan on Tourism*, as well as for the Tourism Zone Action Area Plans and Outline Schemes in coastal areas, in order to ensure an adequate degree of environmental integration.
- Define mechanisms to ensure adequate protection of critical natural capital, e.g. through the IROPI concept
- Prepare a plan for the management of the barachois, indicating those that would be left as nature protected sites, those dedicated for recreational purposes and those open to development. Such a plan would also help instil a sense of security to the local population that they would still be able to enjoy such sites for recreational purposes.

4.2. To enhance EIA framework

- Amend EIA regulations to harmonise them with international good practice, according to the opportunities of improvement discussed above.
- Carry out a stocktaking exercise to assess the effectiveness of the EIA system.

4.3. In relation to SEA

- Define a framework for SEA, with clear regulations, the design of adequate institutional structures and definition of responsibilities to guarantee effective and independent SEA processes. Key policy-making and planning processes, such as Outline Schemes and Action Area Plans, should require the preparation of an SEA.
- Prepare an SEA of the *Sector Strategy Plan on Tourism*, in parallel to the preparation of the Strategy.

4.4. To enhance tourism projects

Key coastal environmental aspects that could be addressed are described above and include: erosion control; lagoon water quality monitoring and control of polluting sources; control of coral damaging activities such as use of motor boats, snorkelling and diving; and control of dolphin watching activities.

A study of the impact of golf courses is recommended, in order to assess the carrying capacity and define environmental safeguards in relation to freshwater extraction and runoff management, use of agrochemical products and introduction of exotic species.

Sewage management in the coastal area should be enhanced. In terms of tourism appropriate solutions could be found for smaller establishments that do not have an obligation to have their own wastewater treatment plant.

RODRIGUES

1. GENERAL CONTEXT

Rodrigues is part of Mauritius but enjoys a large degree of autonomy since 2002. Its governing body is the Rodrigues Regional Assembly (RRA), which has 18 members and an Executive Council headed by a Chief Commissioner. There are five Commissioners who are responsible for different subjects, including one for the Environment, who is also responsible for fisheries, forestry, marine parks, utilities, housing, public buildings, highways, roads, transport and infrastructure. All environmental resources, with the exception of state land, are under this Commissioner's authority.

Tourism is quoted as the most important pillar of Rodrigues' economy, and its principal engine of growth. After a dip between 2003 and 2005, the trend in tourism arrivals has been recovering, having reached 42,833 arrivals in 2006 and experiencing an average of 15.5% increase in the first half of 2007 with respect to the previous year. Currently there are 4 main hotels in the island as well as some 30 small and medium guest houses and gites, with a total capacity of around 400 rooms. About 10 leases of state land have been approved for hotel/tourism projects over the last year, which would provide an additional 300 rooms; however none of these projects have yet been developed.

2. POLICY FRAMEWORK

2.1. Tourism policy and planning

Tourism planning is the responsibility of the Commissioner for Tourism. The guiding policy document is the *Tourism Development Plan for Rodrigues* (2002). The RRA's Government programme identifies tourism as the key engine for economic growth. The current policy is to reach a total of 100,000 tourist arrivals, although there are contradictory opinions as to whether this is part of the 2 million tourist (by 2015) policy objective of Mauritius, or whether it should be a Rodrigues-specific policy. It is not clear either if Mauritius' *Sector Strategy Plan on Tourism (2008-2015)* (road map to reach the 2 million tourists objective) would address Rodrigues or not.

Tourism development in Rodrigues would require upgrading of the airport in order to cater for international flights, and opening of the market allowing foreign airlines to operate, so tourists would not have to pass through Mauritius.

2.2. Environmental policy and planning

Environmental policy for Mauritius is integrated in the *National Environmental Strategy* and the *National Environmental Action Plan*, which are currently under review. The Rodrigues Environment Committee (REC) meets on a monthly basis to discuss key environmental issues, and the Permanent Secretary of the Ministry of Environment is a member.

Mauritius' framework environmental law also applies in Rodrigues. However the Policy Planning Guidelines (PPGs) do not, but their key environmental safeguard components will be integrated in the *Rodrigues Environmental Planning and Land Development Bill 2006* (unfortunately we did not have access to this document to review its contents).

2.2.1. Environmental Impact Assessment

The EIA procedure for Rodrigues is the same as for Mauritius. The only change in the procedure is in the review phase; the Commission for the Environment first reviews the EIA Report and sends its comments to the Director for Environment in Mauritius.

During the review phase Rodrigues is not represented in the EIA Committee, but this does not seem to be a concern for the authorities in Rodrigues, as the comments submitted would normally be addressed. For example the Commission for Environment recommended that a project for a hotel at Anse Ally should not be authorised due to its unacceptable impact on the environment; this view was taken by the Ministry of Environment and the EIA licence was never granted.

The number of EIAs for projects in Rodrigues is very low (approximately 3 EIAs and 4 PERs per year). During the public review phase usually no one reviews the EIA documents, not even the local NGOs.

2.2.2. Strategic Environmental Assessment

There are no SEA provisions for Rodrigues. Although it is not recommended to develop now an SEA framework for Rodrigues, an SEA for the tourism sector would be a useful exercise, but which should be directly linked to the land use planning process. Rodrigues is still largely intact by tourism and it is the appropriate time to clearly define an environmentally-integrated policy that will be followed as well as the necessary environmental safeguards.

Such an SEA should be accompanied by training/capacity-building of staff from relevant authorities (tourism, environment, land use planning) in order to ensure a good understanding of the instrument and how to best use it.

3. ENVIRONMENT-TOURISM LINKAGES

3.1. Current and potential environmental impacts of tourism policy and activities

So far tourism in Rodrigues is very limited and has not had any significant impacts on the environment. Probably the only more evident impact is the increase of demand for fish and seafood, which has led to further pressure on lagoon fisheries and to damage of the coral reef through the use of destructive fishing techniques (mainly harpoons, beach seine, and recently use of oil in the capture of octopus).

The 2006 Government programme states that new leisure activities at sea will be studied to see if they can be introduced, including jet skiing. The introduction of these activities should also be studied in light of their potential environmental impacts.

3.2. Environmental issues potentially constraining tourism development

Freshwater availability

Freshwater is scarce in Rodrigues, particularly during the period of drought from September to March. Rainwater is harvested by almost 90% of the households, but is not sufficient to palliate shortages, and the existing desalination plant only caters for 50% of demand. The Rodrigues Action Plan (part of the NES/NEAP) provides recommendations to address this issue.

In terms of tourism it is said that all new hotels will be required to have their own desalination plants. However this policy has to be carefully addressed. Firstly, desalination plants can have potentially significant impacts on the environment and, although desalination plants require an EIA, there are currently no capacities in the Commission for the Environment to assess such projects or to carry out adequate monitoring of their operation. Secondly, it would be necessary to develop a more efficient approach, whereas one larger plant may cater for various establishments. Freshwater-intensive amenities and facilities should be discouraged, such as swimming pools and golf courses.

Beach erosion

Beach erosion is not wide-spread in Rodrigues. Nevertheless it is important to ensure adequate setback limits are established for new constructions along the coast to ensure that they do not interfere with the dynamic zone of the beach (see Photo 32).

Contamination of lagoon

The degree of contamination of the lagoon has not been studied, and is due to occur from inadequate sewage management, extended erosion and runoff of agricultural products and nutrients. However it must be ensured that all hotels and guest houses have appropriate sewage management, be it in the form of wastewater treatment for larger hotels or through the use of well designed septic tanks for smaller establishments.

Coral damage, over-fishing and destructive fishing

Although the health of the coral reef is considered to be one of the best in the Indian Ocean, the local population see that it has progressively degraded. Although this has apparently not been studied in detail, it is most likely due to a combination of natural causes and anthropogenic ones, such as the use of destructive fishing techniques and transport of sediments and nutrients into the lagoon during periods of heavy rains (due in turn to large scale soil erosion and cattle rearing). Any damage of the coral reef will affect the attractiveness of Rodrigues as a tourism destination.

Fishing is largely uncontrolled in Rodrigues, which has led to over-fishing in the lagoon and to coral damage through the use of destructive techniques. Catches of fish and octopus have already declining, and over-fishing is highlighted as an action area under the new government's programme.

The control of fishing seems to be largely inefficient as it is largely a political issue. Fishermen are a strong electorate power and politicians normally do not attempt to control them. Nevertheless it is important to address this issue, through both awareness raising and effective policy action agreed across the political spectrum.

Growth of tourism will increase the demand for fish and seafood, exacerbating all environmental impacts associated to over-fishing and destructive fishing practices, if not properly controlled.

Solid waste management

Currently waste is disposed of in a landfill at Roche Bon Dieu in the south of the island, but only about 50% of the solid waste produced is collected. The authorities are developing a strategy to address waste management, including an extension of the existing landfill. Increasing tourism will generate an increase in solid waste production, including an increase in the percentage of non-biodegradable waste.

4. RECOMMENDATIONS

4.1. To enhance environmental integration of tourism policy and planning

- Carry out an SEA of the *Sector Strategy Plan on Tourism* as a parallel but integrated exercise. Ensure mechanisms are in place to effectively integrate the results of the SEA.

4.2. To enhance EIA framework

- Consider the representation of the Rodrigues' Commission for the Environment in the EIA Committee.
- Enhance the capacities for assessment and monitoring of projects with key potential environmental impacts, such as desalination plants.
- Enhance monitoring/enforcement capacities.

4.3. In relation to SEA

- Prepare an SEA of the *Sector Strategy Plan on Tourism*, in parallel to the preparation of the Strategy and feeding directly into land use planning.

4.4. To enhance tourism projects

- Ensure appropriate setback limits from the high water mark are defined
- Ensure appropriate treatment of wastewater and solid wastes produced
- Develop a strategy for efficient water management in the tourism industry
- Discourage construction of golf courses, water ski lanes, dredging of lagoon to create bathing areas and use of speed boats in lagoon
- Regulate fishing in lagoon to avoid over-fishing and use of destructive techniques

PART II

Regional Terms of Reference for Strategic Environmental Assessment of the Coastal Tourism Sector in the South-West Indian Ocean

Regional Terms of Reference for Strategic Environmental Assessment of the Coastal Tourism Sector in the South-West Indian Ocean

A. Background

These Terms of Reference (ToR) are designed as a “model” to be applied for the preparation of SEAs of the coastal tourism sector in the south-west Indian Ocean. Although they are designed to address the key aspects associated to coastal tourism in the region, they are by no means an “ideal” model. Thus the ToR should be adapted on a case-by-case basis to fit the particular policy, plan or programme, as well as the particular policy-making or planning process in question. Country appendices provide guidance on how these ToR could be adapted to fit each of the following countries: Comoros, Tanzania (mainland), Zanzibar, Kenya, Seychelles, Madagascar and Mauritius.

These ToR are based on the European Commission’s model SEA ToR for development cooperation¹. They also respond to, and are consistent with, principles of international good-practice for SEA, including the International Association for Impact Assessment’s Strategic Environmental Assessment Performance Criteria², the OECD DAC guidance for SEA³, and the UNECE Protocol on SEA (Kiev Protocol)⁴, amongst others.

B. Principles of SEA

Good practice shows that certain principles should be followed for SEA to be effective. These principles are broadly condensed in the OECD DAC guidance and involve both substantive and procedural aspects. The principles outlined below should be carefully considered by the appropriate actors engaged in SEA.

These ToR are mainly concerned with the procedural aspects of SEA. The substantive aspects of SEA relating to institutional structures and capacities should ideally be in place before engaging in SEA. This will probably require elements of institutional strengthening, capacity building and awareness-raising, to ensure SEAs undertaken will be effective and lead to better policy-making and planning.

Principle 1: Establish clear goals

It must be very clear to key stakeholders what they want to attain by doing the SEA. SEA should not be an administrative exercise but rather one that will enhance policy-making and planning. The goals of the SEA should be clearly spelled out in the ToR, including how the results of the SEA are meant to be used.

Principle 2: Be integrated in existing policy and planning structures

SEA should ideally be an integral part of the policy-making or planning process; however in most cases the SEA would not be intimately merged into this process. Whatever the degree of integration, the points of contact between the policy-making or planning process and the SEA process should be very clearly identified.

Institutional responsibilities should be defined to ensure these contact points are meaningful (i.e. they ensure the SEA process is adequately fed by the policy-making or planning process, and that the policy-making or planning process incorporates the SEA findings). For this to occur the SEA must be “owned” not only by the environmental authorities, but also by the sectoral authorities involved. Key stakeholders must know beforehand which will be the mechanisms to interpret the results of the SEA, and to incorporate its findings into policy-making and planning.

SEA should take place at an early enough stage of the policy-making or planning process such that its results may influence it. SEAs should be discouraged for policies, plans or programmes which have already been negotiated and agreed, as the opportunities to influence the policy-making or planning process will be very limited, unless the mechanisms to incorporate SEA findings are clearly agreed.

Principle 3: Be flexible and customised to context

The model ToR must be adapted to fit each particular context. The higher the strategic level, the more the SEA will rely on qualitative analyses of larger trends, whereas the SEA at a programme level may integrate more quantitative analyses and address particular geographical areas or even groups of projects. But adaptations made should always be checked to ensure the key principles of good practice are still followed (for example, an SEA may require a larger or lesser degree of public engagement, but no SEA should be devoid of opportunities for public involvement).

¹ European Commission (2007) *Handbook for Environmental Integration into EC Development Cooperation*, EuropeAid: Brussels.

² International Association for Impact Assessment (2002) *Strategic Environmental Assessment Performance Criteria*, Special Publication Series No 1, IAIA: Fargo.

³ OECD DAC (2006) *Applying Strategic Environmental Assessment, Good Practice Guidance for Development Co-operation*, DAC Guidelines and Reference Series, OECD DAC: Paris.

⁴ UNECE (2003) *Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context*, done at Kiev (Ukraine), on 21 May 2003.

Principle 4: Analyse the potential effects and risks of the proposed policy, plan or programme, and its alternatives, against a framework of sustainability objectives, principles and criteria

The SEA is an analytical exercise addressing potential impacts on the environment. This should be done using tools appropriate to the level of analysis, and which will often be qualitative. Alternatives should be proposed for their comparative study, and these alternatives should ideally be the same that are being considered as part of the policy-making or planning process (in case SEA is a parallel exercise). Sustainability objectives, principles and criteria (which may be taken from environmental policy) should normally be defined to identify and assess impacts.

Principle 5: Provide explicit justification for the selection of preferred options and for acceptance of significant trade-offs

Results of the SEA should be transparent. This refers not only to the results indicated in an SEA Report, but also to the use made of the SEA Report in influencing the policy-making and planning process. Transparency and accountability should underlie decision-making.

Principle 6: Identify environmental and other opportunities and constraints

The SEA should be concerned not only with the potential environmental impacts of policy, plan or programme implementation. It should also be concerned with the way the environment may act as a constraint or provide opportunities for sectoral development (e.g. contamination of a lagoon will be a constraint to tourism development, whereas an attractive landscape is an opportunity).

Principle 7: Involve key stakeholders and the public

Public participation is a key component for the success of an SEA. Public engagement should ideally take place throughout the SEA process, although the stakeholders to engage and the public participation mechanisms to use may differ. Public participation during scoping (at least with the key stakeholders and affected parties) is highly important to ensure the SEA will address all key concerns. Engagement of the public during the preparation of the SEA report should also be encouraged to gather and verify necessary information. Finally participation during the review phase is key to ensure a quality check and as a way to legitimise the process.

Principle 8: Include an effective, preferably independent, quality assurance system

The review process should be as independent as possible. This means that normally the sectoral authority developing the policy, plan or programme in question should not be the one to assess the quality of the SEA. Different arrangements may be used to ensure independence, including the *ad hoc* involvement of external experts or the use of an independent environmental assessment Commission.

Principle 9: Be transparent throughout the process, and communicate the results

The SEA process should be transparent throughout. All key documents (e.g. development application, scoping report, SEA report, results of public consultations, results of the review) should be made publicly available. The results of the SEA should be communicated and be justified.

Principle 10: Encourage formal review of SEA process after completion, and monitor policy, plan or programme results

SEA follow-up may be a useful exercise to learn about the process, e.g. verifying if results were implemented and actually led to better policies, plans and programmes.

Principle 11: Build capacity for both undertaking and using SEA

For SEA to be effective it is imperative that all key actors understand the process. Competent authorities must be able to develop adequate ToR, review the results of an SEA and integrate the SEA into the policy-making or planning process. Adequate capacities must also exist to undertake SEAs, e.g. by consultants. If such capacities do not exist it is encouraged to implement capacity-building and training projects based on a training needs assessment.

C. Regional ToR for SEA of the coastal tourism sector in the south-west Indian Ocean

ToR for the Strategic Environmental Assessment of the *(name of the policy, plan or programme)*

1. Background

(Name of institution) requires a Strategic Environmental Assessment (SEA) to be carried out for the preparation/review *(delete as appropriate)* of the *(name of the policy, plan or programme)*.

The major policy/plan/programme documents to consider are *(mention the main documents and their status or stage of preparation)*.

(Mention any other pertinent background information, such as key stakeholders, legal requirements, state of the environment reports and main alternatives being considered).

(Explain the reasons why the SEA is required and which decisions it is meant to influence).

2. Objectives

The objective of this SEA is to describe, identify and assess the likely significant effects on the environment of implementing possible formulations of *(name of policy, plan or programme)*, to feed into its preparation/review *(delete as appropriate)*. This information should help ensure that environmental concerns are appropriately integrated in the decision-making and implementation process.

The SEA process will be an integral component of the policy-making/planning process, and both processes will be in continuous communication⁵. *(Explain the institutional arrangements for managing the SEA and for co-ordinating with the policy-making or planning process).*

3. Results

The SEA is composed of two main parts: a Scoping Study and an SEA Study. The Scoping Study will define the issues that need to be addressed in the SEA Study (i.e. its scope), considering the specific context in which the policy/plan/programme *(delete as appropriate)* is being developed and is likely to be implemented.

The Scoping Study will deliver the following results:

- A description of the policy/plan/programme concerned and its alternatives;
- A brief description of the institutional and legislative framework of the sector;
- A brief presentation of the relevant environmental policy, objectives and indicators in the country, as well as a proposal for other sustainable development objectives and indicators relevant to the sector and to the policy/plan/programme under consideration;
- An identification of the key stakeholders and their concerns;
- An identification of the key sector policy/plan/programme-environment interactions;
- A description of the scope of the environmental baseline to be prepared;
- An identification of the impact identification and evaluation methodologies to be used in the SEA study;
- If deemed necessary, an indication of necessary changes to the time-frames, costs and resources needed to carry out the SEA study in relation to those initially specified.

The SEA Study will deliver the following results:

- An environmental assessment of the *(name of the policy, plan or programme)*, taking into account the potential environmental impacts of its implementation and its consistency with the government's environmental policies, objectives and indicators, as well as with other relevant sustainable development objectives and indicators identified in the Scoping Study;
- Recommendations and guidance for integrating results of the SEA Study into the policy/plan/programme *(delete as appropriate)* formulation⁶ (including performance indicators and any necessary environmental safeguards).

7. Issues to be studied

4.1. Scoping Study⁷

a. Overview of the policy/plan/programme and its institutional and legislative framework

The policy/plan/programme under assessment must be described, including any alternatives being considered. If deemed necessary additional alternatives may be suggested.

A description must be made of the sector's institutional and legislative framework, including the institutions responsible for the implementation of the policy/plan/programme, for the management of its environmental impacts and for the SEA process, as well as the relevant environmental policy and legislation.

⁵ This paragraph reflects best practice SEA as an integral component of policy-making/planning. However in many cases SEAs will not be carried out as part of the policy-making/planning, but rather as discrete assessment exercises based on draft policy-making/planning documents. Thus this paragraph should be modified to fit the particular process being used.

⁶ If the SEA process is fully integrated in the policy-making/planning process, then there will be several points of contact between both processes.

⁷ The Scoping Study should ideally be prepared by the relevant government authority preparing the ToR. However if there are no adequate capacities available, the Scoping Study can be prepared by consultants as part of the overall SEA, in which case there should be flexibility at the end of scoping to accommodate its results into the scope of the SEA Study.

The specific decisions and process that should be influenced by the SEA must be identified. An overview must also be given of the wider policy framework related to the policy/plan/programme in order to identify other planning or policy documents which will need to be explored in the SEA Study.

b. Description of key stakeholders and their concerns

The involvement of stakeholders in the SEA process is a key success factor. Key stakeholders should be identified (key groups and institutions, environmental agencies, NGOs, representatives of the public and others, including those groups potentially affected by the likely environmental impacts of implementing the policy/plan/programme).

Records must be reviewed of any national public consultation processes that may have taken place as part of the policy-making/planning process. Based on this review and on additional consultations, key stakeholders' concerns and values with respect to the policy/plan/programme under consideration must be identified. The stakeholder engagement strategy to be employed has to be agreed with (*name of relevant sectoral/environmental institutions*) before being implemented in order to avoid unnecessary conflicts or raising of expectations. The strategy should provide stakeholders an opportunity to influence decisions. If the public is not used to being engaged, particularly at the strategic level, and if there are no precedents, it would be important to include an education component in the stakeholder engagement process.

Due to the large geographical areas that may be covered by the policy/plan/programme, stakeholder engagement could focus on key stakeholders, especially targeting directly affected and vulnerable groups as well as key stakeholders that may not have been adequately represented in previous phases of policy/plan/programme preparation. Records must be kept of all consultations and comments received.

c. Description of key environmental aspects to be addressed in the SEA

On the basis of the policy, institutional and legislative framework analysis, as well as the participation of stakeholders, the consultants must identify the key environmental aspects that should be addressed in the SEA Study. That is, the key policy/plan/programme-environment interactions that deserve special consideration and emphasis. Depending on expected impacts on society and the scope of other studies, there is also a need to determine the extent to which social impacts should be assessed.

d. Description of the scope of the environmental baseline to be prepared in the SEA Study

Also on basis of the information obtained above, indications must be provided on the scope of the environmental baseline needed for the SEA Study. This will include a proposal of the geographical boundaries to be covered.

e. Recommendations on impact identification and evaluation methodologies to be used in the SEA Study

An indication must be provided on the impact identification and evaluation methodologies that will be used in the SEA Study. Special attention should be given to identifying those environmental interactions that will merit quantitative analyses and those for which qualitative analyses should be carried out.

f. Indication of the time-frames and resources needed to carry out the SEA Study

If, based on the results of the Scoping Study, the time-frames and resources considered for the SEA Study are deemed to be inadequate, recommendations should be made on how to adapt them. If at this stage it is considered necessary to incorporate other experts with specific skills, this should be proposed for consideration.

4.2. SEA Study

The scope of the SEA Study will be defined on the basis of the Scoping Study. The SEA Study will include an environmental baseline study, an identification of environmental opportunities and constraints, an identification of relevant sustainable development objectives and indicators, an identification and assessment of potential environmental impacts, an analysis of performance indicators, an assessment of the institutional capacities to address environmental challenges and conclusions and recommendations for the preparation of the policy/plan/programme.

4.2.1. Environmental baseline study

A description and appraisal must be made of the current state of the environment, focusing on those key environmental components identified by the Scoping Study. The trends for the various environmental components must be identified and a projection must be made of the state of the environment on the short-, medium- and long-term in the assumption of no implementation of the policy/plan/programme. External factors must be taken into account, including the influence of other sectoral policies. If the "no implementation" scenario is unrealistic the most probable "business as usual" scenario should be selected.

Coastal tourism development would normally be encompassed in a wider tourism policy-making or planning process, especially for small-island developing states. The geographical area of assessment should include not only the immediate coastal area, but also that which has a direct influence on the coastal environment (e.g. inland deforestation and agricultural activities).

The following environmental components should be addressed (*the list of components is comprehensive and indicative, and should thus be adapted to reflect the specific context in question, based on the results of the Scoping Study. Only those aspects considered relevant should be included*). The detail of the information provided should correspond to the importance of the environmental aspect for the policy/plan/programme under review, and should refer to the geographical area of concern; a general description should suffice for most aspects.

Marine and coastal environment	Socio-economic baseline
• Fisheries (lagoon and open sea)	• Key economic activities
• Coral health and state of reef	• Employment
• Lagoon water quality	• Livelihoods
• Sea-grass beds	• Poverty
• Endemic marine species (flora and fauna)	• Population, demographic growth
• Endangered and emblematic marine species (flora, fauna)	• Ethnic composition, presence of social/ethnic conflicts
• Mangrove forests	• Archaeological and historical heritage
• Invasive aquatic species	• Sites of cultural importance
• Wetlands	• Immigration
• Coastal erosion	• Health statistics and services
• Beach accretion	• Public beaches and other amenities for local population
• Dunes	• Sanitation infrastructure and services
• Turtle nesting beaches	• Education (literacy, infrastructure)
• Poaching of marine species	Tourism-specific baseline information
• Eutrophication, siltation	• Tourist arrivals
Terrestrial environment	• Tourists profile
• Groundwater quality	• Key tourism attractions
• Surface water quality	• Key tourism activities
• Forest cover and coastal forests	• Tourism facilities (e.g. hotels, restaurants)
• Terrestrial and aquatic flora and fauna	• % of employment in region working in tourism
• Endangered, protected and emblematic species (flora, fauna)	• % contribution of tourism to region's income
• Migratory birds and nesting sites	Coastal infrastructure
• Soil erosion	• Marinas, harbours, jetties
• Deforestation	• Roads in coastal area
• Endemic species of flora and fauna	• Coastal protection structures (e.g. groynes, seawalls)
• Invasive species of flora and fauna	• Harbours
• Freshwater availability	General environmental aspects
• Salinisation	• Climate, extreme climatic events
• Land encroachment	• Geology, geomorphology
• Waste management	• Climate change
• Atmospheric pollution	• Seismic activity
• Visual impact, landscape	
• Noise, odours	

The causes of current situations of environmental degradation must be described in general terms, and an indication given of the degree of contribution of different causes. The following list can be used as a checklist for possible causes of coastal environmental degradation (*this list should be adapted according to the results of the Scoping Study*).

Coastal erosion and health of coral reef
• Presence of hard structures interfering in dynamic zone of the beach
• Inadequate coastal erosion protection structures
• Coral bleaching, unusual high tide ranges
• Trampling of coral reef (reef walks, sea-walks, fishing in lagoon)
• Impact of motor boats on coral reef
• Snorkelling, diving damaging coral (e.g. trampling, damage by flippers)
• Coral mining for lime production
• Anchor damage, damage by boat poles
• Dragging of nets across coral reef
• Spear fishing
• Other destructive fishing (e.g. dynamite, poison)
• Dredging of lagoon sand for creation of water skiing lanes, creating traps for sand
• Mining of beach sand
• River bank sand mining (sediments not reaching the coast)
• Excessive transport of sediments into lagoon (due to deforestation inland, damage to mangroves)
• Damage to coral due to contamination of lagoon (point and non-point emissions of wastewaters, agrochemicals, chemical

wastes), including runoff of agrochemicals from golf courses and polluting emissions/leakages from boats
• Removal of coral rubble creating sand-source deficit
Impacts on lagoon fisheries and impacts on marine fauna
• Over-fishing due to inadequate fishing methods (e.g. small mesh nets)
• Over-fishing due to high demand (e.g. from tourism, demographic growth)
• Harassment of dolphins and whales by dolphin- and whale-watching outings
• Loss of turtle nesting beaches by beach erosion or construction of structures
• Impact to turtle nesting by lighting of beaches and harassment
• Poaching of marine turtles, dugong and other protected species
• Loss of seagrass beds used by dugong for grazing
• Deforestation of mangroves
Impacts on mangroves, bird nesting sites
• Over-exploitation of mangroves for e.g. fuel-wood, construction poles, construction of salt pans, infrastructure development
Impacts on freshwater availability
• Over-exploitation of freshwater sources
• Contamination of freshwater sources (e.g. seepage of agrochemicals and biological contamination, leachates from inadequate solid waste management)
Impacts on landscape
• Building of structures not in harmony with surrounding environment
• Constructions blocking view to the sea
Socio-economic and cultural impacts
• Encroachment into public leisure sites (e.g. beaches, barachois)
• Social tensions and conflicts due to e.g. immigration, presence of tourists
• Child prostitution, school drop-outs
• Conflicts over use of sites of cultural importance
• Pressure on social services, e.g. waste management, sewage management, health services

4.2.2. Identification and evaluation of environmental opportunities and constraints

The environmental factors and resources that can affect (positively or negatively) the effectiveness, efficiency and sustainability of the policy/plan/programme should be identified, described and assessed for each alternative. These factors may include expected impacts from other sectors or policies. This part of the study should also consider the environmental issues that could potentially be addressed by the assessed policy/plan/programme. The study should assess if the policy/plan/programme provides an adequate response to these opportunities and constraints.

This section refers to those “impacts” external to the policy/plan/programme under consideration. For example, a degraded lagoon water quality (e.g. due to inadequate wastewater treatment in the coastal villages) will affect sustainability of a tourism destination; as well a pristine natural area may offer opportunities for eco-tourism development.

4.2.3. Identification and evaluation of impacts

The potential environmental impacts and risks from implementing the policy/plan/programme must be identified and described for each alternative being studied, taking into account the views and concerns of stakeholders. Their significance should be determined according to their characteristics (e.g. duration, probability, magnitude, mitigability, reversibility) and the sensitivity of the environment. Those impacts which are potentially significant should be assessed in detail, taking into account:

- the views and concerns of stakeholders;
- their consistency with international commitments (e.g. Multilateral Environmental Agreements);
- their socio-economic consequences (especially on vulnerable groups and ethnic minorities);
- their compliance with environmental regulations and standards;
- their consistency with environmental objectives and policies; and
- their implications for sustainable development.

(More information can be provided on how the methodology presented in the Scoping Study has been used for impact identification and evaluation).

The list of potential causes of environmental impact given in section 4.2.1 above can also be used as an initial checklist of possible environmental impacts of tourism development. The following table provides some basic indications of possible sources of impact as well as their direct and indirect impacts, but does not pretend to be exhaustive.

Cause	Potential direct impacts	Potential indirect impacts
Hard structures (hotels, restaurants)	<ul style="list-style-type: none"> - Interference in beach dynamic zone, accelerating beach erosion - Reduction of recreational coastal areas for local population - Reduction of beach area used by local fishermen - Visual impact - Presence of tourists and beach lighting affecting turtle nesting - Possible introduction of exotic invasive species for landscaping - Cutting of mangroves for access paths and building of structures - Destruction or interference with sites of cultural importance for local population 	<ul style="list-style-type: none"> - Loss of turtle nesting beaches - Creation of conflict with local population and fishermen - Impact on fisheries and damage to coral through cutting of mangrove - Discontent of population by interference with sites of cultural importance
Jetties, marinas	<ul style="list-style-type: none"> - Interference in beach dynamic zone, accelerating beach erosion - Emissions/leakages of fuel and wastes from boats - Damage to coral through polluting emissions - Contamination of bathing waters 	
Harbours	<ul style="list-style-type: none"> - Loss of habitats - Damage to benthic species through dredging - Contamination by emission/leakages of fuel and waste from boats - Loss of mangrove if requiring mangrove clearance 	<ul style="list-style-type: none"> - Impact to coastal biodiversity through polluting emissions - Acceleration of coastal erosion through loss of mangroves - Impact on fisheries through loss of mangroves
Roads	<ul style="list-style-type: none"> - Traffic generation and atmospheric emissions - Noise - Blocking of biological corridors - Informal settlements along road - Deforestation 	<ul style="list-style-type: none"> - Access to previously inaccessible areas, leading to poaching, deforestation
Operation of hotels and restaurants	<ul style="list-style-type: none"> - Generation of solid wastes - Generation of wastewaters - Consumption of freshwater in large quantities (e.g. swimming pools, bath tubs) - Over-fishing by increased demand of fish and seafood - Increase of prices of fish and seafood for local population due to increased demand 	<ul style="list-style-type: none"> - Increased stress on freshwater availability - Increased stress on solid waste management and wastewater treatment facilities - Contamination of lagoon - Destruction of coral due to contamination of lagoon - Impact to fisheries by loss of spawning grounds
Golf courses	<ul style="list-style-type: none"> - Deforestation - Introduction of exotic species - Runoff of agrochemicals - Consumption of freshwater in large quantities for irrigation 	<ul style="list-style-type: none"> - Contamination of lagoon - Increased stress on freshwater availability - Loss of habitats - Destruction of coral due to contamination of lagoon - Impact to fisheries by loss of spawning grounds
Diving and snorkelling	<ul style="list-style-type: none"> - Anchor damage to coral reef - Damage to coral reef through use of flippers - Direct damage to coral reef by tourists - Collection of shells and coral by tourists 	<ul style="list-style-type: none"> - Contribution to coastal erosion through damage to coral reef - Impact to fisheries by loss of spawning grounds - Impact on biodiversity
Sea walks	<ul style="list-style-type: none"> - Anchor damage - Trampling on coral reef - Collection of shells and coral by tourists 	<ul style="list-style-type: none"> - Contribution to coastal erosion through damage to coral reef - Impact to fisheries by loss of spawning grounds - Impact on fisheries through damage to coral reef
Dolphin watching	<ul style="list-style-type: none"> - Harassment of dolphins 	
Excursions	<ul style="list-style-type: none"> - Anchor damage - Damage of coral by impact of motor boats - Damage of coral by use of poles 	<ul style="list-style-type: none"> - Contribution to coastal erosion through damage to coral - Impact to fisheries by loss of spawning

Cause	Potential direct impacts	Potential indirect impacts
	<ul style="list-style-type: none"> - Emissions/leakages of fuel and emission of waste - Possible impact on cultural sites 	<ul style="list-style-type: none"> - Discontent of population over misuse of sites of cultural importance
Walks to coral reef	<ul style="list-style-type: none"> - Trampling on coral reef - Collection of shells and coral 	<ul style="list-style-type: none"> - Contribution to accelerate coastal erosion - Impact to fisheries by loss of spawning grounds
Water skiing	<ul style="list-style-type: none"> - Damage to coral patches through dredging of ski lanes - Damage to coral by motor boat impact 	<ul style="list-style-type: none"> - Contribution to accelerate coastal erosion - Impact to fisheries
Other aquatic activities involving motor boats	<ul style="list-style-type: none"> - Emission/leakage of fuel and emission of wastes - Damage to coral reef by impact 	<ul style="list-style-type: none"> - Contribution to accelerate coastal erosion - Impact to fisheries
Curio shops and beach operators	<ul style="list-style-type: none"> - Collection of shells and corals for sale to tourists - School drop out to engage in informal commercial activities catering for tourists 	<ul style="list-style-type: none"> - Contribution to accelerate coastal erosion - Impact to fisheries - Loss of biodiversity - Impact on education levels of community
Creation of bathing areas	<ul style="list-style-type: none"> - Damage to coral patches due to dredging of lagoon 	<ul style="list-style-type: none"> - Contribution to accelerate coastal erosion
Presence of tourists, sunbathing	<ul style="list-style-type: none"> - Increase number of sex workers and increase in sexually transmitted diseases - Child prostitution - Cultural clashes by presence of "semi-nude" tourists and consumption of alcohol and food during Ramadan, in Muslim countries 	<ul style="list-style-type: none"> - Impacts on social cohesion - Impacts on health of local population

4.2.4. Analysis of performance indicators

Performance indicators proposed by the policy/plan/programme should be assessed and revised from an environmental perspective, i.e. their usefulness to identify the environmental effects (positive and negative) of policy/plan/programme implementation. Proposals should be made for the policy/plan/programme performance indicators and monitoring system.

The set of indicators may include: "Pressure" indicators; "State" indicators; and "Response" indicators of other specific issues, such as key institutional weaknesses identified by the SEA.

Proposed indicators should be concerned only with the key and significant potential environmental impacts.

4.2.5. Assessment of the capacities to address environmental challenges

The capacity of regulatory institutions to address the environmental issues, especially the impacts identified, should be assessed. *(The analysis of institutional capacities should address only the key environmental concerns identified, and should be appraised according to the findings of the Scoping Study).*

4.2.6. Stakeholder engagement

Stakeholders should be engaged throughout the SEA Study according to the stakeholder engagement strategy agreed in the scoping stage.

4.2.7. Conclusions and recommendations

This chapter will summarise the key environmental issues for the sector(s) involved, including policy and institutional constraints, challenges and main recommendations. Recommendations should be made on how to optimise positive impacts and the opportunities to enhance the environment, as well as on how to mitigate environmental constraints, negative effects and risks. They should suggest the selection of an alternative and potential changes in the policy/plan/programme design. If the assessed policy/plan/programme makes reference to specific projects, the SEA should made recommendations on the need to carry out EIAs of those projects (screening) and should give an indication of the scope of such EIAs (initial scoping).

The limitations of the SEA and its assumptions should be presented. The recommendations should take into account the views presented by the stakeholders and explain how these were integrated. In the case of concerns that were not integrated in the final recommendations, the reasons thereof should be given.

5. Work plan

The work plan should include, but not necessarily be limited to the following activities:

Scoping Study

- Fact finding/data collection;
- Review of the prior public consultations, identification of key stakeholders;
- Engagement of stakeholders;
- Analysis/preparation of recommendations and scoping report.

SEA Study

- Fact finding/data collection;
- Field trips;
- Engagement of stakeholders;
- Identification and detailed analysis of the potential environmental impacts;
- Preparation of recommendations to mitigate negative environmental effects (and constraints) and optimise positive effects (and opportunities);
- Preparation of recommendations and draft SEA report;
- Preparation of the final SEA report.

On the basis of this draft proposal and the time schedule outlined in the ToR, a detailed work plan must be provided.

6. Expertise required

The party undertaking the SEA must specify the qualifications and experience of each specialist to be assigned.

The experts should jointly have knowledge and expertise on the following fields:

- Tourism sector and environmental impacts of tourism;
- Detailed knowledge and understanding of the SEA process and its associated tools and methodologies;
- Knowledge of the coastal environment, especially those areas likely to be impacted by the proposed policy/plan/programme.

Experience in the country/region will be an asset, as well as previous working experience in the sector.

A *curriculum vitae* must be proposed for each specialist, setting out the relevant qualifications and experience, and which will be assessed as an integral part of the proposal.

7. Reporting

7.1. Scoping Study

The Scoping Study must be presented in the format given below.

The detailed stakeholder engagement plan must be presented (*two*) weeks after kick-off; copies are to be presented to (*names and organisations*) for comments.

The draft scoping report is to be presented to (*names and organisations*) for comments by (*date*). Comments should be expected by (*date*). The party undertaking the SEA will take into account those comments in preparing the final scoping report, which will be submitted by (*date*).

7.2. SEA Study

(*Name of contracting institution*) will provide feedback on the Scoping Study no later than (*number*) weeks after its delivery, setting the scope for the SEA Study. The SEA Study will begin no later than (*number*) weeks after this date. The conclusions of the study must be presented in the SEA report format given below.

The draft SEA report must be presented to (*names and organisations*) for comments by (*date*). (*Names and organisations*) will make comments by (*date*). The party preparing the SEA will take account of these comments in preparing the final report, which will be submitted by (*date*).

8. Presentation of the proposal

The proposal must include an understanding of the Terms of Reference and a description of the general approach to the whole SEA in accordance with these ToR, highlighting the following: the proposed methodology for the engagement of stakeholders; the proposed approaches for the definition of the environmental baseline; and the proposed methodologies for impact identification and evaluation.

9. Time schedule

(Insert indicative time schedule).

The party preparing the SEA should respond to this time schedule and indicate in their proposal how they intend to organise the work for this purpose.

Standard Format for the SEA scoping report

1. Executive summary
2. Description of the policy/plan/programme under consideration
3. Overview of the policy, institutional and legislative framework
4. Description of key stakeholders and their concerns
5. Description of key environmental aspects to be addressed in the SEA Study
6. Description of the scope of the environmental baseline to be prepared in the SEA Study
7. Recommendations on specific impact identification and evaluation methodologies to be used in the SEA Study
8. Proposal of modifications to time frames and resources needed for the SEA Study
9. Technical appendices
 - a. Stakeholder engagement methodology
 - b. List of stakeholders engaged or consulted
 - c. Records of stakeholder participation
 - d. List of documents consulted

Standard Format for the SEA Study report

1. Executive summary
2. Scope
3. Background
 - a. Policy/plan/programme justification and purpose
 - b. Alternatives
 - c. Environmental policy, legislative and planning framework
4. Approach and methodology
 - a. General approach
 - b. Geographical scope of the study
 - c. Assumptions, uncertainties and constraints
5. Environmental baseline study
6. Impact identification and evaluation
7. Analysis of alternatives
8. Mitigation or optimising measures
9. Indicators and institutional capacities
10. Conclusions and recommendations
11. Technical appendices

- a. Maps and other illustrative information not incorporated into the main report
- b. Other technical information and data, as required
- c. List of stakeholders consulted/engaged
- d. Records of stakeholders' participation

Appendix 1 - Comoros

General context and existing SEA framework

Tourism in Comoros is almost nonexistent, but likely to increase rapidly with the construction of at least two large hotels in the Grand Comore, and other hotels in Mohéli. At the moment it is not recommended to develop an SEA system for Comoros due to the lack of clear policy-making and planning processes and lack of institutional capacities. Nevertheless it is recommended to carry out an SEA of the tourism sector and deliver awareness raising and basic capacity building on SEA to key personnel in DG Environment.

Key environmental constraints affecting tourism development

The following environmental aspects may act as constraints to tourism development and should be explicitly addressed in any tourism SEA:

Environmental concern	Potential impact on tourism
Sand mining	Accelerated coastal erosion Impact to turtle nesting beaches, affecting ecotourism opportunities
Coastal erosion	Threat to infrastructures along the coast Impact to turtle nesting beaches, affecting ecotourism opportunities Reduction of beach area
Land erosion (due mainly to deforestation inland)	Damage to coral reef, with consequent impact on coastal erosion and attractiveness of reef
Inadequate sewage treatment	Damage to coral reef, with consequent impact on coastal erosion and fisheries Degrading bathing water quality
Scarce freshwater availability (especially in the Grand Comore)	Availability of water for tourism industry, and probable need for desalination plants
Solid waste management	Visual impact Health hazards Mosquito breeding (e.g. malaria)
Destructive fishing	Damage to coral reef, with consequent impact on coastal erosion, attractiveness of reef and fisheries
Poaching of turtles	Impact on turtle watching based tourism Impacts on biodiversity

Potential environmental impacts of tourism policy

At the moment there is no environmental impact due to tourism in Comoros, but any SEA in the sector should address the following key environmental issues in the country, as deemed necessary:

- Construction materials for tourism infrastructure, especially if relying on beach sand mining
- Setback limits and contribution to coastal erosion
- Sewage treatment for tourism facilities
- Solid waste management for waste generated in tourism facilities
- Increased pressure on lagoon fisheries due to increased demand of fish and seafood, and use of destructive fishing methods to secure it
- Impact of hotels and restaurants built along beaches on turtle nesting sites, or impact due to lighting
- Increased demand of shells as curio will increase removal of protected shells
- Harassment of whales and dolphins from excursions
- Disturbance of Livingstone bat from increased excursions
- Creation of conflicts over user rights due to building of hotels on beaches used by the public or fishermen
- Clash of western tourism with Islamic cultural values (e.g. in relation to sunbathing, increased prostitution and consumption of alcohol and food during Ramadan)

Institutional and technical capacities for implementing SEA

Capacities within the Department of Environment are very limited, and should be strengthened. Any SEA carried out would probably be supported by donors, and must have a capacity-building component attached. This should be

achieved by the involvement of local experts and Ministry of Environment staff and by including capacity-building. Training and awareness-raising on SEA to key staff and actors (e.g. local consultants likely to engage in the field in the future) should be provided before the SEA is launched.

Public participation considerations

The general public in Comoros is not used to participate in policy-making and planning, and would normally not respond to invitations for public reviews of documents or other public meetings. Thus it is important to design a public participation strategy with an educational component on the subject, and which addresses the traditional power structures.

Public participation arrangements must ensure they integrate the different community actors and traditional leaders.

Notables (grouped under the Council of Notables) play a key role in determining policies at the local level, and any public participation initiatives should involve them explicitly. Local associations are numerous and should also be involved explicitly, although the views of the notables will most certainly have greater weight in supporting or not proposed activities. The *grand marriage* plays a very important role in the social structure, as those that have completed it will have more weight in influencing opinion and accepting/rejecting policies and activities. The Imams should also be involved explicitly (grouped under the Council of Imams) as they will normally sanction initiatives on their conformance to Islam.

The public participation strategy should also integrate minority groups, some of which may be stigmatised. The communities of Anjouannaise are sometimes one such group, and any initiatives must be designed such that they are given a voice, in a way that potential existing conflicts are not fuelled.

It must also be ensured that public meetings and consultations are carried out in Comorien where the population may not feel comfortable with or may have difficulties in expressing themselves in French. This will have implications on the language abilities of the selected experts.

Appendix 2 – Tanzania (mainland)

General context and existing SEA framework

Coastal tourism in mainland Tanzania is currently limited to the area around Dar es Salaam and Bagamoyo as well as small-scale tourism in Mafia Island. However coastal tourism is being promoted and will receive an important push when the road connecting Dar es Salaam to Mtwara is completed, which will facilitate access to the whole of the southern coast. Moreover the bridge connecting Mozambique with Tanzania may also generate an inflow of tourists that select Mozambique as their main destination.

The SEA regulations are in the process of being developed. In broad terms the SEA process described in the draft regulations is rather standard. However there are some fundamental aspects which are lacking and should be addressed in any SEA:

- The SEA process applies only to national level Bills, regulations, policies, plans and programmes, leaving out the region and local levels. This is an important shortcoming as there is a decentralisation process going on in Tanzania and many of the on-the-ground actions will be responding to region and local level plans and programmes (e.g. land use plans, tourism development plans). Thus SEAs should also apply to such regional and local plans and programmes.
- The SEA process does not consider the participation of stakeholders and the wider public, limiting it to consultations between relevant authorities.

Key environmental constraints affecting tourism development

The following environmental aspects may act as constraints to tourism development and should be explicitly addressed in any tourism SEA:

Environmental concern	Potential impact on tourism
Increased nutrient load in lagoon mainly associated to inadequate sewage management and increased urbanisation along the coast	Degradation of bathing water quality Impact on quality of coral reef as tourism attraction Indirect contribution to coastal erosion
Over-fishing, due mainly to increased demographic pressure	Impact on quality of coral reef as tourism attraction Reduced local supply of sea products
Coral mining	Contribution to coastal erosion, posing threat to infrastructures
Mangrove clearing	Damage to potential tourism sites, including bird nesting sites Indirect contribution to coastal erosion
Inadequate solid waste management	Visual impact Health hazards Mosquito breeding (e.g. malaria)
Destructive fishing	Damage to coral reef, with consequent impact on coastal erosion and attractiveness of reef

Potential environmental impacts of tourism policy

Environmental impacts due to coastal tourism are very limited, except for the area around Dar es Salaam and Bagamoyo. Any SEA in the sector should address the following key environmental issues in the country, as deemed necessary:

- Setback limits and contribution to coastal erosion
- Sewage treatment for tourism facilities
- Solid waste management for waste generated in tourism facilities
- Increased pressure on lagoon fisheries due to increased demand of fish and seafood, which may be based on destructive fishing methods
- Impact of hotels and restaurants built along beaches on turtle nesting sites, or impact due to lighting
- Increased demand of shells as curio will increase removal of protected shells
- Impacts on turtle nesting beaches
- Impacts on marina fauna, such as dugong
- Class of western tourism with Islamic cultural values (e.g. in relation to sunbathing, increased prostitution)
- The effects of the construction of the Dar es Salaam road and the bridge connecting Tanzania and Mozambique should be addressed

- The relationship to national parks, in terms of policy and management, should be assessed. In the coastal area this is especially the case with the Saadani national park
- The Marine Ecoregions Programme led by WWF should be reviewed and taken into account, as in the case of Tanzania it forms part of government policy
- Specifically address the areas where coastal tourism is most likely to develop in the short- and medium-term: Mtwara, Rufiji Delta, Kilwa, Bagamoyo, Dar es Salaam and Tanga
- The implementation of the Coastal Tourism Development Guidelines must be taken into account in the definition of safeguards for project level EIAs that may be proposed as part of the SEA outputs

Institutional and technical capacities for implementing SEA

SEA capacities within the National Environmental Management Committee (NEMC) are very limited, and should be strengthened. Training and awareness-raising on SEA to key staff and actors (e.g. local consultants likely to engage in the field in the future) should be provided before the SEA is launched.

Public participation considerations

The general public in mainland Tanzania is not used to participate in policy-making and planning, and would normally not respond to invitations for public reviews of documents or other public meetings. Thus it is important to design a public participation strategy with an educational component on the subject, and which addresses the traditional power structures.

It must be ensured that public meetings and consultations are addressed in Swahili, and that key reports (at least the non-technical summary and discussion papers for public meetings) are provided in both Swahili and English. This will have implications for the language capacities of the selected consultants.

Appendix 3 - Zanzibar

General context and existing SEA framework

Tourism in Zanzibar is well developed and includes a range of facilities from guest houses, mass tourism hotels and luxury establishments. Tourism is having a number of impacts on the environment and its sustainability also depends on the state of the environment. It is recommended to carry out an SEA of the overall tourism development policy, including the Tourism Zoning Plan, in light of increase of tourism and potential impacts.

Key environmental constraints affecting tourism development

The following environmental aspects may act as constraints to tourism development and should be explicitly addressed in any tourism SEA:

Environmental concern	Potential impact on tourism
Inadequate sewage management	Degradation of bathing water quality Impact on quality of coral reef as tourism attraction Indirect contribution to coastal erosion
Sand and coral mining	Contribution to coastal erosion, posing threat to infrastructures
Mangrove clearing, especially in Pemba	Damage to potential tourism sites, including bird nesting sites Indirect contribution to coastal erosion
Inadequate solid waste management	Visual impact Health hazards Mosquito breeding (e.g. malaria)
Destructive fishing	Damage to coral reef, with consequent impact on coastal erosion and attractiveness of reef
Scarce freshwater availability	Increased pressure on limited freshwater resources will be a constraint for tourism development, especially those which are water intensive

Potential environmental impacts of tourism policy

There are various environmental impacts due to coastal tourism, and which any SEA in the sector should address, as deemed necessary:

- Setback limits and contribution to coastal erosion
- Sewage treatment for tourism facilities
- Solid waste management for waste generated in tourism facilities
- Freshwater availability is an issue
- Increased demand of fish and seafood increasing local prices, making them inaccessible for a large portion of the local population
- Hotels built along the beaches interfere with turtle nesting beaches, especially in the east of Unguja
- Increased demand of shells as curio will increase removal of protected shells
- Impacts on marina fauna, such as dugong
- Harassment of dolphins through dolphin watching excursions
- Often western tourism clashes with Islamic cultural values (e.g. in relation to sunbathing, increased prostitution and consumption of food and alcohol during Ramadan)
- The Marine Ecoregions Programme led by WWF may be reviewed and taken into account
- Conflicts over land use and access to beaches by fishermen should be addressed

Institutional and technical capacities for implementing SEA

Institutional capacities are very limited, and should be strengthened. Any SEA carried out would probably be supported by donors, and must have a capacity-building component attached. This should be achieved by the involvement of local experts and Ministry of Environment staff and by including capacity-building. Training and awareness-raising on SEA to key staff and actors (e.g. local consultants likely to engage in the field in the future) should be provided before the SEA is launched.

Public participation considerations

The general public in Zanzibar is not used to participate in policy-making and planning, and would normally not respond to invitations for public reviews of documents or other public meetings. Thus it is important to design a public participation strategy with an educational component on the subject, and which addresses the traditional power structures.

It must be ensured that public meetings and consultations are addressed in Swahili, and that key reports (at least the non-technical summary and discussion papers for public meetings) are provided in both Swahili and English. This will have implications for the language capacities of the selected consultants.

Appendix 4 - Kenya

General context and existing SEA framework

Coastal tourism in Kenya is well developed and represents an important source of employment and GDP for the country. It mainly caters for a mass tourism market and is located along most of the coast stretching north of Mombasa (up to Malindi) and south of Mombasa, with other pockets of tourism around Lamu.

The EIA Regulations address SEA, although in an ambiguous manner as SEA is addressed under the part of "Miscellaneous Provisions". The wording in the regulations is confusing and the way to implemented not clear; there is even no agreement amongst stakeholders whether SEA is mandatory or not. Chapter 4 of the EIA Guidelines refer to SEA, but they are not consistent with the regulations and are not consistent with international good practice, requiring too detailed analyses at stages of the process where it is not justified and omitting other elements of good practice. SEA Regulations are in the process of being developed under a DANIDA Environmental Support Programme, which also includes a capacity building component.

Key environmental constraints affecting tourism development

The following environmental aspects may act as constraints to tourism development and should be explicitly addressed in any tourism SEA:

Environmental concern	Potential impact on tourism
Coastal erosion throughout the coast, and especially important in area around Diani beach	Threat to tourism infrastructure, and loss of beach
Beach accretion, especially in Malindi area	Beach front hotels get further away from the beach Unclear legal status of new land, with risk of leasing to other activities, thus blocking hotels' direct access to beach
Pollution of the lagoon through various sources, including runoff of nutrients and inadequate sewage management	Degradation of bathing water quality Degradation of coral reef, affecting aesthetic value and fisheries, and contributing to accelerated erosion
Inadequate solid waste management	Health risk and hazards Visual impact on landscape
Destructive fishing practices	Degradation of coral reef, affecting aesthetic value and fisheries, and contributing to accelerated erosion
Over-fishing	Loss of aesthetic quality of lagoon Affection to supply of fish and seafood for hotels and restaurants
Degradation of beaches through inadequate control of activities and inadequate facilities	Impact to landscape (visual, noise, odours) Health hazards through presence of wastes Harassment of tourists

Potential environmental impacts of tourism policy

Environmental impacts due to coastal tourism are extensive along the whole of the coast. Any SEA in the sector should address the following key environmental issues in the country, as deemed necessary:

- Seek to enhance conditions in degraded areas, enhance environmental management of hotels and associated activities, and protect undeveloped areas
- Setback limits and contribution to coastal erosion
- Finding integrated solutions to current problems of coastal erosion (addressing entire beaches)
- Sewage treatment for tourism facilities
- Solid waste management for waste generated in tourism facilities
- Demand of fish and seafood increasing pressure on lagoon fishing, maybe based on destructive fishing methods
- Impact on remaining turtle nesting beaches through construction of hotels in unoccupied areas and lighting of beaches
- Increased demand of shells as curio will increase removal of protected shells; impacts on illegal use of precious woods for curio (e.g. ebony, mahogany)
- Impacts on marina fauna, such as dugong
- Social impacts in relation to sex workers (sexually transmitted diseases), child prostitution and school drop out (to engage as beach operators or seek European companions/couples)

- The Marine Ecoregions Programme led by WWF should be reviewed and taken into account

Institutional and technical capacities for implementing SEA

SEA capacities within the National Environmental Management Authority (NEMA) are very limited, and should be strengthened. Training and awareness-raising on SEA to key staff and actors (e.g. local consultants likely to engage in the field in the future) should be provided before the SEA is launched. The programme under DANIDA is addressing this issue and it should be consulted before proposing any SEA-related activities.

Public participation considerations

The general public in Kenya is not used to participate in policy-making and planning, and would normally not respond to invitations for public reviews of documents or other public meetings. Thus it is important to design a public participation strategy with an educational component on the subject, and which addresses the traditional power structures.

Any SEA should directly involve the Province (Coast) authorities (including NEMA and the KWS) and the local level, which is where large part of the knowledge on the region is accumulated.

It must be ensured that public meetings are addressed in Swahili, and that key reports (at least the non-technical summary and discussion papers for public meetings) are provided in both Swahili and English. This will have implications for the language capacities of the selected consultants.

Appendix 5 - Seychelles

General context and existing SEA framework

Tourism is a key economic activity for the economy of the Seychelles, which caters primarily to top market tourism. Seychelles has also been aware of the importance of its natural environment and has been successful at protecting it. A key challenge for its growing tourism industry is the competition for space, mainly for the following land uses: urbanisation, tourism facilities (mainly hotels), nature protection and recreational space for locals.

There is no framework, existing or foreseen, for SEA in the Seychelles. The key tourism planning documents that an SEA should address are Vision 21 (Tourism Development in Seychelles 2001-2010) and SETS-21 (Seychelles Ecotourism Strategy).

Seychelles could benefit from an SEA in the tourism sector, in order to delimit physical areas where tourism developments would be allowed or not, protect public access to beaches, ensure adequate protection for environmentally sensitive areas, and identify/develop adequate safeguards for tourism-related projects. However such an SEA would need to feed directly into the preparation of land use plans.

Key environmental constraints affecting tourism development

The following environmental aspects may act as constraints to tourism development and should be explicitly addressed in any tourism SEA:

Environmental concern	Potential impact on tourism
Scarcity of land and competition for land for: urbanisation, nature protection, leisure (public beaches) and tourism	Less coastal land where to build hotels and other tourism facilities
Coastal erosion	Threat to tourism facilities and access roads

Potential environmental impacts of tourism policy

Any SEA in the sector should address the following key environmental issues in the country, as deemed necessary:

- Setback limits and contribution to coastal erosion
- Reduction of space for public beaches and other coastal leisure sites for the local population
- Encroachment into environmentally sensitive areas, including mangroves
- Socio-economic impacts of large number of foreign workers, e.g. pressure on social services, housing market

Institutional and technical capacities for implementing SEA

The Department of Environment seems to have adequate technical capacities to address the issues that an SEA in the tourism sector would require, or these could be found through *ad hoc* involvement of organisations and individuals. Nevertheless it would be necessary for key staff of relevant authorities (environment, tourism, land use planning) to receive training/capacity-building on SEA, so they would be in a position to commission such a study and make effective use of its findings.

Public participation considerations

The general public in Seychelles is not used to participate in policy-making and planning, and would normally not respond to invitations for public reviews of documents or other public meetings. This is due to a number of factors, which seem to have a strong component of feeling by the population that their input, even if sought, would not be taken into account, as well as fear to be seen opposing government-supported projects. Thus it is important to design a public participation strategy with an educational component on the subject.

The government would need to show that public input is indeed valued and taken into account in decision-making, by clearly pointing out how public inputs have led to enhance the design of projects. In this sense it is also necessary to justify when public input has not been incorporated into the decision.

It must be ensured that public meetings are addressed in Kreole if there are participants not fluent in English or French, and that key reports (at least the non-technical summary) are provided in that language.

Appendix 6 - Madagascar

General context and existing SEA framework

Coastal tourism in Madagascar is more developed in the north-west (Nosy Be) and north-east (Ile Sainte Marie), catering for mass tourism establishments. It is less intensive but focus on promotion in the south-west (around Tulear), and at a lesser extent in the south-east (Fort Dauphin).

No specific SEA legislation exists in Madagascar, although the MECIE decree (i.e. the EIA process) is also applicable to policies, plans and programme. An EIA is required for "any plan, programme or policy which may modify the natural environment, the use of natural resources and/or the quality of the human environment in an urban or rural environment". This is a broad definition which could imply that any policies, plans and programmes are subject to EIA.

There is currently confusion between what is an EIA and what an SEA, mainly triggered by the scope of application of the MECIE decree, but the ONE is currently preparing – with the assistance of USAID - Guidelines for SEA (due to be completed by 2008).

Key environmental constraints affecting tourism development

The following environmental aspects may act as constraints to tourism development and should be explicitly addressed in any tourism SEA:

Environmental concern	Potential impact on tourism
Coastal erosion, especially in the west coast	Threat to hotels and other structures (e.g. restaurants, roads) Loss of beach
Over-fishing in lagoon	Reduced supply of local fish and seafood Increased prices due to decrease in supply
Coral damage (various causes, including destructive fishing techniques, deforestation and soil erosion inland leading to transport of sediments into lagoon, inadequate sewage management, mining activities inland)	Reduced attractiveness of coral reef Contribution to accelerated erosion Contribution to depletion of fisheries
Incompatible activities, especially mining and oil & gas exploration and production	Degradation of lagoon water quality through increased transport of sediments and transport of pollutants Construction of structures on tourism areas (e.g. harbours, pipelines) Degradation of landscape Threat to sensitive environmental sites (and to their tourism attractiveness)

Potential environmental impacts of tourism policy

Environmental impacts due to coastal tourism are mainly concentrated in the area of Nosy Be and Ile Sainte Marie. Any SEA in the sector should address the following key environmental issues in the country, as deemed necessary:

- Setback limits and contribution to coastal erosion
- Finding integrated solutions to current problems of coastal erosion (addressing entire beaches)
- Sewage treatment facilities for tourism facilities
- Solid waste management for waste generated in tourism facilities
- Demand of fish and seafood increasing pressure on lagoon fishing, often based on destructive fishing methods
- Increased demand of shells as curio will increase removal of protected shells
- SEAs should address not only the tourism sector but should also be instrumental in defining effective land use planning, in order to ensure compatibility between different economic activities (especially tourism and mining) and with nature protection, which may compete for the same physical space
- Social impacts in relation to sex workers (sexually transmitted diseases) and child prostitution

Institutional and technical capacities for implementing SEA

SEA capacities within the ONE are very limited, and should be strengthened. Training and awareness-raising on SEA to key staff and actors (e.g. local consultants likely to engage in the field in the future) should be provided before SEA is launched. A programme under USAID is addressing this issue and it should be consulted before proposing any SEA-related activities.

Public participation considerations

The general public in Madagascar is not used to participate in policy-making and planning, and would normally not respond to invitations for public reviews of documents or other public meetings. Thus it is important to design a public participation strategy with an educational component on the subject, and which addresses the traditional power structures.

The Presidents of the Fokotany (local level authorities) should be key stakeholders, but should not be taken as full representatives of the local population, as they are often designated and may even be new to the area. Any SEA should take into account that opinion of traditional authorities (notables and heads of lineage) play a key role in deciding the position of their communities (e.g. in support or rejection of a project, and in transmitting their concerns), irrespective of the outcomes of wider public consultations and public meetings. Efforts must be made to identify and ensure the contribution of such traditional leaders as part of any SEA process. It is recommended to engage anthropologists with knowledge of power structures in the region to help in the design of public consultations.

It must be ensured that public meetings are addressed in Malagasy, and that key reports (at least the non-technical summary and discussion papers for public meetings) are provided in both Malagasy and French. This will have implications for the language capacities of the selected consultants.

Appendix 7 – Mauritius

General context and existing SEA framework

Tourism is a key economic activity in Mauritius and, with the decline in the textile and sugar sectors, the government is staking its future economic growth in this sector. The quality of the marine environment is key to maintain the attractiveness of the island. Tourism in Mauritius caters primarily to the top-end market and includes an intensive use of the coastal and lagoon areas, especially through the construction of hotels, golf courses and activities such as water skiing, kite surfing, dolphin watching, diving and snorkelling.

There is no SEA framework in Mauritius, although at least two SEAs have been carried out, one of them addressing the tourism sector (for the selection of areas appropriate for water ski lanes, marinas and bathing areas). The use of SEA as a tool is part of the agenda, especially in the tourism sector, although there are no explicit plans to develop a legal framework for SEA or written procedures and guidelines.

Key environmental constraints affecting tourism development

The following environmental aspects may act as constraints to tourism development and should be explicitly addressed in any tourism SEA:

Environmental concern	Potential impact on tourism
Coastal erosion, caused by various factors including presence of hard structures in dynamic zones of beaches, damage to coral (in turn caused by various factors such as anchor damage, destructive fishing, contamination of lagoon, etc.)	Threat to tourism structures (e.g. hotels, restaurants) Loss of beach
Over-fishing in lagoon	Reduced supply of local fish and seafood and increase in prices
Degrading quality of lagoon water, due to inadequate sewage management in villages and smaller hotels, runoff of agrochemical products from agriculture and industry, runoff of sediments due to soil erosion inland	Degradation of bathing waters, which may in some cases lead to closure of certain beaches as bathing areas
Freshwater scarcity	Water stress affecting also tourism industry Additional expenses in construction of desalination plants
Degradation of coral reef, due to various causes such as contamination of lagoon, transport of sediments, destructive fishing techniques, etc.	Loss of attractiveness of coral reef for diving and snorkelling Contribution to beach erosion

Potential environmental impacts of tourism policy

Environmental impacts due to coastal tourism are found throughout the island. Any SEA in the sector should address the following key environmental issues in the country, as deemed necessary:

- Impacts of motor boats through: emissions and leakages of fuels, impact on coral patches by speed boats, anchor damage
- Impacts on coral patches and contribution to beach erosion due to dredging for the creation of water ski lanes and bathing areas in lagoon
- Contribution to erosion by structures interfering in dynamic zones of beaches
- Contribution to erosion by levelling of dunes and heavy pedestrian and vehicle traffic on dunes
- Damage to coral by aquatic activities, mainly diving, snorkelling and sea walks
- Contamination of lagoon by inadequate sewage treatment
- Selling of sea shells (including protected shells) as curio to tourists
- Demand of fish and seafood increasing pressure on lagoon fishing, often based on destructive fishing methods
- Increase in price of fish and seafood for local population
- Finding integrated solutions to current problems of coastal erosion (addressing entire beaches)
- Impacts of golf courses on scarce freshwater resources and runoff of agrochemicals into lagoon
- Dolphin harassment by inadequately controlled dolphin watching excursions
- Impact on landscape by densification of hotels along the coast
- Potential social conflict by loss of access to beaches and barachois

- SEAs should address not only the tourism sector but should also be instrumental in defining effective land use planning, in order to ensure compatibility between different potential land uses, mainly recreational use for the local population, hotels and nature/landscape protection

Institutional and technical capacities for implementing SEA

SEA capacities within the Department of Environment are limited and should be strengthened. Training and awareness-raising on SEA to key staff (including from the Ministry of Environment and the Mauritius Tourism Authority) and actors (e.g. local consultants likely to engage in the field in the future) should be provided before the development of an SEA framework.

Public participation considerations

The general public in Mauritius is not used to participate in policy-making and planning, and does not often respond to invitations for public reviews of documents or other public meetings. However some environmental NGOs do engage in lobbying for the protection of environmentally sensitive areas and public concerns are often voiced through the media, and sometimes demonstrations. There is thus an opportunity to raise awareness of SEA as a participatory tool, providing for mechanisms which would allow the public to engage in it.

Efforts must be made to identify integrate groups which may be marginalised but which nevertheless are potentially affected by the implementation of the policy, plans or programme under assessment. Public consultations should be carried out in Kreole in case there are persons that are not fluent in French or English. Likewise key documents, including the report's non-technical summary should be available in Kreole or French if stakeholders are not fluent in English. This will have implications for the language capacities of the selected consultants.

Appendix 8 – Rodrigues

General context and existing SEA framework

Tourism is a key economic activity in Rodrigues, and is seen to be the engine of its economy's growth. As in Mauritius the quality of its environment, especially its marine environment, is its key attraction. Tourism in Rodrigues does not cater to the top-end market as in Mauritius, but is rather based on a small number of hotels and guest houses. As well activities in the lagoon on offer as less intensive in the use and potential impact of natural resources, limited to diving, snorkelling, and kite surfing. Other activities include game fishing and terrestrial attractions, such as visiting of caves.

There is no SEA framework for Rodrigues and no SEA has been carried out which addresses the island.

Key environmental constraints affecting tourism development

The following environmental aspects may act as constraints to tourism development and should be explicitly addressed in any tourism SEA:

Environmental concern	Potential impact on tourism
Coastal erosion in specific sites, causes of which have not been studied	Threat to infrastructure (roads) Loss of beach area
Degradation of coral reef	Loss of attractiveness of coral reef as tourist attraction Contribution to reduction of fisheries in lagoon Contribution to coastal erosion
Freshwater scarcity	Higher dependence on desalination plants Limitation on freshwater-intensive facilities (e.g. golf courses)
Contamination of lagoon during heavy rainfall events, due to extensive soil erosion and cattle raising	Contribution to degradation of coral reef
Over-fishing	Decreased availability of fish and seafood for hotels
Destructive fishing	Contribution to damage of coral reef, with potential consequences on coastal erosion and loss of quality of coral reef as tourism attraction

Potential environmental impacts of tourism policy

Environmental impacts due to coastal tourism are minor in Rodrigues. Any SEA in the sector should address the following key environmental issues in the country, as deemed necessary:

- Contribution to erosion by structures interfering in dynamic zones of beaches
- Damage to coral by aquatic activities, mainly diving and snorkelling
- Demand of fish and seafood increasing pressure on lagoon fishing, often based on destructive fishing methods
- Increase in price of fish and seafood for local population
- SEAs should address not only the tourism sector but should also be instrumental in defining effective land use planning, in order to ensure compatibility between different potential land uses, mainly recreational use for the local population, hotels and nature/landscape protection

Institutional and technical capacities for implementing SEA

SEA capacities within the Commission for Environment are limited and should be strengthened. Training and awareness-raising on SEA to key staff should be provided together with initiatives at Mauritius level.

Public participation considerations

The public in Rodrigues is not used to participate in policy-making and planning, and does not respond to invitations for public reviews of documents. There is an opportunity to raise awareness of SEA as a tool, providing for mechanisms which would allow the public to engage in it, and any SEA should have an educational component on participation.

Efforts must be made to identify and integrate groups which may be marginalised but which are potentially affected by the implementation of the policy, plans or programme under assessment. Public consultations should be carried out in Kreole in case there are persons that are not fluent in French or English. Likewise key documents, including the report's non-technical summary should be available in Kreole or French if stakeholders are not fluent in English. This will have implications for the language capacities of the selected consultants.

ANNEX 1

PHOTOGRAPHIC RECORD



Photo 1. Burial of waste in the beach – Fomboni (Mohéli)



Photo 2. Waste collection point in Mitsamiouli beach



Photo 3. Disused 'incinerator' in Djiouzi (Mohéli)



Photo 4. Cleaning of beach in Itsandra (Grand Comore)



Photo 5. Litter on Chindini beach (Grand Comore)



Photo 6. Mined sand detained by the gendarmerie, near Galawa beach (Grand Comore)



Photo 7. Use of “stabilised earth brick” in bungalow, (Mohéli)



Photo 8. Stabilised earth brick factory, Fomboni (Mohéli)



Photo 9. Coastal erosion in Djoeizi (Mohéli)



Photo 10. Selling of protected shells, Galawa beach (Grand Comore)



Photo 11. Coastal erosion control in Diani Beach, Kenya



Photo 12. “Beach operators”, Mombasa



Photo 13. Camel ride, Mombasa



Photo 14. Beach accretion in Malindi, Kenya



Photo 15. Beach watch tower on accreted land, Eden Rock hotel, Malindi, Kenya



Photo 16. Land reclamation in Mahé, Seychelles



Photo 17. Beach erosion in Mahé, Seychelles



Photo 18. Awareness-raising on protected shells (1), Anakao, Madagascar



Photo 19. Awareness-raising on protected shells (2), Ifaty, Madagascar



Photo 20. Beach erosion in Ifaty, Madagascar



Photo 21. Beach erosion control (1), Ifaty



Photo 22. Beach erosion control (2), Ifaty



Photo 23. Beach erosion control (3), Ifaty



Photo 24. Beach erosion control (4), Ifaty



Photo 25. Pedestrian and vehicle traffic on dunes, Flic en Flac public beach



Photo 26. Partially removed seawall for beach erosion control, Sofitel, Flic en Flac



Photo 27. Wastewater treatment plant, Sofitel, Flic en Flac



Photo 28. Sale of shells, artisans market, Ile aux Cerfs



Photo 29. Motor boats, Ile aux Cerfs



Photo 30. Golf course, Ile aux Cerfs



Photo 31. Barachois with application for a hotel development, Mauritius



Photo 32. Seawall built as part of coastal erosion control project, Rodrigues

ANNEX 2

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ANNEX 3

INTERNAL GUIDANCE FOR INTERVIEWS

Part 1: Appraisal of environmental impacts of coastal tourism sector

The first part of the assignment concerns making an appraisal of the environmental impacts caused by the tourism sector in each country. This appraisal will provide information to be able to provide recommendations to minimise such impacts through an enhanced policy and concrete actions. It will also provide information useful to provide country-specific model ToR for SEAs.

The appraisal will be based on a revision of key documents (e.g. tourism policy, EC Country Environmental Profile, State of the Environment reports) and interviews with key stakeholders (e.g. NGOs; national, regional and local tourism and environmental authorities; developers; professional organisations).

Interviews will be semi-structured, based on an interview protocol. This will allow focusing the interview whilst allowing a degree of freedom to explore new themes that may arise on the go.

The appraisal will explore the following:

1. Identify the key environmental problems associated to coastal tourism, for example: groundwater depletion; deforestation; land encroachment; interference with coastal hydrodynamics; destruction of habitats.
2. Identify the key direct causes of such problems, for example: land clearance for tourism developments; groundwater extraction; construction of infrastructure (roads, harbours, jetties, airports...); increased access to sensitive areas.
3. Identify the key geographical areas where such problems are occurring.
4. Identify the underlying causes of such problems.
5. Identify positive developments which are reverting/avoiding such problems, including the driving forces behind them (e.g. in terms of policy, enforcement etc.).
6. Get the views from interviewees as to their proposed solutions for sustainable tourism.

Such an appraisal will be broad due to restrictions in time and resources and will focus on "significant" impacts, in order to gather the main threats that should be addressed.

Appraisal of Environmental Impacts from the Coastal Tourism Sector – Interview Protocol

1. What are the key environmental problems associated to coastal tourism in the country?

Checklist of possible problems

1. Water contamination: coastal waters; freshwater bodies (lakes, lagoons, rivers); groundwater
2. Water depletion: fresh water; groundwater
3. Atmospheric pollution
4. Noise: affectation to fauna
5. Land: erosion; deforestation; siltation of water bodies; salinisation; reduction of agricultural land; land encroachment; waste dumping.
6. Coastal erosion
7. Destruction of wetlands and mangrove forests
8. Destruction of habitats (terrestrial, aquatic, including coral reefs and dunes)
9. Destruction of spawning grounds (e.g. mangrove, coral reef)
10. Flora and fauna (terrestrial and aquatic): endangering flora and fauna; introduction of exotic species and predators; blocking of biological corridors; destruction of sites important to migratory birds.
11. Over-fishing and poaching of endangered species
12. Landscape: visual intrusion and destruction of scenic landscape

13. Geology and geomorphology: creation of unstable characteristics; subsidence; landslides, mudslides (e.g. associated to deforestation)
14. Vulnerability: increased vulnerability to extreme weather events (e.g. due to reef blasting); increased vulnerability to floods (e.g. due to deforestation and mangrove logging); increased vulnerability to drought (e.g. due to groundwater extraction)
15. Health: creation of breeding grounds for disease vectors; increased incidence of disease due to pollution (water, air)
16. Socio-economy: employment; social cohesion (e.g. associated to drug abuse, prostitution, child prostitution, alcoholism, indigenous peoples and minority groups issues); social services
17. Cultural and archaeological heritage: destruction of archaeological heritage; increased conflicts

2. What are the direct causes of such problems?

Checklist of possible direct causes

1. Building and operation of infrastructure
 - a. Roads
 - b. Airports and landing strips
 - c. Ports, jetties and marinas
 - d. Hotels
 - e. Golf courses
 - f. Desalination plants
 - g. Power plants and transmission lines
 - h. Hotel landscaping using exotic species
 - i. Land filling and land reclamation
 - j. Dredging
 - k. Sand mining
 - l. Beach creation
2. Associated developments and activities
 - a. Irregular settlements (e.g. along roads)
 - b. Handicrafts production (e.g. over-using scarce natural resources such as coral, tropical woods, furs and skins from protected species)
3. Sports and recreational activities
 - a. Diving
 - b. Water skiing
 - c. Sea walks
 - d. Fishing
 - e. Boat rides
 - f. Cruisers
 - g. Camping and campfires
 - h. Uncontrolled number of visitors
 - i. Anchor damage and groundings
4. Operational activities
 - a. Water extraction
 - b. Untreated wastewater discharges (hotels, restaurants, boats)
 - c. Atmospheric pollution

- d. Noise generation (motors, boats, airports, traffic, etc)
- e. Littering
- f. Urban waste disposal
- g. Hazardous waste management (e.g. medical waste, oils)

3. Which are the main geographical areas where such problems are encountered (expected)? Which are their specific environmental, social and economic characteristics?

- 1. Political situation (political instability?)
- 2. Economic and social situation
- 3. Presence of indigenous peoples and marginalised groups
- 4. Situation of conflict? (type of conflict, parts involved)
- 5. Environmental sensitiveness of the area
- 6. Protection status of area
- 7. Degree of environmental awareness amongst the population
- 8. Organisation of the civil society

4. What are the underlying causes to these problems?

- 4.1. Is the current tourism policy encouraging/promoting the identified problems (unsustainable tourism)? How and why?
- 4.2. Is the current environmental policy and land use planning addressing these problems?
- 4.3. Are environmental legislation and regulations adequate to address these problems? e.g. in relation to Environmental Impact Assessment, control of protected areas.
- 4.4. Is enforcement of environmental legislation (and land use planning) adequate (also in relation to monitoring and governance)?
- 4.5. Are the institutional structures and capacities adequate to address the identified problems (e.g. overlapping or voids in areas of responsibility, local problems addressed inefficiently at central government level, lack of trained staff for monitoring, lack of EIA specialists, environmental responsibilities fall under an inadequate sectoral authority).
- 4.6. Behaviour/awareness of visitors contributing to impacts?

Part 2: Identification of Tourism policy-making and planning process

The identification of the tourism policy-making and planning process is important to be able to contextualise the recommendations made, as well as to identify potential entry-points for current or possible SEA frameworks.

Part 3: Appraisal of existing tourism and eco-tourism policies, plans and programmes

- 1. Are there national/regional tourism and eco-tourism policies, plans and/or programmes?
- 2. What is their quality in general terms? e.g. in terms of recognising:
 - Using resources sustainably
 - Reducing over-consumption and waste
 - Maintaining diversity
 - Integrating tourism into planning
 - Supporting and involving local economies
 - Consulting stakeholders and the public
 - Training staff
- 3. What environmental impacts can be identified (on a first instance) from the policies analysed (in relation to the specific problems identified above)?

These questions will be answered mainly based on desk-top analyses of existing policy documents. The aim of this Part is mainly to provide an insight into the existence and adequacy of eco-tourism policies, from an environmental point of view. It may lead to general recommendations on how to enhance them. The potential environmental impacts are just a

first attempt to point out possible adverse ecotourism-environment relationships, and does not pretend to be an SEA of such policies.

Part 4: Appraisal of SEA/EIA systems and capacities in the country

The second part is an appraisal of the SEA/EIA systems and capacities in the country. First it must be determined if an SEA system is established; this can be either formally or informally. It should also identify if *ad-hoc* SEAs have been carried out (e.g. under AfDB guidelines, by donors), which may have set a precedent for preferred procedures.

Any existing SEA system will be assessed against substantive and procedural good practice criteria (e.g. international good practice, OECD DAC, IAIA). The appraisal will be based not only on written procedures but also existing practice and capacities. Similar assessment for the EIA system, although in more general terms.

Procedural criteria

1. Screening (tourism PPPs that require an SEA and way to determine if they do)
2. Scoping (defined? participatory?)
3. Nexus between SEA-process and PPP-making process
4. Definition of the environmental baseline
5. Analysis of regulatory, political, social systems
6. Analysis of alternatives
7. Public participation requirements
8. Impact identification requirements
9. Identification of mitigation measures requirements
10. Assessment of regulatory, monitoring and enforcement capacities
11. Environmental Management Plan (and enforcement of its implementation)
12. Reporting
13. (Independent) review process

Substantive criteria

1. Existence of legal requirements
2. Timing (when in the PPP-making process? does it allow influencing PPP-making?)
3. Inter-sectoral cooperation mechanisms (existing? conflicting?)
4. SEA capacities in competent relevant authorities (environmental, sectoral, national/regional/local)
5. Adequacy of structures for SEA (environmental responsibilities in sector, structure in environmental authority)
6. Public participation and transparency culture (within population and government)
7. Pool of adequate consultants (local, regional and national level)
8. Transparency of process
9. Integration of SD dimensions

In cases where no SEA system is in place, certain substantive criteria will nevertheless provide a good insight into the aspects that should be strengthened in order to develop a good working SEA system, as well as specific aspects that should be adapted of regional model ToR.

Model Regional ToR for SEAs for the tourism sector will be prepared, with country annexes that provide information on how to adapt them to each of the countries concerned. Some aspects to consider include, e.g. specific sensitive areas where more detail is required, specific development-policy/plan links that should be explored/considered, existing sources of baseline information, public participation and transparency culture, consideration of specific minority groups, situation of conflict, political stability, inter-sectoral communication channels, etc.)

ANNEX 4

OUTLINE FOR RECOMMENDED INTERVENTIONS ON EIA AND SEA

Two key interventions that could be supported by ReCoMaP are: training/awareness raising on SEA; and stock-taking assessments of the EIA systems.

Training/awareness-raising on SEA

Most countries are pursuing or thinking about SEA as a tool to be developed and employed. This is mainly due to the general expansion that the tool is having worldwide, and which is also being promoted by donor and through professional forums on environmental policy and management. Some countries have already carried out ad hoc SEAs promoted by donors, and other are developing a regulatory system for SEA. However it was identified in the mission that there are many misconceptions about SEA (with regards to its usefulness, where to be applied, how to apply it, etc), which is not surprising in light of the multitude of diverse "SEA systems" available worldwide. Moreover the capacities and knowledge on SEA are extremely limited, both within the environmental authorities but also within sectoral authorities, consultants and NGOs.

Although all countries could benefit from SEA training/awareness raising, countries could be prioritised as follows.

Country	Priority	Reasons
Mauritius	High Priority	Potential significant environmental impacts of tourism sector activities. Sensitive environment, already threatened Large potential benefits from SEA SEA being promoted, and already applied on an <i>ad hoc</i> basis, but without clear legal basis or clear understanding of the tool
Tanzania	High Priority	<i>Idem</i>
Zanzibar	High Priority	<i>Idem</i> , but no SEAs have been carried out
Seychelles	Medium Priority	<i>Idem</i> , but the competent authorities do not show interest in the tool
Madagascar	Medium Priority	Normally it would be high priority but the government is receiving support from USAID on SEA, including development of the regulatory framework
Kenya	Medium Priority	Normally it would be high priority but the government is receiving support from DANIDA on SEA, including development of the regulatory framework
Comoros	Medium Priority	Could be useful to promote the tool and raise awareness if it will be target to an <i>ad hoc</i> SEA in the tourism sector (recommended), but it would not be priority to develop and SEA framework in the country

It is recommended to carry out training seminar on a country-by-country basis, in order to focus discussions on the particular needs of each country and allow to cover a wider audience. Key stakeholders from non-priority countries could be invited to participate in certain seminars.

Target audience are: environmental authorities; sectoral authorities (tourism sector); relevant para-statal organisations; consultants likely to engage in preparing SEAs in the future; relevant NGOs. It is of key importance that sectoral authorities are represented, as they are as important players in SEA as the environmental authorities.

In order to keep the groups manageable and be able to focus the training adequately, it is recommended to use two trainers, and have groups between 25-35 trainees. Arrangements would be desirable to have a general one-day (or half-day) awareness raising session with a larger audience, but limiting the focused training to the above numbers.

Training could last 5 days, which could be distributed in a 1+3+1 format: 1 day for general awareness raising and larger audience, 3 days intensive training and 1 day for sessions addressing particular situations in the country, according to issues identified by participants. However a detailed calendar should be considered on a case-by-case basis.

It is recommendable to use fictitious (but elaborate) case studies in the early stages of the training, whilst drawing on concrete examples of best-practices. This allows to focus attention on key issues of the substance (SEA).

Additional time should be considered for preparation. The time allocated would depend on the extent and complexity of the materials that need to be prepared. However the standard material would be the same for all courses, and only context-specific material would need to be prepared for the second seminar onwards.

Stock-taking assessment on EIA

All countries have an EIA system in place, which is common practice practically around the world. However in many cases EIAs have become administrative burdens which do not lead to taking better decisions and achieving better project designs (from an environmental point of view). The mission has found indications that this might be the case in some countries and under some circumstances; detailed reasons were not explored, but are most likely due to a combination of: inadequate regulations, inadequate institutional structures, inadequate institutional capacities, and EIA system not responding to the country-specific context.

It is thus recommended to carry out stock-taking exercises which would allow: reviewing in detail the adequacy of the regulatory framework and of the institutional capacities and structures; assessing whether EIAs have been leading to better decisions (e.g. blocking projects with potential and unacceptable significant impacts on the environment, specifying reasonable conditions); assessing whether EIAs are helping improving project designs (e.g. selecting better project alternatives in terms of their potential environmental impacts); assessing whether EIA Environmental Management Plans and conditions imposed are being adequately implemented and effective. Such an exercise will allow to re-focus the EIA systems as an effective tool to enhance decision-making from an environmental point of view.

The design of the consultancy would need to be thought out, but should be based on a combination of legislative review with the undertaking of detailed and representative case studies. Access to EIA and decision-making dossiers by the competent authorities will be key to the success of such an assessment, as well as the availability of key civil servants (and other actors) for interviews.

Countries could be prioritised as follows.

Country	Priority	Reasons
Mauritius	High Priority	EIA system is mature Indications of EIA system not being effective (e.g. in relation to alleged projects authorised with significant environmental impacts, possible lack of adequate review capacities, alleged ineffectiveness of EIA system by certain developers).
Seychelles	High Priority	<i>Idem</i>
Madagascar	High Priority	<i>Idem</i>
Zanzibar	High Priority	<i>Idem</i>
Tanzania	Low Priority	New EIA system is very good on paper, but has not yet been implemented. Thus no experience yet to assess.
Kenya	Low Priority	New EIA system is very good on paper, but has not been extensively implemented. Thus no experience yet to assess.
Comoros	Low Priority	EIA system not mature. Very limited implementation. Comoros rather need basic training and institutional strengthening on EIA.