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APPENDIX 1

Description of methodology used in preparation of NBSAP

The National Steering Committee elected to utilize the expertise of national and regional consultants to develop the NBSAP. The development of the NBSAP involved several stages:

i) Inventory and Review

- Review of the Country Study to address the existing gaps and needs in biodiversity management;
- Review of the NBSAPs and biodiversity planning documents from other countries;
- Survey of policies, activities, and legislation impacting on biodiversity.
- Review of the “*National Biodiversity Planning Guidelines based on early experiences around the world, WRI/UNEP/IUCN.1995.*”

ii) Publicity

A publicity campaign was launched using biodiversity brochures, news spots, radio announcements, mailed notices, and expositions.

iii) Individual Consultations

Individual consultations with stakeholders and agencies were done through meetings, interviews, nature and traditional use tours, panel discussions, and club meetings.

iv) National Consultation

Information from the inventory, review, and individual consultations were utilized in the first National Biodiversity Strategy and Action Plan Workshop. The workshop sought to ensure that as many individuals and organizations as possible understood and supported the plan, particularly those who will be involved in its implementation. The workshop report was circulated to participants.

v) Drafting

National Consultants drafted the NBSAP

vi) Stakeholder Review

A national review workshop was held for perusal of the draft document.

vii) Peer Review and Submission

Regional NBSAP developers reviewed the second draft of the NBSAP and recommendations were submitted to the project officer for

finalization of the document. The finished document was then forwarded to Cabinet for approval.

Participation in the development process was comprised of several tiers:

- **The Institutional Base**
The Department of Environment provided the direct institutional support needed for the project along with project oversight from the Planning Unit.
- **Project Management**
The National Steering Committee, with the assistance of the National Project Coordinator, provided direct project support and guidance for the management of consultants and their outputs.
- **Information Sharing**
Individuals of civil society, all users of biodiversity, contributed to the information base needed for the creation of a Biodiversity Strategy and Action Plan. Hikes, tours, field exercises, and interviews were done with local tour guides, herbalists, charcoal burners, traditional tea makers, fishermen, NGO's, government agencies, clubs, and other local associations.
- **Drafting, Review and Approval**
The National Steering Committee, other regional NBSAP developers, and National Consultants were involved in these processes.

EXAMPLES OF THE AGENDAS FOR THE NBSAP CONSULTATIONS

Day 1

- 9:30 Welcome and Opening Remarks
Helen Douglas, NBSAP Project Coordinator
- 9:45 Introductory Remarks and Overview of Workshop Objectives:
Carol Henry, NBSAP National Consultant
- 10:00 Morning Break**
- Break into two working groups**
- 10:15 Developing a Vision Statement
- 12:00 Plenary Discussion on Vision Statement
- 12:30 Lunch**
- 1:30 Constraints & Opportunities in Meeting Vision
- 3:00 Afternoon Break**
- 3:15 Setting Objectives for Biodiversity Use, Conservation and Benefit Sharing
- 4:15 Discussion on Objectives by all participants
- 4:30 Wrap-up of Proceedings of Day 1

DAY 2

9:00 **Breakfast**

9:30 Recap Proceedings of Day 1

Break into working groups

9:45 Listing & Evaluation of Options for Biodiversity Use, Conservation, and Benefit Sharing

12:00 **Lunch**

1:00 Developing Strategies

2:00 Developing Actions

2:45 Monitoring & Evaluation of Actions

3:00 Wrap-up and Close Consultation

APPENDIX 2 - THE PLANTS OF ST. KITTS AND NEVIS

K = St. Kitts
N = Nevis

end. L.A. = endemic to Lesser Antilles
rest. L.A. = restricted to Lesser Antilles

FAMILY	SPECIES	DISTRIBUTION		NOTES
	<i>PTERIDOPHYTA</i>			
PSISOTACEAE	<i>Psilotum nudum</i>		N	
LYCOPODIACEAE				
	<i>Lycopodium sieberianum</i>	K		
	<i>L. cernuum</i> var. <i>cernuum</i>	K	N	
	<i>L. cernuum</i> var. <i>dussii</i>	K	N	
	<i>L. clavatum</i>	K		
	<i>L. dichotomum</i>	K		
	<i>L. linifolium</i> var. <i>linifolium</i>	K		
	<i>L. taxifolium</i>	K	N	
SELAGINELLACEAE				
	<i>Selaginella flabellata</i>	K	N	end. L.A.
	<i>S. plana</i>	K		
	<i>S. rotundifolia</i>	K		
	<i>S. serpens</i>		N	
	<i>S. substipitata</i>	K	N	
	<i>S. tenella</i>	K		
MARATTIACEAE				
	<i>Danaea nodosa</i>	K		
SCHIZAEACEAE				
	<i>Anemia hirta</i>	K		
	<i>A. adiantifolia</i>	K	N	
GLEICHENIACEAE				
	<i>Dicranopteris pectinata</i>	K	N	
	<i>Gleichenia farinosa</i>	K		
	<i>G. bifida</i>	K		
	<i>G. furcata</i>	K	N	
HYMENOPHYLLACEAE				
	<i>Hymenophyllum fucoides</i>	K		
	<i>H. elegans</i>	K	N	
	<i>H. hirsutum</i>	K	N	
	<i>H. hirtellum</i> var. <i>gratum</i>	K	N	end. L.A.
	<i>H. lanatum</i>	K		
	<i>H. lineare</i>	K	N	
	<i>H. macrothecum</i>	K	N	
	<i>H. polyanthes</i> var. <i>polyanthes</i>	K	N	

FAMILY	SPECIES	DISTRIBUTION		NOTES
	<i>H. seiberi</i>	K		
TRICHOMANES				
	<i>Trichomanes hymenophylloides</i>	K	N	
	<i>T. alatum</i>	K	N	
	<i>T. angustifrons</i>	K	N	
	<i>T. crispum</i>	K	N	
	<i>T. kapplerionum</i>	K		
	<i>T. krausii</i>	K	N	
	<i>T. membranaceum</i>	K	N	
	<i>T. polypodioides</i>	K	N	
	<i>T. punctatum</i>	K	N	
	<i>T. rigidum</i>	K	N	
	<i>T. trigonum</i> var. <i>trigonum</i>	K	N	
CYATHEACEAE				
	<i>Cyathea muricata</i>	K	N	
	<i>C. arborea</i>	K	N	
	<i>Cnemidaria grandifolia</i> var. <i>grandifolia</i>	K	N	
POLYPODIACEAE				
Sub-family DAVALLIOIDEAE	<i>Lindsaea quadrangularis</i> subs. <i>antillensis</i>	K	N	
sub-family PTERIDOIDEAE				
	<i>Acrostichum danaeifolium</i>		N	
	<i>Anisosoru hirsutus</i>		N	
	<i>Hypolepis repens</i>	K		
	<i>Pteris longifolia</i>	K		
	<i>P. altissima</i>		N	
	<i>P. biaurita</i>	K		
	<i>P. Multifida</i>	K		
	<i>P. vittata</i>	K	N	
sub-family BLENNOIDEAE	<i>Blechnum occidentale</i>	K	N	
	<i>B. Binervatum</i>	K	N	
	<i>B. divergens</i>	K		
	<i>B. insularum</i>	K	N	
	<i>B. ryanii</i>	K	N	
sub-family ADIANTOIDEAE	<i>Adiantum villo</i>		N	
	<i>A. caudatum</i>		N	
	<i>A. latifolium</i>	K	N	
	<i>A. tenerum</i>	K	N	
	<i>A. tetraphyllum</i>	K		
	<i>Cheilanthes microphylla</i>		N	

FAMILY	SPECIES	DISTRIBUTIO		NOTES
		N		
	<i>Pityrogramma calomelanos</i>	K	N	
	<i>P. chrysophylla</i>	K	N	
sub-family OLEANDROIDEAE	<i>Bolbitis portoricensis</i>	K		
	<i>Ctenistis meridionalis</i>	K	N	
	<i>Diplazium limbatum</i>	K	N	
	<i>D. christatum</i>	K	N	
	<i>D. striatum</i>	K	N	
	<i>Elaphoglossum petiolatum</i>	K	N	
	<i>E. apodum</i>	K	N	
	<i>E. boryanum</i>	K		
	<i>E. Hirtum</i>	K		
	<i>E. impressum</i>	K	N	
	<i>E. martinicense</i>	K	N	
	<i>E. plumieri</i>	K	N	
	<i>E. schomburgkii</i>	K	N	
	<i>Hymenodium crinitum</i>	K	N	
	<i>Lomariopsis sorbifolia</i>	K	N	
	<i>Nephrolepis falcata</i>		N	
	<i>N. cordifolia</i>		N	
	<i>N. hirsutula</i>		N	
	<i>N. rivularis</i>		N	
	<i>Polybortrya cervina</i>	K	N	
	<i>Tectaria plantaginea</i>	K	N	
	<i>T. heracleifolia</i>	K		
	<i>T. incisa</i>	K	N	
	<i>T. incisa x trifoliata</i>		N	A hybrid believed unique to Nevis
	<i>T. trifoliata</i>	K	N	
THELYPTERIDOIDEAE				
	<i>Thelypteris opposita</i>	K		
	<i>T. antillana</i>	K		
	<i>T. balbisii</i>	K	N	
	<i>T. clypeolutat</i>	K	N	
	<i>T. decussata</i>	K	N	
	<i>T. dentat</i>		N	
	<i>T. germaniana</i>	K	N	
	<i>T. glandulosa</i>	K	N	
	<i>T. grandis</i>	K		
	<i>T. limbata</i>	K	N	
	<i>T. muscicola</i>		N	
	<i>T. nephrodioides</i>		N	
	<i>T. normalis</i>		N	
	<i>T. patens var. inconstans</i>	K		
	<i>T. patens var. scabriscula</i>		N	
	<i>T. pennata</i>	K		
	<i>T. poiteana</i>	K	N	
	<i>T. reotans</i>	K	N	

FAMILY	SPECIES	DISTRIBUTION		NOTES
	<i>T. reticulata</i>	K	N	
	<i>T. sancta</i>		N	
	<i>T. tetragona</i> var. <i>nephrodiodes</i>		N	
	<i>T. tetragona</i> var. <i>tetragona</i>	K	N	
sub-family ASPLENIOIDEAE	<i>Asplenium laetum</i>	K	N	
	<i>A. abscissum</i>	K	N	
	<i>A. auritum</i> var. <i>rigidum</i>	K	N	
	<i>A. cristatum</i>	K	N	
	<i>A. malcolm-smithii</i>	K		Believed to be endemic to St. Kitts
	<i>A. pteropus</i>	K		
	<i>A. salicifolium</i> var. <i>salicifolium</i>	K		
sub-family POLYPODIOIDEAE	<i>Polypodium pectinatum</i>	K	N	
	<i>P. astrolepsis</i>	K	N	
	<i>P. aureum</i> var. <i>aureum</i>	K	N	
	<i>P. loriceum</i>	K	N	
	<i>P. lycopodioides</i>	K	N	
	<i>P. phyllitidis</i>	K	N	
	<i>P. piloselloides</i>	K	N	
	<i>P. sectifrons</i>	K		
	<i>P. triseriale</i>		N	
sub-family GRAMMITIDOIDEAE	<i>Cochlidium seminudum</i>	K	N	
	<i>Grammitis serrulata</i>	K	N	
	<i>G. asplenifolia</i>	K	N	
	<i>G. eggersii</i>	K		
	<i>G. flabelliformis</i>		N	
	<i>G. mollissima</i>	K		
	<i>G. serricula</i>	K	N	
	<i>G. suspensa</i>	K	N	
	<i>G. taenifolia</i>	K	N	
	<i>G. taxifolia</i>	K		
	<i>G. trifurcata</i>	K		
sub-family VITTARIOIDEAE	<i>Anetium citrifolium</i>	K		
	<i>Polytaenium feei</i>	K		
	<i>P. dussianum</i>	K		
	<i>Vittaria lineata</i>	K	N	
ORCHIDOIDEAE				
	<i>Charanichis muscosa</i>	K	N	
	<i>Pontheieva petiolata</i>	K		
	<i>Erythroides plantaginea</i>	K		End. L.A.
	<i>Stelis scabrada</i>		N	

FAMILY	SPECIES	DISTRIBUTION		NOTES
	<i>Brachionidium sherringii</i>	K		
	<i>Malaxis massonii</i>	K		
	<i>M. umbelliflora</i>	K		
	<i>Jacquiniella globosa</i>	K	N	
	<i>Epidendrum ciliare</i>		N	
	<i>E. difforme</i>	K		
	<i>E. patens</i>	K	N	end. L.A.
	<i>E. secundum</i>	K		
	<i>Polystachya concreta</i>	K		
	<i>Maxillaria coccinea</i>	K	N	
	<i>Oncidium urophyllum</i>	K	N	end. L.A.
	<i>Cranichis muscosa</i>		N	
	<i>Pleurothallis ruscifolia</i>		N	
GYMNOSPERMAE				
	<i>Podocarpus coriaceus</i>	K	N	
	MONOCOTYLEDONEAE			
PANDANACEAE				
	<i>Pandanus vetchii</i>		N	
RUPPIACEAE				
	<i>Ruppia maritime</i>		N	
	<i>R. cirrhosa</i>	K	N	
CYMODOCEACEAE				
	<i>Syringodium filiforme</i>	K	N	
NAJADACEAE				
	<i>Najas guadalupensis</i>	K	N	
	<i>N. marina</i>	K	N	
HYDROCHARITACEAE				
	<i>Thalassia testudinum</i>	K	N	
POACEAE				
	<i>Bambusa vulgaris</i>	K	N	
sub-family ARTHROSTYLIDIUM	<i>Andropogon glomeratus</i>	K	N	
	<i>A. bicornis</i>	K		
	<i>Anihephora hermaphrodita</i>			
	<i>Aristida adscensionis</i>		N	
	<i>Arthrostylidium venezuelae</i>	K		
	<i>Arundo donax</i>	K		

FAMILY	SPECIES	DISTRIBUTION		NOTES
	<i>Axonopus compressus</i>		N	
	<i>Brachiaria reptans</i>	K		
	<i>B. adspersa</i>	K	N	
	<i>B. echinulata</i>	K	N	
	<i>B. fasciculata</i>	K		
	<i>Bothriochloa pertusa</i>		N	
	<i>B. saccharoides</i>	K		
	<i>Bouteloua americana</i>	K	N	
	<i>Chloris inflata</i>		N	
	<i>C. ciliata</i>		N	
	<i>C. radiata</i>	K		
	<i>C. sagraeana</i>		N	
	<i>Cenchrus echinatus</i>	K	N	
	<i>C. inceratus</i>	K	N	
	<i>Coix lachryma-jobi</i>	K	N	
	<i>Cymbopogon citratus</i>		N	
	<i>Cynodon ciliaris</i>	K		
	<i>D. Bicornis</i>		N	
	<i>D. horizontalis</i>	K		
	<i>D. insularis</i>	K	N	
	<i>D. longiflora</i>		N	
	<i>Dactyloctenium aegyptium</i>	K	N	
	<i>Dicanthium aristatum</i>	K	N	
	<i>Eragrostis ciliaris</i>	K		
	<i>E. pilosa</i>	K		
	<i>E. tenella</i>	K		
	<i>E. tephrosanthes</i>	K		
	<i>Echinochloa colona</i>		N	
	<i>Eleusine indica</i>	K	N	
	<i>Hackelochloa granularis</i>	K		
	<i>Heteropogon contortus</i>	K		
	<i>Hyparrhenia rufa</i>	K		
	<i>I. aurundinacea</i>	K	N	
	<i>I. disperma</i>	K	N	
	<i>I. rigidifolia</i>	K		
	<i>Ichnanthus nemorosus</i>	K	N	
	<i>I. pallens</i>	K		
	<i>Lasiacis divaricata</i>	K		
	<i>L. sorghoidea</i>	K		
	<i>Leptochloa virgata</i>	K		
	<i>L. filiformis</i>	K		
	<i>Oplismenus hirtellus</i>	K		
	<i>Panicum maximum</i>	K	N	
	<i>P. pilosum</i>	K		
	<i>P. trichoides</i>	K		

FAMILY	SPECIES	DISTRIBUTION		NOTES
	<i>Pappophorum pappiferum</i>	K		
	<i>Paspalidium germinatum</i>	K		
	<i>Paspalum conjugatum</i>	K		
	<i>P. fimbriatum</i>	K	N	
	<i>P. laxum</i>	K	N	
	<i>P. paniculatum</i>	K		
	<i>P. plicatum</i>	K	N	
	<i>P. saccharoides</i>	K		
	<i>P. vaginatum</i>		N	
	<i>P. virgatum</i>	K		
	<i>P. nutans</i>	K		
	<i>Pennisetum setosum</i>	K		
	<i>Rhynchelytrum repens</i>	K		
	<i>Rottboellia exaltata</i>	K	N	
	<i>Saccharum officinarum</i>		N	
	<i>Setaria utonaccaeae</i>	K		
	<i>S. geniculata</i>	K	N	
	<i>S. glauca</i>	K	N	
	<i>S. rariflora</i>	K		
	<i>S. setosa</i> var. <i>setosa</i>	K		
	<i>Sorghum halepense</i>	K	N	
	<i>Spartina patens</i>	K	N	
	<i>Sporobolus virginicus</i>	K	N	
	<i>S. jacquemontii</i>	K		
	<i>S. pyramidatus</i>		N	
	<i>Stenotaphrum secundatum</i>	K		
	<i>Tragus berteronianus</i>	K		
	<i>Vetiveria zizanioides</i>	K	N	
	<i>Zea mays</i>	N	N	
CYPERACEAE				
	<i>Acrocomia aculeata</i>	K	N	
	<i>Bulbostylis capillaris</i>	K		
	<i>Carex polystachya</i>	K		
	<i>Cocos nucifera</i>	K	N	
	<i>Cyperus articulatus</i>		N	
	<i>C. alopecuroides</i>		N	
	<i>C. distans</i>	K		
	<i>C. elegans</i>		N	
	<i>C. laevigatus</i>		N	
	<i>C. planifolius</i>	K	N	
	<i>C. rotundus</i>		N	
	<i>C. spacelatus</i>	K		
	<i>Eleocharis mutata</i>		N	
	<i>E. geniculata</i>		N	
	<i>E. interstincta</i>		N	
	<i>E. liogiera</i>		N	

FAMILY	SPECIES	DISTRIBUTION		NOTES
	<i>E. montana</i>		N	
	<i>F. cymosa</i>	K	N	
	<i>Frimbristylis ferruginea</i>		N	
	<i>Machaerina restioides</i>		N	
	<i>Prestoea montana</i>	K	N	
	<i>Roystonea oleracea</i>		N	
	<i>Rynchospora rugosa</i>		N	
	<i>R. holoschoenoides</i>	K		
	<i>Schoenoplectus americanus</i>	K	N	
	<i>Scleria secans</i>		N	
	<i>S. latifolia</i>	K		
	<i>S. pterota</i>	K	N	
	<i>S. scindens</i>	K	N	
	<i>Torulinium odoratum</i>	K		
			N	
CYCLANTHACEAE				
	<i>Asplundia insignis</i>	K		
	<i>A. rigida</i>	K		
	<i>Anthurium acaule</i>	K	N	
	<i>A. cordatum</i>	K		
	<i>A. grandifolium</i>	K		
	<i>Caladium bicolor</i>		N	
	<i>Colocasia esculenta</i>		N	
	<i>Dieffenbachia seguine</i>	K		
	<i>Monstera adansonii</i>	K		
	<i>Philodendron giganteum</i>	K	N	
	<i>P. linlatum</i>	K		
	<i>P. scandens</i>	K		
	<i>Pistia stratiotes</i>		N	
BROMELIACEAE				
	<i>Ananas comosus</i>	K	N	
	<i>Guzmania dusii</i>		N	
	<i>G. plumieri</i>		N	
	<i>Pitcairnia angustifolia</i>	K		
	<i>P. bifrons</i>	K		
	<i>Tillandsia recurvata</i>	K	N	
	<i>T. usneoides</i>	K		
	<i>T. utriculata</i>	K	N	
	<i>Vriesia antillana</i>	K		
	<i>V. capituligera</i>		N	
	<i>V. conellii</i>	K		
COMMELINACEAE				
	<i>Commelina diffusa</i>	K		
	<i>C. elegans</i>	K	N	
	<i>Rhoeo spathacea</i>		N	

FAMILY	SPECIES	DISTRIBUTION		NOTES
	<i>Zebrina pendula</i>		N	
PONTEDERIAACEAE				
	<i>Echornia crassipes</i>		N	
LILIACEAE				
	<i>Aloe vera</i>	K	N	
	<i>Asparagus desifloris</i>		N	
	<i>A. setaceus</i>		N	
HYPOXIDAZEAE				
	<i>Hypoxis decumbens</i>	K		
HAEMODORACEAE				
	<i>Xiphidium caeruleum</i>	K	N	
AMARYLLIDACEAE				
	<i>Crinum bulbispermum</i>	K		
	<i>Euchris grandis</i>		N	
	<i>Hymenocallis caribaeae</i>	K	N	
	<i>H. fragrans</i>		N	
AGAVACEAE				
	<i>Agave caribaeicola</i>	K		
	<i>A. karatto</i>	K		
	<i>A. sisalana</i>	K	N	
	<i>A. van grolae</i>	K	N	
	<i>Cordyline frucosa</i>		N	
	<i>Furcraea tuberosa</i>	K	N	end. L.A.
DIOSCOREACEAE				
	<i>Dioscorea bulbifera</i>	K		
	<i>D. alata</i>		N	
	<i>Rajania cordata</i>	K		
IRIDACEAE				
	<i>Belamcanda chinensis</i>	K		
	<i>Trimezia martinicensis</i>		N	
MUSACEAE				
	<i>Musa spp.</i>	N	N	
HELOCONIACEAE				
	<i>Heliconia bihai</i>	K		
	<i>H. psittacorum</i>	K	N	
	<i>H. caribaea</i>		N	

FAMILY	SPECIES	DISTRIBUTION		NOTES
BURMANNIACEAE				
	<i>Apteria aphylla</i>	K		
STRELITZIACEAE				
	<i>Ravenala madagascariensis</i>		N	
ZINGEBERACEAE				
	<i>Hedychium coronarium</i>		N	
	<i>Alpinia zerumbet</i>		N	
MARANTACEAE				
	<i>Maranta arundinacea</i>		N	
	DICTYOLEDONEAE			
CASUARINACEAE				
	<i>Casuarina equisetifolia</i>	K	N	
PIPERACEAE				
	<i>Lepianthes peltata</i>	K		
	<i>Peperomia emarginella</i>	K	N	
	<i>P. glabella</i>	K		
	<i>P. hernandiifolia</i>	K	N	
	<i>P. humilis</i>	K		
	<i>P. magnoliifolia</i>		N	
	<i>P. myrtifolia</i>	K		
	<i>P. nigropunctata</i>	K	N	
	<i>P. pellucida</i>	K		
	<i>P. trifolia</i>	K	N	end. L.A.
	<i>P. urocarpa</i>	K		
	<i>Piper aequale</i>	K		
	<i>P. dilatatum</i>	K	N	
	<i>P. dussii</i>		N	rest. L.A.
CHLORANTHACEAE				
	<i>Hedyosmum arborescens</i>	K	N	
BATAACEAE				
	<i>Batis maritima</i>	K		
ULMACEAE				
	<i>Celtis iguanaea</i>	K		
	<i>Trema lamarkiana</i>	K	N	
MORACEAE				
	<i>Artocarpus altilis</i>	K	N	
	<i>Cecropia schreberiana</i>	K	N	
	<i>C. peltata</i>	K	N	

FAMILY	SPECIES	DISTRIBUTION		NOTES
	<i>Ficus americana</i>	K	N	
	<i>F. benjamina</i>		N	
	<i>F. citrifolia</i>	K	N	
	<i>F. elastica</i>	K	N	
	<i>F. microcarpa</i>	K		
	<i>F. nymphaeifolia</i>	K	N	
	<i>F. pumila</i>	K	N	
	<i>F. trigonata</i>	K	N	
CANNABACEAE				
	<i>Cannabis sativa</i>	K	N	
URTICACEAE				
	<i>Boehmeria ramiflora</i>	K	N	
	<i>Laportea aestuans</i>	K	N	
	<i>Pilea hyalina</i>	K		
	<i>P. inaequalis</i>	K	N	
	<i>P. microphylla</i>		N	
	<i>P. nummulariifolia</i>	K	N	
	<i>P. rivoirae</i>	K	N	
	<i>P. semidentata</i>	K		
	<i>Urera carasana</i>	K		
OLACACEAE				
	<i>Schoepfia schreberi</i>	K	N	
ARISTOLOCHIACEAE				
	<i>Aristolochia littoralis</i>	K		
POLYGONACEAE				
	<i>Antigonon leptopus</i>	K	N	
	<i>Coccoloba pubescens</i>		N	
	<i>C. diversifolia</i>		N	
	<i>C. swartzii</i>	K	N	
	<i>C. uviflora</i>	K	N	
CHENOPODIACEAE				
	<i>Chenopodium ambrosioides</i>	K		
	<i>C. murrale</i>	K		
AMARANTHACEAE				
	<i>Achyranthes aspera</i> var. <i>aspera</i>	K		
	<i>Alternanthera sessilis</i>	K	N	
	<i>Amaranthus dubius</i>	K		
	<i>A. hybridus</i>	K		
	<i>A. spinosus</i>	K		
	<i>Blutaparon vermiculata</i>	K		
	<i>Celosia argentea</i>	K		

FAMILY	SPECIES	DISTRIBUTION		NOTES
	<i>C. nitida</i>	K		
	<i>Chamissoa altissima</i>	K		
	<i>Gomphrena globosa</i>	K		
	<i>G. serrata</i>	K		
	<i>Iresine angustifolia</i>	K		
	<i>I. diffusa</i>	K	N	
	<i>Lithophila muscoides</i>			
NYCTAGINACEAE				
	<i>Boerhavia coccinea</i>	K		
	<i>B. erecta</i>	K		
	<i>B. scandens</i>	K		
	<i>Bougainvillea glabra</i>		N	
	<i>B. spectabilis</i>		N	
	<i>Mirabilis jalapa</i>		N	
	<i>Pisonia aculeata</i>	K	N	
	<i>P. fragrans</i>	K		
	<i>P. subcordata</i>		N	
PHYTOLACCACEAE				
	<i>Microtea debilis</i>	K		
	<i>Petiveria alliacea</i>	K		
	<i>Phytolacca rivinoides</i>	K		
	<i>Rivina humilis</i>	K		
AIZOACEAE				
	<i>Mullago verticillata</i>	K		
	<i>Sesuvium portulacastrum</i>	K	N	
	<i>Trianthema portulacastrum</i>	K		
PORTULACACEAE				
	<i>Portulaca oleracea</i>	K	N	
	<i>P. quadrifida</i>	K		
	<i>Talinum fruticosum</i>	K	N	
	<i>T. paniculatum</i>		N	
CARYOPHYLLACEAE				
	<i>Drymaria cordata</i>	K		
NYMPHACEAE				
	<i>Nymphaea ampla var. speciosa</i>		N	
ANNONACEAE				
	<i>Annona montana</i>		N	
	<i>A. glabra</i>		N	
	<i>A. muricata</i>	K		
	<i>A. reticulata</i>		N	
	<i>A. squamosa</i>		N	

FAMILY	SPECIES	DISTRIBUTION		NOTES
	<i>Guatteria caribaea</i>	K	N	
	<i>Oxandra laurifolia</i>	K	N	
MYRISTICACEAE				
	<i>Myristica fragrans</i>	K		
LAURACEAE				
	<i>Aniba bracteata</i>		N	
	<i>Beilschmieda pendula</i>	K	N	
	<i>Cassytha filiformis</i>	K		
	<i>Ocotea alpina</i>	K	N	
	<i>O. floribunda</i>		N	
	<i>O. leucoxydon</i>	K	N	
	<i>O. membranacea</i>	K		
	<i>Persa americana</i>	K	N	
PAPAVERACEAE				
	<i>Argemone mexicana</i>	K		
	<i>Bocconia frutescens</i>	K		
CRUCIFERAE				
	<i>Brassica juncea</i>	K	N	
	<i>B. oleracea</i>		N	
	<i>Cakile lanceolata</i>	K	N	
	<i>Lepidium virginicum</i>	K	N	
CAPPARACEAE				
	<i>Capparis baduica</i>	K		
	<i>C. cynophallophora</i>	K	N	
	<i>C. hastata</i>	K		
	<i>C. indica</i>	K		
	<i>Cleome gynandra</i>	K		
	<i>C. rutidosperma</i>	K		
	<i>C. viscosa</i>	K	N	
MORINGACEAE				
	<i>Moringa oleifera</i>	K	N	
CUNONIACEAE				
	<i>Weinmannia pinnata</i>	K		
ROSSACEAE				
	<i>Prunus pleuradenia</i>	K		
	<i>Rubus coronarius</i>	K		
	<i>R. rosifolius</i>	K		
CHRYSOBALANACEAE				
	<i>Chrysobalanus cuspidatus</i>	K		

FAMILY	SPECIES	DISTRIBUTION		NOTES
	<i>C. icaco</i>	K	N	
	<i>Hirtella triandra</i>	K	N	
CONNARACEAE				
	<i>Connarus grandifolius</i>	K		
LEGUMINOSAE				
Sub-family MIMOSOIDEAE	<i>Acacia farnesiana</i>	K		
	<i>Adenantha pavonina</i>	K		
	<i>Calliandra purpurea</i>	K		
	<i>Desmanthus virgatus</i>	K		
	<i>Inga laurina</i>	K	N	
	<i>Leucaena leucocephala</i>	K	N	
	<i>Mimosa pudica</i>	K		
	<i>Pithecellobium unguis-cati</i>	K	N	
sub-family CAESALPINIOIDEAE	<i>Bauhinia divaricata</i>	K		
	<i>B. multinervia</i>	K		
	<i>B. tomentosa</i>	K		
	<i>Caesalpinia bonduc</i>	K	N	
	<i>C. cilitata</i>	K		
	<i>C. pulcherrima</i>	K	N	
	<i>Chamaecrista diphylla</i>	K		
	<i>C. glandulosa</i> var. <i>swartzii</i>	K		
	<i>C. nititans</i> var. <i>diffusa</i>	K	N	
	<i>Cassia fistula</i>		N	
	<i>Chamaecrista glandulosa</i> var. <i>swartzii</i>	K	N	
	<i>Delonix regia</i>	K		
	<i>Haematoxylon campechianum</i>		N	
	<i>Hymenacaea courbril</i>		N	
	<i>Parkinsonia aculeata</i>		N	
	<i>Senna alata</i>	K	N	
	<i>S. bacillaris</i> var. <i>bacillaris</i>	K		
	<i>S. bicapularis</i> var. <i>bicapularis</i>	K		
	<i>S. nitida</i>	K		
	<i>S. occidentalis</i>	K		
	<i>S. siamea</i>		N	
	<i>Tamarindus indica</i>	K	N	
sub-family FABOIDEAE	<i>Abrus precatorius</i>	K	N	
	<i>Aeschynomene villosa</i>	K		
	<i>Alysicarpus vaginalis</i>	K	N	
	<i>Arachis hypogaea</i>		N	
	<i>Cajanus cajan</i>	K	N	
	<i>Canavalis rosea</i>		N	
	<i>Centrosema virginianum</i>	K		
	<i>Christia vespertilionis</i>	K		

FAMILY	SPECIES	DISTRIBUTION		NOTES
	<i>Clitoria ternatea</i>	K	N	
	<i>Crotalaria incana</i>	K		
	<i>C. micans</i>	K		
	<i>C. pallida</i>	K		
	<i>C. pumila</i>	K		
	<i>C. retusa</i>	K		
	<i>C. verrucosa</i>	K		
	<i>Desmodium ascendens</i>	K		
	<i>D. axillare var. axillare</i>	K	N	
	<i>D. incanum</i>	K	N	
	<i>D. scorpiarus</i>	K		
	<i>D. triflorum</i>	K		
	<i>Erythrina corallodendrum</i>	K		
	<i>Flemingia strobilifera</i>	K		
	<i>Galactia longifolia</i>	K		
	<i>G. rubra</i>	K		
	<i>Gliricidia sepium</i>		N	
	<i>Indigofera suffruticosa</i>		N	
	<i>I. tinctoria</i>	K	N	
	<i>Lablab purpurea</i>	K	N	
	<i>Lonchocarpus pentaphyllus</i>	K		
	<i>L. violaceus</i>		N	
	<i>Macroptilium lathyroides</i>	K		
	<i>Mucuna pruriens</i>		N	
	<i>M. sloanei</i>	K		
	<i>M. urens</i>	K		
	<i>Ormosia monosperma</i>	K	N	
	<i>Phaseolus lunatus</i>	K	N	
	<i>P. coccineus</i>	K	N	
	<i>P. vulgaris</i>	K	N	
	<i>Piscidia carthagenensis</i>	K	N	
	<i>Rhynchosia minima</i>	K		
	<i>R. reticulata</i>	K		
	<i>Sesbania grandiflora</i>	K	N	
	<i>S. sesbum</i>	K		
	<i>Stylosanthes hemata</i>	K	N	
	<i>Tephrosia candida</i>	K		
	<i>T. cinerea</i>	K		
	<i>T. senna</i>	K	N	
	<i>Vigna luteola</i>		N	
	<i>V. unguiculata</i>	K	N	
	<i>Zornia reticulata</i>	K		
OXALIDAZEAE				
	<i>Oxalis corniculata</i>	K		
	<i>O. debilis var. corymbosa</i>		N	
ERYTHROXYLACEAE				

FAMILY	SPECIES	DISTRIBUTION		NOTES
	<i>Erythroxylum havanense</i>	K		
	<i>E. oxycarpm</i>	K		
	<i>E. squamatum</i>		N	
ZYGOPHYLLACEAE				
	<i>Kallstroemia pubescens</i>	K		
	<i>Guaiacum officinale</i>		N	
RUTACEAE				
	<i>Amyris elemifera</i>	K	N	
	<i>Citrus limon</i>	K	N	
	<i>C. aurantifolia</i>	K	N	
	<i>C. grandis</i>	K	N	
	<i>C. maxima</i>	K	N	
	<i>C. paradisi</i>	K	N	
	<i>C. aurantium</i>	K	N	
	<i>C. reticulata</i>	K	N	
	<i>C. sinensis</i>	K	N	
	<i>Murraya exotica</i>	K	N	
	<i>Triphasia trifolia</i>		N	
	<i>Zanthoxylum spinifex</i>	K	N	
SIMAROUBACEAE				
	<i>Picrasma excelsa</i>	K	N	
	<i>Simarouba amara</i>	K		
SURIANACEAE				
	<i>Suriana maritima</i>		N	
BURSERACEAE				
	<i>Bursera simaruba</i>	K		
	<i>Dacryodes excelsa</i>	K	N	
MELIACEAE				
	<i>Azadirachta indica</i>	K	N	
	<i>Guarea glabra</i>	K	N	
	<i>Melia azadarach</i>	K	N	
	<i>Swietenia mahagoni</i>	K	N	
MALPIGHIACEAE				
	<i>Bunchosia polystachia</i>	K	N	
	<i>Byrsonima spicata</i>	K		
	<i>Galphimia gracilis</i>	K		
	<i>Heteropterys purpurea</i>	K		
	<i>Malpighia emarginata</i>	K		
	<i>M. linearis</i>	K	N	
	<i>Stigmaphyllon diversifolium</i>	K		
	<i>S. emarginatum</i>		N	

FAMILY	SPECIES	DISTRIBUTION		NOTES
KRAMERIACEAE				
	<i>Krameria ixine</i>	K		
EUPHORBIACEAE				
	<i>Acalypha poiretii</i>	K		
	<i>A. hispida</i>		N	
	<i>A. wilkensisana</i>		N	
	<i>Breynia disticha</i>	K		
	<i>Chamaesyce articulata</i>	K		
	<i>C. hirta</i>	K		
	<i>C. hypericifolia</i>	K		
	<i>C. mesembrianthemifolia</i>	K		
	<i>C. serpens</i>	K		
	<i>C. prostata</i>	K		
	<i>Cnidoscolus urens</i>	K	N	
	<i>Codiaeum variegatum</i>		N	
	<i>Croton astroites</i>	K		
	<i>C. flavens</i>	K	N	
	<i>C. lobatus</i>		N	
	<i>Dalechampia scandens</i>	K		
	<i>Drypetas glauca</i>	K	N	
	<i>D. piriformis</i>		N	
	<i>Euphorbia cotonifolia</i>		N	
	<i>Hyppomane mancinella</i>	K	N	
	<i>Hura crepitans</i>		N	
	<i>Jatropha gossypifolia</i>	K	N	
	<i>J. integerrima</i>	K		
	<i>Manihot esculenta</i>		N	
	<i>Pedilanthus tithymaloides</i>	K	N	
	<i>Phyllanthus caroliniensis</i>		N	
	<i>P. urinaria</i>		N	
	<i>P. acidus</i>		N	
	<i>Sapium caribaeum</i>	K		end. L.A.
	<i>Tragia colubilis</i>	K		
ANACARDIACEAE				
	<i>Comocladia dodonaea</i>	K	N	
	<i>Mangifera indica</i>	K	N	
	<i>Spondias mombin</i>	K	N	
	<i>S. cytherea</i>		N	
	<i>S. purpurea</i>		N	
AQUIFOLIACEAE				
	<i>Ilex macfadyenii</i>	K	N	
	<i>I. dioica</i>		N	
	<i>I. sideroxyloides</i>	K	N	

FAMILY	SPECIES	DISTRIBUTION		NOTES
CELASTRACEAE				
	<i>Cassine xylocarpa</i>	K	N	
	<i>Crosspetalum rhacoma</i>	K		
	<i>Gyminda latifolia</i>	K		
	<i>Schaefferia frutescens</i>	K		
STAPHYLEACEAE				
	<i>Allophyllus racemosus</i>		N	
	<i>Blighia sapida</i>		N	
	<i>Cardiospermum corindum</i>	K		
	<i>C. microcarpum</i>	K	N	
	<i>Melicoccus bijugatus</i>	K	N	
	<i>Paullinia vespertilis</i>	K		
	<i>Sapindus saponaria</i>	K		
SABIACEAE				
	<i>Meliosma herbertii</i>	K		
BALSAMINACEAE				
	<i>Impatiens balsamina</i>		N	
	<i>I. walleriana</i>		N	
VITACEAE				
	<i>Cissus verticillata</i>	K	N	
ELAEOCARPACEAE				
	<i>Sloanea berteriana</i>	K	N	
	<i>S. dentata</i>	K		end. L.A.
	<i>S. massoni</i>	K		end. L.A.
TILIACEAE				
	<i>Corchorus aestuans</i>	K		
	<i>C. hirtusus</i>	K		
	<i>C. siliquosus</i>	K		
MALVACEAE				
	<i>Abelmoschus esculentus</i>	K	N	
	<i>Abutilon hirtum</i>	K		
	<i>A. indicum</i>	K		
	<i>Floria vitifolia</i>	K		
	<i>Gossypium hirsutum</i>	K		
	<i>G. barbadense</i>		N	
	<i>Hibiscus cannabinus</i>	K		
	<i>H. phoeniceus</i>	K		
	<i>H. sabdariffa</i>	K	N	
	<i>H. rosa-sinensis</i>	K	N	
	<i>H. rosa-sinensis</i> var. <i>schizopetalum</i>		N	

FAMILY	SPECIES	DISTRIBUTION		NOTES
	<i>Malachra capitata</i>	K		
	<i>Malvastrum americanum</i>	K		
	<i>Pavonia spinifex</i>	K		
	<i>Sida acuta</i>	K		
	<i>S. cordifolia</i>	K		
	<i>S. r. hombifolia</i>	K		
	<i>Sidastrum multiflorum</i>	K		
	<i>Thespesia populneua</i>	K	N	
	<i>Urena lobata</i>	K		
BOMBACEAE				
	<i>Ceiba pentandra</i>		N	
	<i>Ochroma pyramdale</i>	K	N	
	<i>Pachira insignis</i>	K		
	<i>Quaribea turbinata</i>	K	N	
STERCULIACEAE				
	<i>Ayenia insulaecola</i>	K		
	<i>Guazuma ulmifolia</i>	K	N	
	<i>Melochia nodiflora</i>		N	
	<i>M. pyramidata</i>	K		
	<i>M. tomentosa</i>	K	N	
	<i>Theobroma cacao</i>	K	N	
OCHNACEAE				
	<i>Sauvagesia erecta</i>	K	N	
MARCGRAVIACEAE				
	<i>Marcgravia umbrellata</i>	K		
	<i>Norantea guianensis</i>		N	
THEACEAE				
	<i>Freziera undulata</i>	K	N	end. L.A.
	<i>Ternstroemia elliptica</i>	K	N	end. L.A.
	<i>T. peduncularis</i>	K		
CLUSIACEAE				
	<i>Clusia major</i>	K	N	end. L.A.
	<i>Mammea americana</i>	K	N	
	<i>Marila racemosa</i>	K		end. L.A.
TAMARIACEAE				
	<i>Tamarix gallica</i>		N	
BIXZCEAE				
	<i>Bixa orellana</i>	K	N	

FAMILY	SPECIES	DISTRIBUTION		NOTES
COCHLOSPERMACEAE				
	<i>Cochlospermum vitifolius</i>		N	
CANELLACEAE				
	<i>Viola stipularis</i>	K	N	
FLACOURTIACEAE				
	<i>Caeseria decandra</i>	K		
	<i>C. sylvestris</i>	K		
	<i>Prokia crucis</i>		N	
	<i>Samyda dodecandra</i>	K	N	
TURNERACEAE				
	<i>Turnera ulmifolia</i>		N	
PASSIFLORACEAE				
	<i>Passiflora foetida</i>	K		
	<i>P. edulis</i>		N	
	<i>P. quadrangularis</i>		N	
	<i>P. rubra</i>	K		
	<i>P. sexflora</i>	K		
CARICAEAE				
	<i>Carica papaya</i>	K	N	
BEGONIACEAE				
	<i>Begonia retusa</i>	K	N	rest. L.A.
CACTACEAE				
	<i>Cereus hexagonus</i>	K		
	<i>Hylocereus trigonus</i>		N	
	<i>Melocactus intortus</i>	K	N	
	<i>Opuntia cochenillifera</i>	K		
	<i>O. dillenii</i>	K	N	
	<i>O. rubescens</i>	K		
	<i>O. triancantha</i>	K	N	
	<i>Pereskia bleo</i>	K		
	<i>P. grandiflora</i>	K		
	<i>Pilosocereus royeri</i>	K	N	
THYMELAEACEAE				
	<i>Ammania latifolia</i>	K	N	
	<i>Daphnopsis americana</i>		N	
	<i>Lagerstroemia indica</i>	K		
	<i>Lawsonia inermis</i>	K	N	
LYTHRACEAE				
	<i>Ammania latifolia</i>		N	

FAMILY	SPECIES	DISTRIBUTION		NOTES
	<i>Cuphea hyssopifolia</i>		N	
	<i>Lagerstroemia indica</i>		N	
	<i>Lawsonia inermis</i>		N	
PUNICACEAE				
	<i>Punica gratum</i>		N	
RHIZOPHORACEAE				
	<i>Rhizophora mangle</i>	K		
COMBRETACEAE				
	<i>Buchenavia capitata</i>	K	N	
	<i>Laguncularia racemosa</i>	K		
	<i>Conocarpus eractus</i>		N	
	<i>Terminalia catappa</i>	K	N	
MYRTACEAE				
	<i>Eugenia chrosobalanoides</i>		N	
	<i>E. cordata</i>	K	N	
	<i>E. ligustrina</i>	K		
	<i>E. uniflora</i>	K	N	
	<i>Gomidesia lindeniana</i>	K		
	<i>Myrcia citrifolia</i>	K	N	
	<i>M. splendens</i>	K		
	<i>Myrcianthus fragrans</i>	K		
	<i>Myrciaria floribunda</i>	K		
	<i>Pimenta racemosa</i>		N	
	<i>Pimenta amplexicaule</i>		N	
	<i>P. cattleianum</i>		N	
	<i>P. guajava</i>	K	N	
	<i>Syzygium jambos</i>	K		
MELASTOMATACEAE				
	<i>Charianthus purpureus</i>	K	N	end. L.A.
	<i>Climimia hirta</i>	K	N	
	<i>C. umbrosa</i>	K		end. L.A.
	<i>Micinia globuliflora</i> var. <i>dominicæ</i>	K	N	
	<i>M. impetiolearis</i>	K		
	<i>M. laevigata</i>	K	N	
	<i>M. mirabilis</i>	K	N	
	<i>Tibouchina longifolia</i>	K		
	<i>T. ornata</i>	K		end. L.A.
	<i>Tetrazygia discolor</i>		N	
	<i>Vespera aquatica</i>	K		
ARALIANCEAE				
	<i>Schefflera attenuata</i>	K		end. L.A.

FAMILY	SPECIES	DISTRIBUTION		NOTES
UMBELLIFERAE				
	<i>Eryngium foetidum</i>	K	N	
THEOPHRASTACEAE				
	<i>Jacquinia armillaris</i>	K		
MYRSINACEAE				
	<i>Ardisia abovata</i>		N	
	<i>Cybianthus parasiticus</i>		N	end. L.A.
	<i>Myrsine coriacea</i>		N	
PLUMBAGINACEAE				
	<i>Plumbago scandens</i>	K	N	
SAPOTACEAE				
	<i>Manilkara zapota</i>		N	
	<i>Micropholis guyanensis</i>		N	
	<i>Pouteria multiflora</i>		N	
	<i>Sideroxylon cubense</i>	K		
	<i>Sideroxylon obovatum</i>	K		
	<i>S. salicifolium</i>		N	
STYRACAEAE				
	<i>Styrax glaber</i>	K		end. L.A.
SYMPLOCACEAE				
	<i>Symplocos martinicensis</i>	K	N	
OLEACEAE				
	<i>Jasminum multiflorum</i>	K		
LOGANACEAE				
	<i>Spigelia anthelmia</i>	K		
GENTIANACEAE				
	<i>Centaurium pulchellum</i>		N	
	<i>Enicostema verticillatum</i>	K		
	<i>Voyryia aphylla</i>	K	N	
APOCYNACEAE				
	<i>Allamanda blanchetti</i>		N	
	<i>Allamanda cathartica</i>	K	N	
	<i>Catharanthus roseus</i>	K	N	
	<i>Nerium oleander</i>		N	
	<i>Plumeria alba</i>	K		
	<i>P. rubra</i>	K	N	
	<i>Rauvolfia nitida</i>	K		
	<i>Rauvolfia tetraphylla</i>	K		

FAMILY	SPECIES	DISTRIBUTION		NOTES
	<i>Rauvolfia viridis</i>	K		
	<i>Tabernaemontana citrifolia</i>	K		
	<i>Thevetia peruviana</i>	K		
	<i>Urechites lutea</i>	K		
ASCLEPIADACEAE				
	<i>Calotropis procera</i>	K	N	
	<i>Matelia maritima</i>	K		
CONVOLVULACEAE				
	<i>Cuscuta americana</i>	K	N	
	<i>Evolvulus concolvuloides</i>	K		
	<i>E. tenuis</i>	K		
	<i>Ipomoea hederifolia</i>	K		
	<i>I. asarifolia</i>		N	
	<i>I. batatas</i>		N	
	<i>I. indica</i>	K		
	<i>I. pes-caprae</i>	K		
	<i>I. phyllomega</i>	K		
	<i>I. quamoclit</i>	K	N	
	<i>I. tiliacea</i>	K		
	<i>I. triloba</i>	K		
	<i>I. violacea</i>	K		
	<i>Jacquemontis cumanensis</i>	K		
	<i>J. pentantha</i>	K	N	
	<i>J. solanifolia</i>	K		
	<i>J. tamnifolia</i>		N	
	<i>Merremia aegyptia</i>	K		
	<i>M. dissecta</i>	K		
	<i>Poranopsis paniculata</i>	K		
	<i>Turbina corymbosa</i>		N	
HYDROPHYLLACEAE				
	<i>Nama jamaicensis</i>	K		
BORAGINACEAE				
	<i>Argusia gnaphalodes</i>	K	N	
	<i>Bouyeria succulenta</i>	K	N	
	<i>Cordia globosa</i>	K		
	<i>C. nesophila</i>	K		
	<i>C. obliqua</i>	K	N	
	<i>C. polycephala</i>	K		
	<i>C. sebestena</i>	K	N	
	<i>C. sulcata</i>	K		
	<i>C. collococca</i>		N	
	<i>Heliotropium angiospermum</i>	K		
	<i>H. curassavicum</i>	K	N	
	<i>H. indicum</i>	K		

FAMILY	SPECIES	DISTRIBUTION		NOTES
	<i>H. ternatum</i>	K		
	<i>Tournefortia bicolor</i>	K		
	<i>T. hirsutissima</i>	K		
	<i>T. maculata</i>		N	
	<i>T. volubilis</i>	K	N	
AVICENNIACEAE				
	<i>Avicennia germinans</i>	K		
VERBENACEAE				
	<i>Aegiphila martinicensis</i>	K		
	<i>Citharexylum spinosum</i>	K		
	<i>Clerodendron aculeatum</i>	K	N	
	<i>C. speciosissimum</i>	K		
	<i>Duranta erecta</i>	K	N	
	<i>Hyptis pectinata</i>	K		
	<i>Lantana camara</i>	K	N	
	<i>L. involucrata</i>	K		
	<i>L. urticifolia</i>	K		
	<i>Leonotis nepetifolia</i>	K	N	
	<i>Leucas martinicensis</i>	K		
	<i>Petrea kohautiana</i>	K		
	<i>Plectranthus amboinicus</i>	K	N	
	<i>Salvia micrantha</i>	K		
	<i>S. serotina</i>	K		
	<i>Stachytarpheta cayennensis</i>	K		
	<i>S. jamaicensis</i>	K		
	<i>Tetona grandis</i>	K	N	
SOLANACEAE				
	<i>Brunfelsia americana</i>	K	N	
	<i>Capsicum annuum</i>		N	
	<i>Cestrum laurifolium</i>	K	N	
	<i>Datura stramonium</i>	K		
	<i>Nicotiana tabacum</i>	K		
	<i>Physalis angulata</i>	K		
	<i>P. philadelphica</i>		N	
	<i>Solandra grandiflora</i>	K	N	
	<i>S. americanum</i>	K		
	<i>S. bicolor</i>	K		
	<i>S. capsicoides</i>	K		
	<i>S. racemosum</i>	K	N	
	<i>S. torvum</i>	K		
SCROPHULARIACEAE				
	<i>Corpraria biflora</i>	K		
	<i>Lindernia diffusa</i>		N	
	<i>Scoparis dulcis</i>	K		

FAMILY	SPECIES	DISTRIBUTION		NOTES
BIGNONIACEAE				
	<i>Crescentia cujete</i>	K	N	
	<i>Macfadyena unguis-cati</i>	K	N	
	<i>Tecoma stans</i>	K	N	
GESNERIACEAE				
	<i>Alloplectus cristatus</i>	K	N	
	<i>Besleria lutea</i>	K		
	<i>Gesneria ventricosa</i>	K		
ACANTHACEAE				
	<i>Asystasia gangetica</i>		N	
	<i>Blechum pyranidatum</i>	K		
	<i>Dicliptera martinicensis</i>	K		
	<i>Justicia pectoralis</i>	K		
	<i>J. secunda</i>	K		
	<i>J. sessilis</i>	K		
	<i>Odontonema nitidum</i>	K	N	
	<i>Pseuderanthemum carruthersii</i>		N	
	<i>Ruellia tuberosa</i>	K	N	
	<i>Thunbergia fragrans</i>	K	N	
	<i>T. alata</i>		N	
	<i>T. erecta</i>		N	
	<i>T. grandiflora</i>		N	
	<i>T. laurifolia</i>		N	
RUBIACEAE				
	<i>Chiococca alba</i>	K		
	<i>Chione venosa</i>	K		
	<i>Diodia acymifolia</i>	K		
	<i>Erithalis fruticosa</i>	K	N	
	<i>E. odorifera</i>	K		
	<i>Faramea occidentalis</i>	K		
	<i>Gonzalagunia hirsuta</i>	K		
	<i>Guettarda odorata</i>	K		
	<i>G. parviflora</i>	K	N	
	<i>G. scabra</i>	K	N	
	<i>Hamelia axillaris</i>	K		
	<i>Hillia parasitica</i>	K		
	<i>Ixora ferrea</i>	K	N	
	<i>Melothris pendula</i>	K		
	<i>Mitracarpus hirtus</i>	K		
	<i>Morinda citrifolia</i>	K		
	<i>Palicourea crocea</i>		N	
	<i>Psychotria aubletiana</i>	K	N	
	<i>P. berteriana</i>	K	N	
	<i>P. guadalupensis</i>	K	N	
	<i>P. microdon</i>	K		

FAMILY	SPECIES	DISTRIBUTION		NOTES
	<i>P. nervosa</i>		N	
	<i>P. pubescens</i>	K		
	<i>Randia aculeata</i>	K	N	
	<i>Relbunium guadalpense</i>	K	N	
	<i>Spermacoce assurgens</i>	K		
	<i>S. bahamensis</i>	K		
	<i>S. confusa</i>	K		
	<i>S. ednsiflora</i>	K		
	<i>S. verticillata</i>	K		
	<i>Strumphia maritima</i>	K		
CUCURBITACEAE				
	<i>Momordica charantia</i>	K	N	
LOBELIACEAE				
	<i>Lobelia circiifolia</i>	K		end. L.A.
	<i>L. stricta</i>	K	N	
COMPOSITAE				
	<i>Acanthospermum hispidum</i>	K		
	<i>Acmella uliginosa</i>	K		
	<i>Adenostemma verbesina</i>	K		
	<i>Ageratum conyzoides</i>	K		
	<i>Ambrosia hisida</i>	K		
	<i>Baccharis pedunculata</i>	K		
	<i>B. dioica</i>		N	
	<i>Bidens pilosa</i>	K		
	<i>Centratherum punctatum</i>		N	
	<i>Chaptalia nutans</i>	K	N	
	<i>Clibadium erosum</i>	K	N	
	<i>Conzya apurensis</i>	K		
	<i>C. bonariensis</i>	K		
	<i>C. canadensis</i>	K		
	<i>Eclipta prostata</i>	K		
	<i>Egletes prostata</i>	K		
	<i>Emilia fosbergii</i>	K		
	<i>E. sonchifolia</i>	K	N	
	<i>Erechtites hieracifolia</i>	K		
	<i>E. valerianifolia</i>	K		
	<i>Eupatorium corymbosum</i>	K		
	<i>E. integrifolium</i>	K		
	<i>E. macranthum</i>	K	N	
	<i>E. macrophyllum</i>	K		
	<i>E. microstemon</i>	K		
	<i>E. odoratum</i>	K		
	<i>E. trigonocarpum</i>	K		
	<i>Lagascea mollis</i>	K		
	<i>Mikania hookeriana</i>	K		

FAMILY	SPECIES	DISTRIBUTION		NOTES
	<i>Neurolena lobata</i>	K		
	<i>Parthenium hysterophorus</i>	K	N	
	<i>Pectis humifusa</i>	K		
	<i>P. linearis</i>	K		
	<i>P. linifolia</i>	K		
	<i>Pluchea carolinensis</i>	K		
	<i>Porophyllum ruderale</i>	K		
	<i>Scaevola plumieri</i>	K	N	
	<i>S. sericea</i>		N	
	<i>Tagetes erecta</i>	K		
	<i>Tithonia diversifolia</i>	K		
	<i>Tridax procumbens</i>	K		
	<i>Verbesina alata</i>	K		
	<i>Veronia albicaulis</i>	K		
	<i>V. cinerea</i>	K		
	<i>Wedelia trilobata</i>	K	N	
	<i>W. calycina</i>		N	
	<i>Xanthium strumarium</i>		N	

APPENDIX 3.

Invasive pests and diseases organisms of importance to animals in St. Kitts & Nevis

Common Name	Species	Host	Distribution	Impact on Biodiversity
Tropical Bont Tick	<i>Amblyomma variegatum</i>	Cattle Sheep Goats	Island wide	Vector of Disease; loss of productivity
Cattle tick	<i>Boophilus microplus</i>	Cattle Sheep Goats Dogs	Island wide	Vector of tick fevers; loss of productivity
Barberpole worm	<i>Haemonchus spp.</i>	Cattle Sheep Goats	Island wide	Loss of productivity
Nasal bot	<i>Oestrus ovis</i>	Sheep Goats	Island wide	Loss of productivity
Nodular worms	<i>Oesophagostomum columbianum</i>	Sheep	Island wide	Loss of productivity
Stomach worms	<i>Ostertagia ostertagia</i>	Cattle	Island wide	Loss of productivity
Stomach worms	<i>Ostertagia circumcincta</i>	Sheep Goats	Island wide	Loss of productivity
Round worms	<i>Ascaris suum</i>	Pigs	Island wide	Loss of productivity
Rumen fluke	<i>Paramphistomum spp.</i>	Sheep Goats Cattle	Island wide	Loss of productivity
Dog tick	<i>Rhipicephalus sanguineus</i>	Dogs	Island wide	Vector of disease
Stomach worm	<i>Habronema sp.</i> <i>Oesophagostomum sp</i>	Horses Pigs	Island wide	Loss of productivity
Canine distemper	<i>Paramyxovirus</i>	Dogs	Island wide	Loss of productivity
Feline pan-leukopenia	<i>Parvovirus</i>	Cats	Island wide	Loss of productivity
Canine parvovirus	<i>Parvovirus</i>	Dogs	Island wide	Loss of productivity
Leptospirosis	<i>Leptospira</i>	Dogs	Island wide	Loss of productivity
Feline leukemia virus	<i>Retrovirus</i>	Cats	Island wide	Loss of productivity

- (cont'd) Invasive pests and diseases organisms of importance to animals in St. Kitts & Nevis

Common Name	Species	Host	Distribution	Impact on Biodiversity
Hook worms	<i>Ancylostoma caninum</i>	Dogs	Island wide	Affects man
Heart worms	<i>Dirofilaria immitis</i>	Dogs Cats	Island wide	Loss of productivity
Dog tape worm	<i>Dipylidium caninum</i>	Dogs	Island wide	Loss of productivity
Round worms	<i>Toxocara canis</i>	Dogs	Island wide	Affects humans
Mastitis	<i>Staphylococcus & Streptococcus</i>	Cattle Sheep Goats	Island wide	Loss of productivity
Lumpy jaw	<i>Actinomycolosis</i>	Sheep Goat Cattle	Island wide	Loss of productivity
Caprine arthritis	<i>Caevirus</i>	Goats	Island wide	Loss of productivity
Strongyloid-osis	<i>Strongyloid stercoralis</i>	Dogs Man	Old Road	Affects humans
Varroa mite	<i>Apis mellifera</i>	Bees	Island wide	Loss of productivity

Source: (Thomas *et al* 2001)

APPENDIX 4

Biological control agents introduced into St. Kitts & Nevis for crop protection measures

Biological Agent	Target Pest	Status
<i>Cortesia flavipes</i>	Sugarcane stem borer (<i>Diatrea saccharalis</i>)	Established
<i>Anagyrus kamali</i>	Pink hibiscus mealybug (<i>M. hirsutus</i>)	Established
<i>Crytolaemus montrouzieri</i>	Pink hibiscus mealybug (<i>Maconellicoccus hirsutus</i>)	Established
<i>Gyranusoidea indica</i>	Pink hibiscus mealybug (<i>M. hirsutus</i>)	Established
<i>Scymnus coccivora</i>	Pink hibiscus mealybug (<i>M. hirsutus</i>)	Uncertain
<i>Lixophaga diatraeae</i>	Sugarcane stem borer (<i>D. saccharalis</i>)	Established

Source: (Thomas *et al* 2001)

APPENDIX 5

St. Kitts and Nevis Bird Species of Special Conservation Concern

(Rare; Vulnerable or Endangered; and /or Endemic.

† = species suspected to exist in the country, but not documented)

Brown Pelican (<i>Pelecanus occidentalis</i>)	Uncommon, Vulnerable due to threats to nesting habitat
Magnificent Frigatebird (<i>Fregata magnificens</i>)	Rare nester in St. Kitts-Nevis (not observed to nest during either 1997 or 1998)
† West Indian Whistling Duck (<i>Dendrocygna arborea</i>)	West Indian endemic; Rare, Endangered in Lesser Antilles due to habitat loss and hunting
† White-cheeked Pintail (<i>Anas bahamensis</i>)	Uncommon, Vulnerable in Lesser Antilles due to habitat loss
Ruddy Duck (<i>Oxyura jamaicensis</i>)	Rare, Vulnerable in Lesser Antilles due to habitat loss
Osprey (<i>Pandion haliaetus</i>)	Rare winter visitor
† Broad-winged Hawk (<i>Buteo platypterus insulicola</i>)	Lesser Antillean endemic sub-species (Antigua to Grenada)
Peregrine Falcon (<i>Falco peregrinus</i>)	Rare, Endangered globally
Clapper Rail (<i>Rallus longirostris</i>)	Rare, Vulnerable to habitat loss; historical records of nesting on St. Kitts
Laughing Gull (<i>Larus artricilla</i>)	Rare nester in St. Kitts-Nevis, restricted to Booby Island.
Roseate Tern (<i>Sterna dougallii</i>)	Rare nester in St. Kitts-Nevis, restricted to Booby Island (designated as Threatened by the USFWS).

St. Kitts and Nevis Bird Species of Special Conservation Concern

Cont'd

Least Tern (<i>Sterna antillarum</i>)	Rare nester in St. Kitts-Nevis (the only species of seabird known to nest in Nevis; considered Endangered by the SCO and USFWS
Bridled Tern (<i>Sterna anaethetus</i>)	Rare nester in the La; in St. Kitts-Nevis, restricted to Booby Island
Sooty Tern (<i>Sterna fuscata</i>)	Rare nester in St. Kitts-Nevis, restricted to Booby Island
Brown Noddy (<i>Anous stolidus</i>)	Rare nester in St. Kitts-Nevis, restricted to Booby Island
Red-necked pigeon (<i>Columba squamosa</i>)	West Indies endemic
White-crowned pigeon (<i>Columba leucocephala</i>)	West Indies (and Florida Keys) endemic
Zenaida Dove (<i>Zenaida aurita</i>)	West Indies (and Yucatan Peninsula) endemic
Bridled Quail-Dove (<i>Geotrygon mystacea</i>)	Lesser Antilles (and Puerto Rico) endemic
† Ruddy Quail-Dove (<i>Geotrygon montana</i>)	West Indies (and Central and South America) endemic; based on 1 sight record and may be extirpated
† Burrowing Owl	Fossil record only
† Barn Owl	Anecdotal evidence only
Mangrove cuckoo (<i>Coccyzus minor</i>)	Lesser Antillean endemic sub-species
Purple-throated Carib (<i>Eulampis jugularis</i>)	Lesser Antilles endemic (Saba to Grenada)
Green-throated Carib (<i>Sericotes holosericeus</i>)	Lesser Antilles (Virgin Islands and Puerto Rico endemic)
Antillean Crested Hummingbird (<i>Orthorhynchus cristatus</i>)	Lesser Antilles (Virgin Islands & Puerto Rico) endemic
Caribbean Elaenia (<i>Elaenia martinica rissii</i>)	West Indies endemic
Lesser Antillean Flycatcher (<i>Myiarchus oberi</i>)	Lesser Antillean endemic (St. Kitts to St. Lucia)
Caribbean Martin (<i>Progne dominicensis</i>)	West Indies. Rare (nests in St. Kitts-Nevis); winters in South America
Scaly-breasted Thrasher (<i>Margarops fuscus</i>)	Lesser Antillean endemic (Saba to St. Vincent)
Brown Trembler (<i>Cinclocerthia ruficauda</i>)	Lesser Antillean endemic (Saba to St. Vincent)
Yellow Warbler (<i>Dendroica petechia bartholemica</i>)	Lesser Antillean endemic sub-species (Anguilla to Montserrat)
† Antillean (Blue-headed) Euphonia (<i>Euphonia musica</i>)	Lesser Antillean endemic sub-species; anecdotal evidence only

St.Kitts Bullfinch (<i>Loxigilla portoricensis grandis</i>)	Endemic to St. Kitts; but may be extinct
Lesser Antillean Bullfinch (<i>Loxigilla noctis</i>)	Lesser Antillean endemic
† Burrowing Owl	Fossil record only
† Barn Owl	Anecdotal evidence only
Mangrove cuckoo (<i>Coccyzus minor</i>)	Lesser Antillean endemic sub-species
Purple-throated Carib (<i>Eulampis jugularis</i>)	Lesser Antilles endemic (Saba to Grenada)
Green-throated Carib (<i>Sericotes holosericeus</i>)	Lesser Antilles (Virgin Islands and Puerto Rico endemic)
Antillean Crested Hummingbird (<i>Orthorhynchus cristatus</i>)	Lesser Antilles (Virgin Islands & Puerto Rico) endemic
Caribbean Elaenia (<i>Elaenia martinica rissii</i>)	West Indies endemic
Lesser Antillean Flycatcher (<i>Myiarchus oberi</i>)	Lesser Antillean endemic (St. Kitts to St. Lucia)
Caribbean Martin (<i>Progne dominicensis</i>)	West Indies. Rare (nests in St. Kitts-Nevis); winters in South America
Scaly-breasted Thrasher (<i>Margarops fuscus</i>)	Lesser Antillean endemic (Saba to St. Vincent)
Brown Trembler (<i>Cinlocerthia ruficauda</i>)	Lesser Antillean endemic (Saba to St. Vincent)
Yellow Warbler (<i>Dendroica petechia bartholemica</i>)	Lesser Antillean endemic sub-species (Anguilla to Montserrat)
† Antillean (Blue-headed) Euphonia (<i>Euphonia musica</i>)	Lesser Antillean endemic sub-species; anecdotal evidence only
St.Kitts Bullfinch (<i>Loxigilla portoricensis grandis</i>)	Endemic to St. Kitts; but may be extinct
Lesser Antillean Bullfinch (<i>Loxigilla noctis</i>)	Lesser Antillean endemic

APPENDIX 6

Invertebrates: Goba and Country Estimates

Taxa	G.S.E. ¹	Country Estimate ² (and notes)
Porifera (sponges)	9,000	56 (Humann, 1993)
Cnidaria (includes corals, hydroids, jellyfish and anemones)	9,000	148 corals plus another 62 Cnidarians in various other taxa (Humann,1993)
Ctenophora (comb-jellies or sea walnuts)	100	9 (Humann, 1993)
Platyhelminthes (flatworms)	20,000	5 (Humann, 1993)
Nemertea [= Rhynchocoela] (ribbon worms)	900	1 (Humann, 1993)
Pseudocoelomates (10 phyla: Rotifera, Gastrotricha, Kinorhyncha, Nematoda, Nematomorpha, Acabthocephala, Entoprocta, Pripula, Gnathostomulida and Loricifera)	16,000 (12,000 of which are nematodes)	
Annelida (segmented worms: earthworms, fireworms, feather duster worms, calcareous tube worms, spaghetti worms)	10,000	23 (Humann, 1993)
Coelomate Worms (14 phyla: Sipuncula, Echiura, Pogonophora, Vestimentifera)	600	
Arthropoda (4 subphyla, 1 of which-Trilobitomorpha - is extinct)		

(continued) Invertebrates: Goba and Country Estimates

Taxa	G.S.E. ¹	Country Estimate ⁻² (and notes)
Cheliceriformes (this subphylum includes horseshoe crabs, spiders scorpions, mites)	>65,000	
Arachnida (subclass containing 10 orders, including spiders [35,000 spp], scorpions [1,200 spp], mites and ticks [30,000])	65,000	Kohls (1969) lists 17 species of ticks in the L.A:
Uniramia		
Myriapoda	13,120	
Chilopoda (centipedes) and Diplopoda (millipedes)	2,500 10,000	
Insecta (class containing 32 orders, only some of which are included below)	> 850,000	
Odonata (Dragonflies and Damselflies)	5,500	86 species of dragonflies and 44 species of damselflies are recorded for Florida (Dunkle, 1989)
Isoptera (Termites)	2,000	94 species recorded for the Caribbean (Collins unpublished)
Orthoptera (grasshoppers, crickets and locusts)	20,000	
Hemiptera	35,000	
Homoptera	33,000	
Coleoptera (beetles)	300,000 350,000 ²	>1,200 species recorded in the USVI, which has been relatively well-studied (Ivie, reported by Chadwick, 1998)
Hymenoptera (ants, bees, wasps)	125,000	
Diptera (flies, mosquitoes)	150,000	
Lepidoptera (Butterflies and Moths)	120- 180,000	292 species of butterflies in the West Indies (Stiling 1986), over half endemic (following Miller and Miller's (1989) inclusion of the southern tip of Florida and the Keys as Antillean); 69 in the Lesser Antilles: 9 of which occur in the Leeward Islands but not the Windward Islands and 19 that occur in the Windwards but not the Leewards (Riley, 1975). Barnes' (1996) identification guide lists just over 500 (moth) species for the Lesser Antilles ³ .

(continued) Invertebrates: Global and Country Estimates

Taxa	G.S.E.¹	Country Estimate⁻² (and notes)
Mollusca (includes chitons; clams, oysters, mussels; snails, slugs, whelks; tooth shell; squid, octopus)	50,000	100 marine (Humann, 1993)
Lophophorates (3 phyla:Phoronida, Ectoprocta [= Bryozoa] and Brachiopoda)	5,000	13 (Humann, 1993)
Echinodermata (includes starfish, brittle stars, sea urchins, sea cucumbers and feather stars)	6,000	14 starfish, 9 brittle stars, 11 sea urchins, 7 sea cucumbers, 4 featherstars (Humann, 1993)
Invertebrate Chordates and kin: 3 phyla - Chaetognatha, Hemichordata and some of the Chordata	3, 200	23 (Humann, 1993)
Crustacea (Includes crayfish, lobster, crab, shrimp, barnacles)	30,000	64 marine (Humann, 1993)

Source: (Horwith & Lindsay 1999 cited in Thomas *et al* 2001)

Notes

¹Global Species Estimates (G.S.E.) are from Brusca and Brusca (1990).

²For most taxa, no country-specific accounts exist for St. Kitts-Nevis. The estimates referenced as Humann (1993) are for the Caribbean and are probably vast underestimates, in part because the emphasis of his guide presumably is on the most conspicuous species likely to be seen by drivers and snorkelers, but also because these taxa remain inadequately researched. Young's data (unpublished from research in the early 1990s, on file at the NHCS) identify a few marine invertebrate species as part of a research effort focusing on ecological, not taxonomic issues, and have limited value in assessing the marine biodiversity of Nevis. Bass (unpublished data from research in St.Kitts and Nevis in 1996 and 1997, on file at the NHCS and the SCHS) sampled invertebrates from 12 freshwater sites. The 56 taxa of macroinvertebrates collected include 1 species of sponge, 1 species of aquatic earthworm, 1 species of leech, 4 species of snails, 1 species of clam, 1 species of seed shrimp, 3 species of mayflies, 11 species of dragonflies and damselflies, 10 species of true bugs, 13 species of beetles and 8 species of two-winged flies. He noted that more species were collected from Nevis than St. Kitts even though the former is smaller and had fewer sampling sites. Termites have been investigated by Majarajh and Chase (unpublished data from 6 days of collecting on St.Kitts and Nevis in 1997, on file at the NHCS), but the data on file does not allow an assessment of the biodiversity of this taxa without interpretation by the researchers.

³ Barnes produced a report of his work on the moths of St. Kitts -Nevis (on file at the SCHS).

APPENDIX 7

Family	Scientific name	Common name	
Belonidae	<i>Ablennes hians</i>	Flat needlefish	
Pomacentridae	<i>Abudefduf saxatilis</i>	Sergeant major	
Pomacentridae	<i>Abudefduf taurus</i>	Night sergeant	
Chaenopsidae	<i>Acanthemblemaria aspera</i>	Roughhead blenny	
Chaenopsidae	<i>Acanthemblemaria maria</i>	Secretary blenny	
Chaenopsidae	<i>Acanthemblemaria medusa</i>	Medusa blenny	
Chaenopsidae	<i>Acanthemblemaria spinosa</i>	Spinyhead blenny	
Scombridae	<i>Acanthocybium solandri</i>	Wahoo	
Ostraciidae	<i>Acanthostracion polygonius</i>	Honeycomb cowfish	
Ostraciidae	<i>Acanthostracion quadricornis</i>	Scrawled cowfish	
Acanthuridae	<i>Acanthurus bahianus</i>	Ocean surgeon	
Acanthuridae	<i>Acanthurus chirurgus</i>	Doctorfish	
Acanthuridae	<i>Acanthurus coeruleus</i>	Blue tang surgeonfish	
Gobiesocidae	<i>Acyrtops beryllinus</i>	Emerald clingfish	
Gobiesocidae	<i>Acyrtus rubiginosus</i>	Red clingfish	
Myliobatidae	<i>Aetobatus narinari</i>	Spotted eagle ray	Spotted eagle ray
Albulidae	<i>Albula vulpes</i>	Bonfish	Tenpounder
Carangidae	<i>Alectis ciliaris</i>	African pompano	
Serranidae	<i>Alphestes afer</i>	Mutton hamlet	
Monacanthidae	<i>Aluterus schoepfii</i>	Orange filefish	
Monacanthidae	<i>Aluterus scriptus</i>	Scrawled filefish	
Cirrhitidae	<i>Amblycirrhitus pinos</i>	Redspotted hawkfish	
Engraulidae	<i>Anchoa cayorum</i>	Key anchovy	
Engraulidae	<i>Anchoa colonensis</i>	Narrow-striped anchovy	
Engraulidae	<i>Anchoa cubana</i>	Cuban anchovy	

Scientific name	Family	Common name	
Engraulidae	<i>Anchoa filifera</i>	Longfinger anchovy	
Engraulidae	<i>Anchoa lamprotaenia</i>	Big-eye anchovy	
Engraulidae	<i>Anchoa lyolepis</i>	Shortfinger anchovy	
Engraulidae	<i>Anchovia clupeioides</i>	Zabaleta anchovy	
Engraulidae	<i>Anchoviella perfasciata</i>	Poey's anchovy	
Haemulidae	<i>Anisotremus surinamensis</i>	Black margate	
Haemulidae	<i>Anisotremus virginicus</i>	Porkfish	
Antennariidae	<i>Antennarius multiocellatus</i>	Longlure frogfish	
Apogonidae	<i>Apogon binotatus</i>	Barred cardinalfish	
Apogonidae	<i>Apogon lachneri</i>	Whitestar cardinalfish	
Apogonidae	<i>Apogon maculatus</i>	Flamefish	
Apogonidae	<i>Apogon planifrons</i>	Pale cardinalfish	
Apogonidae	<i>Apogon quadrisquamatus</i>	Sawcheek cardinalfish	
Apogonidae	<i>Apogon townsendi</i>	Belted cardinalfish	
Lutjanidae	<i>Apsilus dentatus</i>	Black snapper	
Sparidae	<i>Archosargus rhomboidalis</i>	Western Atlantic seabream	
Ariommatidae	<i>Ariomma bondi</i>	Silver-rag driftfish	
Ariommatidae	<i>Ariomma regulus</i>	Spotted driftfish	
Apogonidae	<i>Astrapogon puncticulatus</i>	Blackfin cardinalfish	
Apogonidae	<i>Astrapogon stellatus</i>	Conchfish	

Scientific name	Family	Common name	
Aulostomidae	<i>Aulostomus maculatus</i>	Trumpetfish	
Scombridae	<i>Auxis rochei rochei</i>	Bullet tuna	
Scombridae	<i>Auxis thazard thazard</i>	Frigate tuna	
Gobiidae	<i>Awaous banana</i>	River goby	
Sciaenidae	<i>Bairdiella batabana</i>	Blue croaker	
Sciaenidae	<i>Bairdiella ronchus</i>	Ground croaker	
Balistidae	<i>Balistes capriscus</i>	Grey triggerfish	
Balistidae	<i>Balistes vetula</i>	Queen triggerfish	
Gobiidae	<i>Barbulifer antennatus</i>	Barbulifer	
Stomiidae	<i>Bathophilus digitatus</i>		
Gobiidae	<i>Bathygobius soporator</i>	Frillfin goby	
Percophidae	<i>Bembrops ocellatus</i>	Ocellate duckbill	
Percophidae	<i>Bembrops quadrisella</i>		
Labridae	<i>Bodianus pulchellus</i>	Spotfin hogfish	
Labridae	<i>Bodianus rufus</i>	Spanish hogfish	
Bothidae	<i>Bothus lunatus</i>	Plate fish	
Bothidae	<i>Bothus ocellatus</i>	Eyed flounder	
Syngnathidae	<i>Bryx dunckeri</i>	Pugnose pipefish	
Syngnathidae	<i>Bryx randalli</i>		
Macrouridae	<i>Caelorinchus ventrilux</i>	Firebelly grenadier	
Bythitidae	<i>Calamopteryx goslinei</i>	Longarm brotula	
Sparidae	<i>Calamus bajonado</i>	Jolthead porgy	
Sparidae	<i>Calamus calamus</i>	Saucereye porgy	
Sparidae	<i>Calamus penna</i>	Sheepshead porgy	
Sparidae	<i>Calamus pennatula</i>	Pluma porgy	
Ophichthidae	<i>Callechelys bilinearis</i>	Twostripe snake eel	
Ophichthidae	<i>Callechelys guineensis</i>	Shorttail snake eel	
Callionymidae	<i>Callionymus bairdi</i>	Lancer dragonet	

Scientific name	Family name	Common name	
Monacanthidae	<i>Cantherhines macrocerus</i>	American whitespotted filefish	
Monacanthidae	<i>Cantherhines pullus</i>	Orangespotted filefish	
Balistidae	<i>Canthidermis sufflamen</i>	Ocean triggerfish	
Tetraodontidae	<i>Canthigaster rostrata</i>	Caribbean sharpnose-puffer	
Carangidae	<i>Carangoides bartholomaei</i>	Yellow jack	
Carangidae	<i>Carangoides ruber</i>	Bar jack	
Carangidae	<i>Caranx crysos</i>	Blue runner	White back cavalli
Carangidae	<i>Caranx hippos</i>	Crevalle jack	Common jack
Carangidae	<i>Caranx latus</i>	Horse-eye jack	Carangue gros yeux
Carangidae	<i>Caranx lugubris</i>	Black jack	
Carcharhinidae	<i>Carcharhinus acronotus</i>	Blacknose shark	
Carcharhinidae	<i>Carcharhinus falciformis</i>	Silky shark	
Carcharhinidae	<i>Carcharhinus leucas</i>	Bull shark	
Carcharhinidae	<i>Carcharhinus limbatus</i>	Blacktip shark	
Carcharhinidae	<i>Carcharhinus longimanus</i>	Oceanic whitetip shark	
Carcharhinidae	<i>Carcharhinus perezii</i>	Caribbean reef shark	
Lamnidae	<i>Carcharodon carcharias</i>	Great white shark	
Malacanthidae	<i>Caulolatilus cyanops</i>	Blackline tilefish	
Centropomidae	<i>Centropomus ensiferus</i>	Swordspine snook	
Centropomidae	<i>Centropomus parallelus</i>	Fat snook	
Centropomidae	<i>Centropomus pectinatus</i>	Tarpon snook	
Centropomidae	<i>Centropomus undecimalis</i>	Common snook	Róbalo
Pomacanthidae	<i>Centropyge argi</i>	Cherubfish	
Serranidae	<i>Cephalopholis cruentata</i>	Graysby	
Serranidae	<i>Cephalopholis fulva</i>	Coney	Butterfish
Microdesmidae	<i>Cerdale floridana</i>	Pugjaw wormfish	

Scientific name	Family name	Common name	
Engraulidae	<i>Cetengraulis edentulus</i>	Atlantic anchoveta	
Chaenopsidae	<i>Chaenopsis ocellata</i>	Bluethroat pikeblenny	
Chaetodontidae	<i>Chaetodon ocellatus</i>	Spotfin butterflyfish	
Chaetodontidae	<i>Chaetodon sedentarius</i>	Reef butterflyfish	
Chaetodontidae	<i>Chaetodon striatus</i>	Banded butterflyfish	
Muraenidae	<i>Channomuraena vittata</i>	Broadbanded moray	
Exocoetidae	<i>Cheilopogon cyanopterus</i>	Margined flyingfish	
Exocoetidae	<i>Cheilopogon furcatus</i>	Spotfin flyingfish	
Exocoetidae	<i>Cheilopogon melanurus</i>	Atlantic flyingfish	
Diodontidae	<i>Chilomycterus antennatus</i>	Bridled burrfish	
Diodontidae	<i>Chilomycterus antillarum</i>	Web burrfish	
Clupeidae	<i>Chirocentrodon bleekermanus</i>	Dogtooth herring	
Carangidae	<i>Chloroscombrus chrysurus</i>	Atlantic bumper	Plateau
Pomacentridae	<i>Chromis cyanea</i>	Blue chromis	
Pomacentridae	<i>Chromis enchrysurus</i>	Yellowtail reeffish	
Pomacentridae	<i>Chromis multilineata</i>	Brown chromis	
Labridae	<i>Clepticus parrae</i>	Creole wrasse	
Congridae	<i>Conger triporiceps</i>	Manytooth conger	
Haemulidae	<i>Conodon nobilis</i>	Barred grunt	
Coryphaenidae	<i>Coryphaena equiselis</i>	Pompano dolphinfish	
Coryphaenidae	<i>Coryphaena hippurus</i>	Common dolphinfish	
Gobiidae	<i>Coryphopterus dicrus</i>	Colon goby	
Gobiidae	<i>Coryphopterus glaucofraenum</i>	Bridled goby	
Gobiidae	<i>Coryphopterus lipernes</i>	Peppermint goby	

Scientific name	Family name	Common name	
Gobiidae	<i>Coryphopterus personatus</i>	Masked goby	
Scaridae	<i>Cryptotomus roseus</i>	Bluelip parrotfish	
Sciaenidae	<i>Cynoscion jamaicensis</i>	Jamaica weakfish	
Cyprinodontidae	<i>Cyprinodon variegatus variegatus</i>	Sheepshead minnow	
Exocoetidae	<i>Cypselurus comatus</i>	Clearwing flyingfish	
Dactyloscopidae	<i>Dactyloscopus boehlkei</i>		
Dactyloscopidae	<i>Dactyloscopus crossotus</i>	Bigeye stargazer	
Dasyatidae	<i>Dasyatis guttata</i>	Longnose stingray	
Dasyatidae	<i>Dasyatis say</i>	Bluntnose stingray	
Carangidae	<i>Decapterus macarellus</i>	Mackerel scad	
Carangidae	<i>Decapterus punctatus</i>	Round scad	Round robin
Labridae	<i>Decodon puellaris</i>	Red hogfish	
Serranidae	<i>Dermatolepis inermis</i>	Marbled grouper	
Gerreidae	<i>Diapterus auratus</i>	Irish mojarra	
Diodontidae	<i>Diodon hystrix</i>	Spot-fin porcupinefish	
Sparidae	<i>Diplodus argenteus argenteus</i>	South American silver porgy	
Sparidae	<i>Diplodus argenteus caudimacula</i>	Silver porgy	
Gempylidae	<i>Diplospinus multistriatus</i>	Striped escolar	
Labridae	<i>Doratonotus megalepis</i>	Dwarf wrasse	
Eleotridae	<i>Dormitator maculatus</i>	Fat sleeper	
Echeneidae	<i>Echeneis naucrates</i>	Live sharksucker	
Muraenidae	<i>Echidna catenata</i>	Chain moray	
Gobiidae	<i>Elacatinus chancei</i>	Shortstripe goby	
Gobiidae	<i>Elacatinus evelynae</i>	Sharknose goby	
Gobiidae	<i>Elacatinus multifasciatus</i>	Greenbanded goby	
Gobiidae	<i>Elacatinus randalli</i>	Yellownose goby	

Scientific name	Family name	Common name	
Gobiidae	<i>Elacatinus tenox</i>	Slaty goby	
Carangidae	<i>Elagatis bipinnulata</i>	Rainbow runner	
Elopidae	<i>Elops saurus</i>	Ladyfish	
Chaenopsidae	<i>Emblemaria pandionis</i>	Sailfin blenny	
Chaenopsidae	<i>Emblemariopsis bahamensis</i>	Blackhead blenny	
Chaenopsidae	<i>Emblemariopsis occidentalis</i>	Flagfin blenny	
Chaenopsidae	<i>Emblemariopsis signifera</i>		
Muraenidae	<i>Enchelycore nigricans</i>	Mulatto conger	
Blenniidae	<i>Entomacrodus nigricans</i>	Pearl blenny	
Serranidae	<i>Epinephelus adscensionis</i>	Rock hind	Rock grouper
Serranidae	<i>Epinephelus flavolimbatus</i>	Yellowedge grouper	
Serranidae	<i>Epinephelus guttatus</i>	Red hind	Hind
Serranidae	<i>Epinephelus itajara</i>	Itajara	
Serranidae	<i>Epinephelus morio</i>	Red grouper	
Serranidae	<i>Epinephelus mystacinus</i>	Misty grouper	
Serranidae	<i>Epinephelus striatus</i>	Nassau grouper	Grouper
Sciaenidae	<i>Equetus lanceolatus</i>	Jack-knifefish	
Sciaenidae	<i>Equetus punctatus</i>	Spotted drum	
Eleotridae	<i>Erotelis smaragdus</i>	Emerald sleeper	
Lutjanidae	<i>Etelis oculatus</i>	Queen snapper	Bream
Dalatiidae	<i>Etmopterus hillianus</i>	Caribbean lanternshark	
Paralichthyidae	<i>Etropus crossotus</i>	Fringed flounder	
Gerreidae	<i>Eucinostomus argenteus</i>	Silver mojarra	
Gerreidae	<i>Eucinostomus havana</i>	Bigeye mojarra	
Hemiramphidae	<i>Euleptorhamphus velox</i>	Flying halfbeak	
Scombridae	<i>Euthynnus alletteratus</i>	Little tunny	
Gobiidae	<i>Evermannichthys metzelaari</i>	Sponge goby	
Exocoetidae	<i>Exocoetus obtusirostris</i>	Oceanic two-wing flyingfish	
Exocoetidae	<i>Exocoetus volitans</i>	Tropical two-wing flyingfish	

Scientific name	Family name	Common name	
Fistulariidae	<i>Fistularia tabacaria</i>	Cornet fish	
Carcharhinidae	<i>Galeocerdo cuvier</i>	Tiger shark	
Scyliorhinidae	<i>Galeus antillensis</i>		
Scyliorhinidae	<i>Galeus springeri</i>	Springer's sawtail cat shark	
Gempylidae	<i>Gempylus serpens</i>	Snake mackerel	
Gerreidae	<i>Gerres cinereus</i>	Yellow fin mojarra	Hedow
Dactyloscopidae	<i>Gillellus greyae</i>	Arrow stargazer	
Ginglymostomatidae	<i>Ginglymostoma cirratum</i>	Nurse shark	
Gobiidae	<i>Ginsburgellus novemlineatus</i>	Nineline goby	
Gobiidae	<i>Gnatholepis thompsoni</i>	Goldspot goby	
Gobiesocidae	<i>Gobiesox punctulatus</i>	Stippled clingfish	
Eleotridae	<i>Gobiomorus dormitor</i>	Bigmouth sleeper	
Serranidae	<i>Gonioplectrus hispanus</i>	Spanish flag	
Grammatidae	<i>Gramma loreto</i>	Royal gramma	
Muraenidae	<i>Gymnothorax conspersus</i>	Saddled moray	
Muraenidae	<i>Gymnothorax funebris</i>	Green moray	
Muraenidae	<i>Gymnothorax miliaris</i>	Goldentail moray	
Muraenidae	<i>Gymnothorax moringa</i>	Spotted moray	
Muraenidae	<i>Gymnothorax ocellatus</i>	Caribbean ocellated moray	
Muraenidae	<i>Gymnothorax vicinus</i>	Purplemouth moray	
Haemulidae	<i>Haemulon album</i>	White margate	Margate
Haemulidae	<i>Haemulon aurolineatum</i>	Tomtate grunt	Toctoc
Haemulidae	<i>Haemulon bonariense</i>	Black grunt	
Haemulidae	<i>Haemulon carbonarium</i>	Caesar grunt	
Haemulidae	<i>Haemulon chrysargyreum</i>	Smallmouth grunt	
Haemulidae	<i>Haemulon flavolineatum</i>	French grunt	
Haemulidae	<i>Haemulon macrostomum</i>	Spanish grunt	

Scientific name	Family name	Common name	
Haemulidae	<i>Haemulon melanurum</i>	Cottonwick grunt	
Haemulidae	<i>Haemulon parra</i>	Sailor's grunt	
Haemulidae	<i>Haemulon plumierii</i>	Grunt	
Haemulidae	<i>Haemulon sciurus</i>	Bluestriped grunt	
Haemulidae	<i>Haemulon striatum</i>	Striped grunt	
Labridae	<i>Halichoeres bivittatus</i>	Slippery dick	
Labridae	<i>Halichoeres cyanocephalus</i>	Yellowcheek wrasse	
Labridae	<i>Halichoeres garnoti</i>	Yellowhead wrasse	
Labridae	<i>Halichoeres maculipinna</i>	Clown wrasse	
Labridae	<i>Halichoeres pictus</i>	Rainbow wrasse	
Labridae	<i>Halichoeres poeyi</i>	Blackear wrasse	
Labridae	<i>Halichoeres radiatus</i>	Puddingwife wrasse	
Clupeidae	<i>Harengula clupeola</i>	False herring	
Clupeidae	<i>Harengula humeralis</i>	Redear herring	
Clupeidae	<i>Harengula jaguana</i>	Scaled herring	
Serranidae	<i>Hemanthias aureorubens</i>	Streamer bass	
Hemiramphidae	<i>Hemiramphus balao</i>	Balao halfbeak	
Hemiramphidae	<i>Hemiramphus brasiliensis</i>	Ballyhoo	
Congridae	<i>Heteroconger longissimus</i>		
Priacanthidae	<i>Heteropriacanthus cruentatus</i>	Glasseye	
Dasyatidae	<i>Himantura schmardae</i>	Chupare stingray	
Syngnathidae	<i>Hippocampus erectus</i>	Lined seahorse	
Exocoetidae	<i>Hirundichthys affinis</i>	Fourwing flyingfish	
Exocoetidae	<i>Hirundichthys speculiger</i>	Mirrorwing flyingfish	
Pomacanthidae	<i>Holacanthus ciliaris</i>	Queen angelfish	
Pomacanthidae	<i>Holacanthus tricolor</i>	Rock beauty	
Holocentridae	<i>Holocentrus adscensionis</i>	Squirrelfish	
Holocentridae	<i>Holocentrus rufus</i>	Longspine squirrelfish	

Scientific name	Family name	Common name	
Macrouridae	<i>Hymenocephalus italicus</i>	Glasshead grenadier	
Blenniidae	<i>Hypleurochilus aequipinnis</i>	Oyster blenny	
Blenniidae	<i>Hypleurochilus springeri</i>	Orangespotted blenny	
Atherinidae	<i>Hypoatherina harringtonensis</i>	Reef silverside	
Serranidae	<i>Hypoplectrus guttavarius</i>	Shy hamlet	
Serranidae	<i>Hypoplectrus puella</i>	Barred hamlet	
Serranidae	<i>Hypoplectrus unicolor</i>	Butter hamlet	
Hemiramphidae	<i>Hyporhamphus unifasciatus</i>	Common halfbeak	
Inermiidae	<i>Inermia vittata</i>	Boga	
Istiophoridae	<i>Istiophorus albicans</i>	Atlantic sailfish	
Lamnidae	<i>Isurus oxyrinchus</i>	Shortfin mako	
Clupeidae	<i>Jenkinsia lamprotaenia</i>	Dwarf round herring	
Scombridae	<i>Katsuwonus pelamis</i>	Skipjack tuna	
Chlopsidae	<i>Kaupichthys nuchalis</i>	Collared eel	
Kyphosidae	<i>Kyphosus sectator</i>	Bermuda sea chub	
Labrisomidae	<i>Labrisomus bucciferus</i>	Puffcheek blenny	
Labrisomidae	<i>Labrisomus gobio</i>	Palehead blenny	
Labrisomidae	<i>Labrisomus guppyi</i>	Mimic blenny	
Labrisomidae	<i>Labrisomus haitiensis</i>	Longfin blenny	
Labrisomidae	<i>Labrisomus nigricinctus</i>	Spotcheek blenny	
Labrisomidae	<i>Labrisomus nuchipinnis</i>	Hairy blenny	
Labridae	<i>Lachnolaimus maximus</i>	Hogfish	
Ostraciidae	<i>Lactophrys bicaudalis</i>	Spotted trunkfish	
Ostraciidae	<i>Lactophrys trigonus</i>	Buffalo trunkfish	
Ostraciidae	<i>Lactophrys triqueter</i>	Smooth trunkfish	
Tetraodontidae	<i>Lagocephalus laevigatus</i>	Smooth puffer	
Lampridae	<i>Lampris guttatus</i>	Opah	
Sciaenidae	<i>Larimus breviceps</i>	Shorthead drum	

Scientific name	Family name	Common name	
Gempylidae	<i>Lepidocybium flavobrunneum</i>	Escolar	
Serranidae	<i>Liopropoma rubre</i>	Peppermint bass	
Grammatidae	<i>Lipogramma evides</i>	Banded basslet	
Lobotidae	<i>Lobotes surinamensis</i>	Atlantic tripletail	
Lophiidae	<i>Lophiodes reticulatus</i>	Reticulated goosefish	
Chaenopsidae	<i>Lucayablennius zingaro</i>	Arrow blenny	
Lutjanidae	<i>Lutjanus analis</i>	Mutton snapper	
Lutjanidae	<i>Lutjanus apodus</i>	Schoolmaster snapper	
Lutjanidae	<i>Lutjanus buccanella</i>	Blackfin snapper	Blackfin snapper
Lutjanidae	<i>Lutjanus cyanopterus</i>	Cubera snapper	
Lutjanidae	<i>Lutjanus griseus</i>	Grey snapper	Gray snapper
Lutjanidae	<i>Lutjanus jocu</i>	Dog snapper	Dog's tooth snapper
Lutjanidae	<i>Lutjanus mahogoni</i>	Mahogany snapper	Spot snapper
Lutjanidae	<i>Lutjanus purpureus</i>	Southern red snapper	
Lutjanidae	<i>Lutjanus synagris</i>	Lane snapper	Redtailed snapper
Lutjanidae	<i>Lutjanus vivanus</i>	Silk snapper	Vivaneau
Istiophoridae	<i>Makaira nigricans</i>	Atlantic blue marlin	
Macrouridae	<i>Malacocephalus laevis</i>	Softhead grenadier	
Macrouridae	<i>Malacocephalus occidentalis</i>	Western softhead grenadier	
Labrisomidae	<i>Malacoctenus aurolineatus</i>	Goldline blenny	
Labrisomidae	<i>Malacoctenus erdmani</i>		
Labrisomidae	<i>Malacoctenus gilli</i>	Dusky blenny	
Labrisomidae	<i>Malacoctenus macropus</i>	Rosy blenny	
Labrisomidae	<i>Malacoctenus triangulatus</i>	Saddled blenny	
Labrisomidae	<i>Malacoctenus versicolor</i>	Barfin blenny	
Megalopidae	<i>Megalops atlanticus</i>	Tarpon	Bass
Atherinopsidae	<i>Melanorhinus microps</i>	Querimana silverside	

Scientific name	Family name	Common name	
Balistidae	<i>Melichthys niger</i>	Black triggerfish	
Syngnathidae	<i>Micrognathus crinitus</i>	Banded pipefish	
Gobiidae	<i>Microgobius carri</i>	Seminole goby	
Gobiidae	<i>Microgobius signatus</i>		
Syngnathidae	<i>Microphis brachyurus</i> <i>brachyurus</i>	Short-tailed pipefish	
Sciaenidae	<i>Micropogonias furnieri</i>	Whitemouth croaker	
Pomacentridae	<i>Microspathodon chrysurus</i>	Yellowtail damselfish	
Molidae	<i>Mola mola</i>	Ocean sunfish	
Monacanthidae	<i>Monacanthus ciliatus</i>	Fringed filefish	
Monacanthidae	<i>Monacanthus tuckeri</i>	Slender filefish	
Mugilidae	<i>Mugil cephalus</i>	Flathead mullet	
Mugilidae	<i>Mugil curema</i>	White mullet	
Mugilidae	<i>Mugil curvidens</i>	Dwarf mullet	
Mugilidae	<i>Mugil gyrans</i>	Fantail mullet	
Mugilidae	<i>Mugil hospes</i>	Hospe mullet	
Mugilidae	<i>Mugil liza</i>	Liza	
Mugilidae	<i>Mugil trichodon</i>		
Mullidae	<i>Mulloidichthys martinicus</i>	Yellow goatfish	Goatfish
Triakidae	<i>Mustelus canis</i>	Dusky smooth-hound	
Serranidae	<i>Mycteroperca acutirostris</i>	Comb grouper	
Serranidae	<i>Mycteroperca bonaci</i>	Black grouper	
Serranidae	<i>Mycteroperca interstitialis</i>	Yellowmouth grouper	
Serranidae	<i>Mycteroperca tigris</i>	Tiger grouper	
Serranidae	<i>Mycteroperca venenosa</i>	Yellowfin grouper	Grammanik
Ophichthidae	<i>Myrichthys ocellatus</i>	Goldspotted eel	
Holocentridae	<i>Myripristis jacobus</i>	Blackbar soldierfish	
Carangidae	<i>Naucrates ductor</i>	Pilotfish	
Gempylidae	<i>Nealotus tripes</i>	Black snake mackerel	
Sciaenidae	<i>Nebris microps</i>	Smalleye croaker	

Scientific name	Family name	Common name	
Carcharhinidae	<i>Negaprion brevirostris</i>	Lemon shark	
Holocentridae	<i>Neoniphon marianus</i>	Longjaw squirrelfish	
Gobiidae	<i>Nes longus</i>	Orangespotted goby	
Gempylidae	<i>Nesiarchus nasutus</i>	Black gemfish	
Macrouridae	<i>Nezumia aequalis</i>	Common Atlantic grenadier	
Nomeidae	<i>Nomeus gronovii</i>	Man-of-war fish	

Source:<http://www.fishbase.org>

APPENDIX 8

PROPOSED PROTECTED AREAS FOR SELECTED NATURAL RESOURCES, St. Kitts and Nevis

AREA	REASON FOR PROTECTION
ST. KITTS	
MT. LIAMUIGA CENTRAL RANGE NATIONAL PARK	Forest and habitat protection; soil, water, and species conservation; recreation
GUANA ISLAND "MARINE RESERVE"	Habitat protection
NAGSHEAD "WILDLIFE RESERVE"	Species protection(Magnificent Frigate Bird, Brown Pelican)
BLACK ROCKS "NATURAL MONUMENT"	Unique lava phenomenon; public education
SOUTHEAST PENINSULA "MARINE PARK"	Reef protection, recreation
GREATHEEDS POND	Primary freshwater pond in St. Kitts; extensively used by migratory waterfowl and shorebirds
SANDYPOINT REEF "MARINE RESERVE"	Reef protection; recreation
SOUTHEAST PENINSULA SALT PONDS (AVIAN SANCTUARY)	Species protection; ecotourism
NEVIS	
NEVIS PEAK "NATIONAL PARK"	Forest and habitat protection; soil, water, and species conservation; recreation
GALLOWS BAY BOG	Wetland habitat; species protection
SADDLE HILL	Historic and scenic value
ROUND HILL/HURRICANE HILL	Bird habitat
CADES BAY "MARINE PARK"	Reef habitat; Amerindian site; recreation
NEW CASTLE "MARINE PARK"	Reef protection; recreation

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APPENDIX 10

1. Strengthening national capacity

a. Policy, legislation and institutional review and development

Objectives: The objectives of this project are to:

- Provide an adequate and effective policy framework;
- Identify the most appropriate institutional arrangements for effective biodiversity conservation and management;
- Identify the legal requirements for effective policy implementation, including the harmonization of laws, the preparation of new laws and regulations, and the refinement of enforcement mechanisms;
- Enhance the capacity of relevant institutions to implement policy and to manage the use of biological resources effectively.

PRIORITY: **HIGH**

Rationale: There is need for a comprehensive policy framework to guide biodiversity conservation and management, there are critical gaps and overlaps in institutional arrangements, and the legal framework is inadequate to achieve the objectives of the strategy and action plan.

Activities: The main steps to be followed in this project are as follows:

- Review of the National Conservation and Environmental Protection Act (NCEPA), particularly as it relates to the establishment of the National Conservation Commission (NCC) and its relevance to the implementation of the NBSAP;
- Study of the policy implications of the National Biodiversity Strategy and Action Plan;
- Identify policy issues requiring consideration or clarification;
- Formulate specific policies when needed (including a policy on wildlife, for which a need has already been clearly identified);
- Review of current institutional arrangements and formulation of recommendations, including the preparation of capacity-development plans for key organizations;
- Study of the desirability and feasibility of establishing an institution or mechanism specifically dedicated to financing biodiversity programmes;
- Review of current legal instruments, identification of gaps and overlaps, and formulation of recommendations;
- Review of international conventions, their relevance to national needs, and the desirability of modifying St. Kitts and Nevis' participation in these international instruments;

- Determine the feasibility and desirability of establishing a special court to deal with environmental offenses;
- Consult with land owners and other stakeholders, and identification of the most appropriate instruments to ensure the conservation of the biological diversity on private lands;
- Develop new laws and regulations when needed (notably for the management of wild plants and animals).

Location: St. Kitts and Nevis

Lead Agency: **Department of Environment**

Other Agencies: Ministry of Agriculture, Forestry and Fisheries, Planning Unit, Department of Lands and Housing, St. Christopher Heritage Society, Nevis Historical and Conservation Society.

Budget: US\$ 50,000.

b. Capacity Development Project for Biodiversity Management and Conservation

Objectives:

- To formulate a detailed training strategy for resource management and conservation with testing piloting of the implementation strategy;
- To strengthen the capacity of individuals and organizations to participate in the conservation and management of biodiversity;
- To reduce St. Kitts and Nevis dependency on external sponsors and expertise to conduct resource management initiatives and programmes;
- To stimulate a culture of local training and to test a model of capacity building in resource management that can be transferred to other sectors.

Priority: High

Rationale: For the successful implementation of the NBSAP and the longer term challenges of environmental management in St. Kitts and Nevis, it essential that local capacity building occurs in areas that have traditionally been contracted to external consultants. Increasing the skill levels of local agencies and individuals would ensure a continuity of programmes, as there would be a cadre of trained individuals and equipped institutions available to work in biodiversity conservation, research and management.

Activities: Training will occur through overseas attachments, short-term courses and local workshops. Priority areas will be:

- Protected areas management;
- Economic valuation and green accounting valuation;
- Research methods and monitoring techniques;
- Assessment of plant and animal diversity and taxonomy;
- Geographic information systems and its applications in resource management;
- Information management (database creation and management) and dissemination;
- Policy development for resource management;
- Environmental Curricula creation;
- Environmental education and design of educational resources;
- Design of demonstration/ community projects;
- Environmental consultancy.

Location: St. Kitts and Nevis

Lead Agencies: Ministry of Legal Affairs; Ministry of Physical Planning and Environment.

Time Frame: 9 months

Budget: US\$50,000 for formulation of strategy and pilot.

c. Education, Public Awareness, and Participation

Objectives: The objectives of this project are to:

- Sensitize the general public, including visitors to the island, on the importance of biodiversity;
- Generate appropriate behaviour;
- Create support for biodiversity conservation and management programmes;
- Encourage active community participation in biodiversity conservation and management;

- Increase the effectiveness of biodiversity conservation and management programmes, as a result of a greater involvement of the public;
- Stimulate community participation in biodiversity conservation and management.

Priority: High

Rationale: The objectives of the National Biodiversity Strategy and Action Plan cannot be achieved in the absence of a full level of awareness among all members of the public. In addition, all citizens need to be equipped with the knowledge and skills that will allow them to contribute to the conservation and management of the country's biodiversity. Formal and informal means of education and communication must therefore be used.

Activities: The main steps to be followed in this project are as follows:

- Conduct of advertising campaigns and media programmes;
 - Formulate an action plan and strategy in collaboration with the Ministry of Education for the development, production and dissemination of educational materials;
 - Train teachers in the use of these materials;
- Strengthen community groups involved or interested in biodiversity conservation and sustainable use;
- Establish a small grants fund to support community-based activities in biodiversity conservation;
- Provide information to community organizations to enhance their capacity to participate in biodiversity conservation programmes;
- Facilitate networking among community groups through regular meetings, newsletters and joint activities;
- Facilitate local planning processes to formulate local-level responses to issues affecting biodiversity, and design projects and specify actions aimed at conservation and sustainable use.

Location: St. Kitts and Nevis

Lead Agency: Department of Environment

Other Agencies: Department of Education, St. Christopher Heritage Society, Nevis Historical and Conservation Society, community based groups, radio and television stations and newspapers.

Budget: US\$ 85,000.

2. Terrestrial conservation measures and practices

a. Mapping and inventory of forested habitats

Rationale: The National Conservation and Environmental Protection Act (1987) provides for the Minister of Environment, in consultation with the Conservation Commission, to establish forest reserves. To date, no such reserves have been fully established. Reserves are areas of forestland kept permanently under forest cover to provide wood and wood products, prevent erosion and flooding, preserve water supplies, and provide wildlife habitats. The absence of clearly defined forest reserves has resulted in the illicit felling of timber and unlawful grazing of livestock, which have resulted in serious degradation of the forest. Additionally, very little detailed information is known about the extent and species composition, the standing volume, and increment of the forest resources of the islands.

Activities:

- Gather all survey and legal data on Forest Reserves Boundaries;
- Locate all Forest Reserves Boundaries in the field;
- Plot the data and produce maps of the Forest Reserves;
- Train field staff for data collection;
- Process data and compile inventory results;
- Establish and maintain sample plots.

Location: St. Kitts and Nevis

Lead Agency: Department of Environment (St. Kitts); Department of Agriculture (Nevis)

Other Agencies: Forestry Division (DOA); Physical Planning Division (PPD);
Legal Department; Ministry of Tourism.

Timeframe: 3 years

Budget: US\$ 400,000

b. Mapping, assessment and rehabilitation of dry scrub habitats

Rationale: Overgrazing, harvesting for the production of charcoal and the return of former agricultural lands to dryscrub woodlands have led to much erosion and loss of plant cover. The topsoil in a number of these areas has been lost and livestock are challenged to find feed.

Activities:

- Map and assess these low-lying areas, determining threats, diversity, and potential for rehabilitation
- Rehabilitate a few model areas and monitor the effectiveness of the rehabilitation measures for replication in tier areas.
- Conduct a public awareness campaigns on land management for landowners and owners of livestock.

Location: St. Kitts and Nevis

Lead Agency: Department of Agriculture (Nevis).

Other Agencies: Department of Natural Resources and Environment (Nevis)

Timeframe: 3 years

Budget: US\$ 225,000

c. Mapping of critical watershed areas

Rationale: The limited lands are being placed under developmental pressure. Many old estates are in the watershed areas; which developers are continuously seeking to subdivide and sell for housing.

Activities:

- Use historical maps of agricultural lands to identify watershed areas;
- Use GIS to map these areas;
- Compile a policy document for the treatment of watersheds and continually monitor and evaluate these areas;
- Perform assessments of the fresh water ecology of these areas.

Location: St. Kitts and Nevis

Lead Agency: Department of Environment (St. Kitts); Water Department; (Nevis)

Other Agencies: Department of Physical Planning, Natural Resources and Environment; Department of Agriculture; Planning Unit;

Timeframe: 11 months

Budget: US\$ 110,000

(i) Ghaut protection and stabilization

A number of ghauts in St. Kitts and Nevis originate in wooded areas above the 300-meter contour; however, below this contour line, the vegetation has been removed on either side and contributes to soil erosion and the widening of the channels. The Project will establish a mixture of fruit and forest trees in the vulnerable ghaut areas to a width of twenty meters as a means to prevent erosion. This project will feed from the monitoring and management plan developed for ghauts in the Federation.

Activities:

- Production of 200,000 seedlings of fruit and forest trees,
- Plant seedlings on eroding areas to a width of 20 meters,
- Build protective structures e.g. gabions.

Location: Vulnerable ghauts in St. Kitts and Nevis

Lead Agency: Department of Agriculture (St. Kitts and Nevis)

Other Agencies: Department of Environment; Physical Planning Division.

Timeframe: 2 years

Budget: US\$160,000

(ii) Monitoring and management plan for ghauts

Rationale: Under NCEPA, 1987 all ghauts in the Federation of St. Kitts and Nevis are protected and development and interference should not be done without permission. Limited monitoring is done on these areas and there is no clear policy addressing their interference in the context where developments impact on them. It is therefore important to develop a monitoring plan that assesses soil erosion and stability, vegetative cover, and the pollutants disposed in the watercourses (water quality testing etc.). Much of what enters a ghaut (including material from erosion of the banks) finds its way to the marine environment and impacts on reefs and bathing water quality.

Activities:

- Define and map the major ghaut systems of St. Kitts and Nevis;
- Identify the land-uses that are impacting on the ghauts;
- Carry out assessments of flora, fauna, water quality, soil stability etc;
- Compile database;
- Develop setback guidelines;
- Develop monitoring plan;
- Run trial tests of monitoring plan.

Location: St. Kitts and Nevis

Lead Agency: Department Environment (St. Kitts);
Department of Physical Planning, Natural Resources and Environment (Nevis)

Other Agencies: Department of Agriculture; Department of Fisheries;
Physical Planning Division; Department of Health; Department of Water.

Timeframe: 2 1/2 years

Budget: US\$ 210,000

d. **Soil conservation and rehabilitation**

Rationale: Having small land area, St. Kitts and Nevis must be very selective in its land utilization. Quarrying and mining have left major scars on the landscape and has contributed to soil erosion, sedimentation of reefs, and the buildup of ghauts beds. In many instances the land are totally denuded of its vegetative cover with no remedial actions taken after the operations are closed.

Activities:

- Develop clear guidelines and policies for quarrying activity;
- Implement soil conservation and rehabilitation measure on crown lands that have been quarried;
- Provide guidelines and assistance in the restoration of private lands that have been quarried.

Location: St. Kitts and Nevis

Lead Agency: Department of Environment (St. Kitts)

Other Agencies: Department of Agriculture (St. Kitts); Department of Agriculture (Nevis)
Department of Physical Planning, Natural Resources and Environment (Nevis)

Timeframe: 3 years

Budget: \$US 180,000

e. Mapping of alienated lands

Rationale: In recent times, both islands have witnessed an unprecedented increase in squatting. An inventory has never been taken of the amount and type of squatting that occurs in the Federation. Consequently, these lands have never been officially mapped nor has the amount of land that has been alienated recorded. Much of the lands that are being squatted upon are in sensitive areas - the coastal zone, watersheds, and even in wetlands. For this reason, it is important that squatting activity be curbed and monitored as a matter of urgency.

Activities:

- Use information from building inspectors, map the lands that are being squatted upon.
- Reformat the planning legislation to deal with the issue of squatting.
- Enable the Development Control and Planning Board to assess the environmental features of the land under consideration, especially with regards to the destruction of the natural environmental features or services of these areas.

Location: St. Kitts and Nevis

Lead Agency: Physical Planning Division, Department of Lands and Housing (St. Kitts),
Department of Physical Planning, Natural Resources and Environment (Nevis)

Other Agencies: Departments of Agriculture; Department of Environment;
WaterDepartment; Department of Electricity.

Time Frame: 1 year

Budget: US\$ 60,000

3. Coastal environmental management programme

a. Mapping of coastal ecosystems and environment

(i.)Coral reef monitoring and research programme

Rationale: There is no coral reef monitoring done for the reefs surrounding the islands. As a result there is no scientific data to support development decisions and conservation efforts.

Activities:

- Determine appropriate methodology and acquire equipment;
- Select the areas to be assessed and map the areas using GIS;
- Conduct baseline study of reef conditions including water quality and biological stock.

Location: Coastal waters of the Federation

Lead Agency: Department of Fisheries (St. Kitts); Department of Fisheries (Nevis)

Other Agencies: Physical Planning Division (St. Kitts);
Department of Physical Planning, Natural Resources, and Environment (Nevis)

Timeframe: 1year for initial study

Budget: US\$ 70,000

(ii)Mapping and assessment of coastal wetlands and mangrove rehabilitation

Rationale: There are very few remaining wetlands in the Federation, the largest of which are on the island of Nevis. These are presently under threat by infilling for residential homes, which are seafront properties with high market value. Proper demarcation or assessments of these areas haven't been done. The Federation is loosing its coastal mangrove habitats due to developmental pressure and natural hazards.

Activities:

- Develop methodology for assessment;
- Gather information on landownership including existing property boundaries;
- Carry out site inspections and analysis;
- Map areas using Collect seedlings for propagation;
- Propagate seedlings of both mangrove and other plants;
- Transplant seedlings;
- Monitor growth of transplanted seedlings in the natural environment
- GIS and design a comprehensive database.

Location: St. Kitts and Nevis

Lead Agency: Department of Environment (St. Kitts);
Department of Physical Planning, Natural Resources and Environment (Nevis)

Other Agencies: Department of Agriculture; (SKN) Department of Fisheries; (SKN)
Physical Planning Division; Registry of Land Title and Deeds.

Timeframe: 3 year

Budget: US\$ 100,000

b. Sea turtle conservation programme

Rationale: The sea turtles that nest in St. Kitts and Nevis (green turtles, leatherbacks, and hawksbills) are all listed by CITES as either endangered or threatened. Although there are regulations in place to protect sea turtles in St. Kitts and Nevis, there has not been any study of the turtle populations, evaluating their status, and focused work on their conservation. For several years, there has been a moratorium on the harvesting of marine turtles from the waters around St. Kitts and Nevis. However, given the demands of fishermen and some members of the general public for an open/close season, there is an urgent need to determine the status of the turtle population.

Activities: The project will:

- Assess the population densities and the impacts of various human activities, including fishing, tourism, human settlement and agriculture;
- Conduct genetic analysis of turtle resources;
- Identify and describe major nesting beaches on St. Kitts and Nevis;
- Identify the migratory pattern of the various species found in St. Kitts and Nevis, using DNA markers;
- Identify existing threats to the nesting of turtles;
- Conduct a survey of communities that have traditionally harvested turtles and determine the socio-economic impact of various management regimes on these communities;
- Conduct frequency surveys of nesting on major nesting beaches;
- Determine peak nesting periods;
- Conduct underwater surveys to determine feeding grounds, migratory patterns, and fishing threats;
 - Monitor nesting beaches on a regular basis
 - Evaluate nesting and hatching success
 - Identify and evaluate foraging areas
 - Develop and implement an educational program.

Location: St. Kitts and Nevis

Lead Agency: Department of Fisheries

Other Agencies: Department of Environment, Planning Unit, Ministry of Tourism, Dive Boat operators, St. Christopher Heritage Society, Nevis Historical and Conservation Society.

Timeframe: 2 years (for short term)

Budget: US\$ 98,694

c. Fish stock assessment for St. Kitts and Nevis

Rationale: The fish stock data that is presently compiled by the Department of Fisheries is mainly based on landings that are done by fishermen. Little or no biological data is collected. Therefore, a thorough study of fish stocks is important so that effective planning and management of local fisheries can be done.

Activities:

- Determine methodology to be used;
- Encourage the participation of fishermen;
- Acquire necessary resources including equipment and expertise;
- Identify areas and target stocks;
- Conduct assessment;
- Create a database and perform analyses.

Location: St. Kitts and Nevis

Lead Agency: Department of Fisheries (St. Kitts); Department of Fisheries (Nevis)

Other Agencies: Statistics Division; Fisherman 's Corporative

Timeframe: 2 years

Budget: US\$ 200,000

d. Pilot environmental valuation of wetlands and sand resources

Rationale: There are no examples of environmental valuation of resources in the Federation. The argument for conservation of these critical habitats and the halting of sandmining has thus been relatively weak and ineffective. Having a monetary value attached to these resources will threaten the bid for their conservation and protection.

Activities:

- Identify the areas to be valued and determine appropriate methodology;
- Promote the process to the public and to decision makers;
- Conduct audits and valuation.

Location: St. Kitts and Nevis

Lead Agency: Department of Environment (St. Kitts), Department of Physical Planning, Natural Resources and Environment (Nevis)

Other Agencies: Department of Agriculture, and Inland Revenue Department and Department of Fisheries

Timeframe: 16 months

Budget: US\$ 65,000

e. Mooring system for St. Kitts and Nevis

Rationale: Presently there is much anchoring on reefs from visiting yachts on the leeward side of the islands that causes destruction of reefs, grass-beds and habitats for juvenile fish and lobsters. There are no moorings available for these pleasure crafts.

Activities:

- Identify the areas where yachts usually drop anchor;
- Determine the best type of mooring to be used in each area;
- Publicize the position for these moorings and legislate penalties for not using these moorings;
- Establish moorings and their management.

Location: St. Kitts and Nevis

Lead Agency: Department of Fisheries (St. Kitts);
St. Christopher and Nevis Air and Sea Port Authority;

Other Agencies: Department of Environment (St. Kitts); Department of Fisheries (Nevis)
Coast Guards.

Timeframe: 1 year

Budget: US\$ 60,000

f. Coastal water quality testing and sewage survey for St. Kitts and Nevis

Rationale: There is limited water quality testing of our coastal waters. However, it has been noted that wastewater and possibly sewage enters into the coastal waters especially in the Charlestown and Basseterre areas. Monitoring the water quality is important in maintaining healthy ecosystems.

Activities:

- Identify present and potential sources of contamination
- Conduct water sampling and analysis
- Develop monitoring program
- Implement monitoring program

Location: St. Kitts and Nevis

Lead Agency: Department of Environment; (St. Kitts)

Other Agencies: Department of Fisheries (SKN); Department of Health (SKN); Water Department (SKN); Department of Community Affairs. Department of Physical Planning, Natural Resources and Environment.

Timeframe: 1 year

Budget: US\$ 80,000

g. Protection of coastal habitats along the north-west coast of Nevis

The North-West Coast is the most valuable coastal corridor on the island of Nevis, in terms of its environmental significance as well as property value. This area has most of the wetlands and beaches and is targeted for tourism, recreation, fishing, as well as conservation. The area has been most susceptible to coastal erosion from storm surges and hurricanes; the erosion rate is conservatively estimated at 2.4 meters per year. Major economic losses are incurred during the normal erosion accretion process and are especially significant during natural hazards such as hurricanes. Whether the area is set aside for conservation or development, it is extremely important to find ways to reduce the impact and damage caused by these events.

Activities:

- Determine and map the area along the North-West coast and note the regions that experiences highest vulnerability;
- Review historical data on impacts of hazards on the area;
- Develop appropriate methods for protection of these areas from natural hazards and reduction of impact from natural processes;
- Implement tests methods in critical areas.

Location: Nevis

Lead Agency: Ministry of Infrastructural Development, Physical Planning, Natural Resources and Environment

Other Agencies: Department of Agriculture; Department of Fisheries; Office of Disaster Preparedness.

Timeframe: 18 months

Budget: US\$ 600,000

h. **Establishment of critical marine protected areas at Cow's Rocks and Jones Town-Nevis and the South-east Peninsula and Sandy Point in St. Kitts**

Rationale: Unsustainable harvesting and coastal practices by fishermen from St. Kitts and Nevis and the neighboring islands have led to severely depleted stocks over the last two years. At Cow Rocks, the juvenile conchs are being severely over-harvested and more effective measures other than a closed season, or minimum size is needed. Jones Bay is a nursery for lobsters, fish and conch, as well as the key study and educational area. However, it is under threat by harvesting of juveniles, habitat disruption by yacht anchoring and construction of jetties. Protection of these areas for a number of years will seek to increase the fish stocks and maintain Jones Bay as an ecological Study area.

Activities:

- Map and demarcate these areas;
- Publicize and legislate the protection of these areas;
- Develop a management plan for protection of these areas;

- Present alternatives to fishermen and provide incentives for alternative practices;

Location: St. Kitts and Nevis

Lead Agency: Department of Fisheries (Nevis)

Other Agencies: Department of Agriculture and Department of Physical Planning, Natural Resources and Environment.

Timeframe: 3 years

Budget: US\$300,000

4. Hazard vulnerability analysis of critical ecosystems

Rationale: The Federation's biodiversity, both terrestrial and marine have been severely impacted by droughts and hurricanes. By rating the vulnerability of these areas and identifying those that are most highly vulnerable, one can develop measures to protect the diversity in these areas whether through *in-situ*, or temporary *ex-situ* protection.

Activities:

- Map critical ecosystems;
- Conduct research on historical characteristics of these areas;
- Determine hazards that affect these areas;
- Utilize GIS to map and calculate the vulnerability of these areas;
- Determine best methods of protection (perhaps combination of *in-situ* and *ex-situ* measures).

Location: St. Kitts and Nevis

Lead Agency: Department of Environment (St. Kitts).

Other Agencies: Department of Fisheries; (SKN) Department of Agriculture (SKN); NEMA; Physical Planning Division (SKN); Department of Physical Planning, Natural Resources, and Environment.

Timeframe: 2 years

Budget: US\$ 250,000

5. Development of monitoring and evaluation methodologies

Rationale: Monitoring becomes important whenever there is any degree of uncertainty — which is nearly always the case in the environmental sciences. Data needs to be comparable over time, and spatially, if it is to be used for long-term monitoring and to determine choice of sites. Methodologies must conform to international standards.

Activities: The main steps to be followed in this project are as follows:

- Review monitoring methods for the status of species and ecosystems
- Field-test monitoring methods, data collection, and storage procedures.
- Train nationals of St. Kitts and Nevis.

Lead Agency: The Multi-purpose Laboratory.

Other Agencies: The Department of Environment; Department of Fisheries; Department of Agriculture; CFB College; Planning Unit; Community based organizations.

Timeframe: 5 years

Budget: US \$90,000

