WESTERN PROVINCIAL BIODIVERSITY PROFILE

AND

CONSERVATION ACTION PLAN








MINISTRY OF AGRICULTURE, LAND, IRRIGATION, FISHERIES,
ANIMAL PRODUCTION & HEALTH, AND AGRARIAN DEVELOPMENT
WESTERN PROVINCE

JUNE 2017

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A PUBLICATION OF

MINISTRY OF AGRICULTURE, LAND, IRRIGATION, FISHERIES, ANIMAL PRODUCTION & HEALTH, AND AGRARIAN DEVELOPMENT
WESTERN PROVINCE

JUNE 2017

Publisher:

Ministry of Agriculture, Agrarian Development, Minor Irrigation, Industries, Environment, Arts and Cultural Affairs (Western Province), Sri Lanka

ISBN:
978-955-7819-00-6

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This document is an updated version of the Western Province Biodiversity Profile and Conservation Action Plan of 2008 produced by the Ministry of Environment and Natural Resources of the Government of Sri Lanka

Message from the Hon Minister of Agriculture, Land, Irrigation, Fisheries, Animal Production & Health, and Agrarian Development

Sri Lanka is one of the smallest, but biologically diverse countries in Asia. Consequently it is recognized as a **Biodiversity hotspot**of global and national importance. It's varied climate and topographical conditions have given rise to this rich species diversity, believed to be the highest in Asia in terms of unit land area.

The wet zone rainforests are home to nearly all of the country's woody endemic plants, and about three quarter of it's endemic animals. The genetic diversity of agricultural crops is also quite remarkable, with around three thousand varieties of rice having been recorded. Many of the indigenous varieties of rice are tolerant to pests, adverse climate, and soil conditions. In addition to the diversity seen in coarse grains, legumes, vegetables, spice crops, roots and tubers, there are many species of ornamental plants.

In addition, Sri Lanka also possesses an equally rich religious and cultural heritage spanning over the millennia which had instilled a strong conservation ethic amongst it's people. Nonetheless, the degradation of biodiversity has been quite severe particularly during the last two centuries and this trend is still continuing in many different ways in spite of having a comprehensive array of enactments based on sound policies for the conservation of biodiversity. This suggests that mere enactment of regulations without their strict enforcement had not been an effective measure for the conservation of biodiversity and it's sustainable management. The regulations to be enforced effectively, there need a strong motivation and commitment towards conservation among all stakeholders which can come effectively through increased awareness of the conservation value through field based conservation education and awareness program.

For these reasons developing a Western Provincial Biodiversity action plan is highly **pertinent for the current conservation issues. Therefore, I show my** gratitude **towards the Ministry of Mahaweli Development and Environment for preparing Provincial Biodiversity Action Plan and I believe this updated version which equip latest knowledge on Biodiversity and conservation tools, will guide us to protect Western Provincial Biological diversity.**

Gamini Thilakasiri
Hon.Minister,
Ministry of Agriculture, Land, Irrigation, Fisheries, Animal Production & Health, and Agrarian Development (Western Province)

Message from the Secretary to the Ministry of Agriculture, Land, Irrigation, Fisheries, Animal Production & Health, and Agrarian Development

Biodiversity as a resource in itself is not given the importance it deserves, nor it is given the priority it should accorded. Biological Diversity is essential to life and it contributes to the regulation of the climate and of the planet and to regeneration of soils. It provides thousands of human beings with their means of subsistence, secures their food supply and provides many traditional medicines and remedies as well as modern pharmaceutical products.

It is the crucial parts of the efforts we are making to end suffering of populations and to improve living standards. At the same time, the destruction of habitats and species which is proceeding at an unprecedented rate because of unsustainable industrial and other activities, is aggravated by poverty and other social and economic factors.

In connection to the Western province, it represents the highest population density, urbanization and industrialization with respect to other provinces in the country. It is a critical task to align development plan of the province and conservation of biodiversity. Hence, Biodiversity Conservation Unit of the Ministry of environment and Natural resources has prepaid a Biodiversity Profile and a Conservation Action plan for the Western Province in 2008.

Yet, obtaining new information on Biodiversity of the Province is much reliable in developing a successful Biodiversity Conservation Action plan. Consequently, the Western Provincial Ministry of Agriculture decided to update the Biodiversity Profile and Conservation Action plan for the year 2017.

I consider that this Action Plan would be of great value in guiding and to update all the stakeholders of the Western province who are working on conservation and sustainable use of biodiversity.

Nayanananda Nilwala
Secretary,
Ministry of Agriculture, Land, Irrigation, Fisheries, Animal Production & Health, and Agrarian Development (Western Province)

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ACRONYMS

AIS	Alien Invasive Species
BCAP	Biodiversity Conservation Action Plan
BDS	Biodiversity Secretariat
BMARI	Bandaranaike Memorial Ayurvedic Research Institute
BOI	Board of Investment
CBC	Ceylon Bird Club
CBO	Community Based Organization
CCD	Coast Conservation Department
CEA	Central Environmental Authority
CIDA	Canadian International Development Agency
CPC	Ceylon Petroleum Corporation
CR	Critically endangered
CRI	Coconut Research Institute
DBG	Department of Botanic Gardens
DC	Department of Customs
DCS	Department of Census and Statistics
DD	Data deficient
DE	Department of Education
DOA	Department of Agriculture

DZG	Department of Zoological Garden
DWLC	Department of Wild Life Conservation
E	Endemic species
EFL	Environmental Foundation Limited
ESR	Environmentally Sensitive Region
EW	Extinct wild
FD	Forest Department
FOG	Field Ornithology Group
GDP	Gross Domestic Product
GSMB	Geological Survey and Mines Bureau
GTZ	The German Organization for Technical Cooperation
IUCN	World Conservation Union
IWMI	International Water Management Institute
JAICA	Japan International Cooperation Agency
UDA	Urban Development Authority
ME&RE	Ministryof Environment and Renewable Energy
MEPA	Marine Environment Protection Authority
MFE	Ministry of Forestry and Environment
MPPA	Marine Pollution Prevention Authority
N	Native species
NAQDA	National Aquaculture Development Authority
NARA	National Aquatic Resources Research and Development Agency
NCS	National Conservation Status;
NGO	Non Governmental Organizations
NHS	The Natural History Society

NPPD	National Physical Planning Department
NSF	National Science Foundation
NRC	National Research Council
PA	Provincial Authority
PE	Possibly extinct
RDA	Road Development Authority
SEA	Strategic Environment Assessment
SL	Sri Lanka
SLEJF	Sri Lanka Environmental Journalists Federation
SLLRDC	Sri Lanka Land Reclamation and Development Corporation
SLRC	Sri Lanka Rupavahini Cooperation
SLTB	Sri Lanka Tourist Board
STC	State Timber Cooperation
T	Total number of species
TH	Threatened species
TS	Taxonomic status
UNDP	United Nations Development Program
UNEP	United Nations Environment Program
WCS	Sri Lanka Wildlife Conservation Society
WHT	Wildlife Heritage Trust
WNPS	Wildlife & Nature Protection Society
WP	Western Province
YZA	Young Zoologists Association

CHAPTER 1

1.1 THE NEED FOR UPDATING THE "BIODIVERSITY PROFILE AND CONSERVATION ACTION PLAN" OF THE WESTERN PROVINCE

Sri Lanka is the home for a rich biodiversity, which is a part of its natural wealth. The region including the Western Ghats of India and Wet zone of Sri Lanka is considered as one of 34 biodiversity hotspots identified in the world (Mittermeier *et al*., 2005). These hotspots are areas that harbour an exceptionally high concentration of endemic species, but have already lost more than 75% of the primary vegetation. Of all the global biodiversity hotspots, those in Western Ghats of India and the Wet zone of Sri Lanka have the highest human population density (Cincotta *et al*., 2000). The biodiversity hotspots in Sri Lanka cover four administrative provinces, namely, Western, Southern, Central and Sabaragamuwa. Of these, the WesternProvince has the highest population density, urbanization and industrialization, which pose a great challenge for conservation and wise use of biodiversity within the province. Hence, developmental plans of the province needs to give due consideration to existing information on biodiversity of the three administrative districts namely, Colombo, Gampaha and Kalutara, that falls within the Western Province. This is important as the National Physical Plan is proposing a metro region and special purpose city covering most of the area of the Western Province (NPPD, 2011) that will have significant impacts on the natural habitats of the province and consequently its biodiversity.

The Biodiversity Secretariat of the Ministry of Environment and Natural Resources of Sri Lanka initiated a process to prepare the "Provincial Biodiversity Profile and Action Plan" in the year 2006. Through this initiative, Bambaradeniya (2008) prepared the Biodiversity Profile and Conservation Plan of the Western Province in collaboration with the Western Provincial Council, using information from secondary sources such as published papers and articles as well as unpublished reports. The document has been prepared through a consultative process, where a total of three workshops have been held for provincial administrators and other officers representing different provincial departments, who have contributed with information for upgrading the draft Profile and Action Plan.

Since 2008, a great deal of new information and knowledge on biodiversity has been generated through research and thus, the need has arisen to update the Provincial Biodiversity Profiles and Action Plans. As a result, the Ministry of Agriculture, Agrarian Development, Minor Irrigation, Industries, Environment, Culture and Art Affairs of the Western Province decided to update the "Provincial Biodiversity Profile and Action Plan" using such information. Updating of the biodiversity profile and action plan was done by reviewing the previous version prepared (Bambaradeniya, 2008) by a team comprising of Prof. Gamini Pushpakumara (Team Leader), Prof. Buddhi Marambe, Prof. Pradeepa Silva and

Prof. Devaka Weerakoon. A similar process used by Bambaradeniya (2008) was employed to obtain new information on biodiversity of the Western Province.The present effort to update the biodiversity profile and action plan for the Western Province was to equip the stakeholders with the latest knowledge on biodiversity conservation, with tools for its management and sustainable utilization within the administrative districts. It is anticipated that the updated “Provincial Biodiversity Profile and Action Plan” of the Western Province will guide and promote the conservation and sustainable use of biodiversity in the Province.

Muthurajawela sanctuary

Bellanwila - Attidiya sanctuary

CHAPTER 2

2.1 PHYSICAL FEATURES

The Western Province is located in the South West of Sri Lanka. The province is surrounded by the Laccadive Sea to the West, North Western Province to the North, Sabaragamuwa Province to the East and the Southern Province to the South (Figure 2.1). It is the home to the legislative capital of Sri Lanka, Sri Jayawardenapura Kotte as well as the nation's administrative and business centre, Colombo. The Western Province encompasses three administrative districts, namely Colombo, Gampaha and Kalutara(Figure 2.1), those together forms a commercial hub linked with a major airport and the harbour. The three administrative districts are further divided into 40 Divisional Secretariat (DS) Divisions and 2,505 Grama Niladari (GN) Divisions. The province also includes 48 administrative bodies comprising of 6 municipal councils, 13 urban councils and 29 Pradeshiya Sabhas (DCS, 2012; 2013). The entire province is linked with a well developed road network including two expressways namely, Southern and Colombo-Katunayake (Figure 2.2).

The Province covers an area of 3,684 square kilometers, which represents 5.6% of the total land area of the country (Table 2.1). It is the most densely populated province in the country and harbours 28.7% of the total population in Sri Lanka (Table 2.2). Colombo (3,438 persons per sq. km) is the most densely inhabited district of the country followed by Gampaha (Table 2.2). It is the most socio-economically developed part in Sri Lanka and contributes to 43.4% of the Gross Domestic Product (GDP) of the country. The GDP is largely contributed by the services sector (62.1%) followed by industry (35.1%) and agriculture (2.8%). The province is also considered as the heartland of the tourism industry of the island (DCS, 2012; 2013).

Table 2.1 Land area of Western Province of Sri Lanka

Administrative district/province	Total land area (sq. km)	Land area (sq km)	Inland waters (sq km)
Gampaha	1,387	1,341	46
Colombo	699	676	23
Kalutara	1,598	1,576	22
WesternProvince	3,684	3,593	91
Sri Lanka	65,610	62,705	2,905

Sources: DCS (2012); DCS (2013)

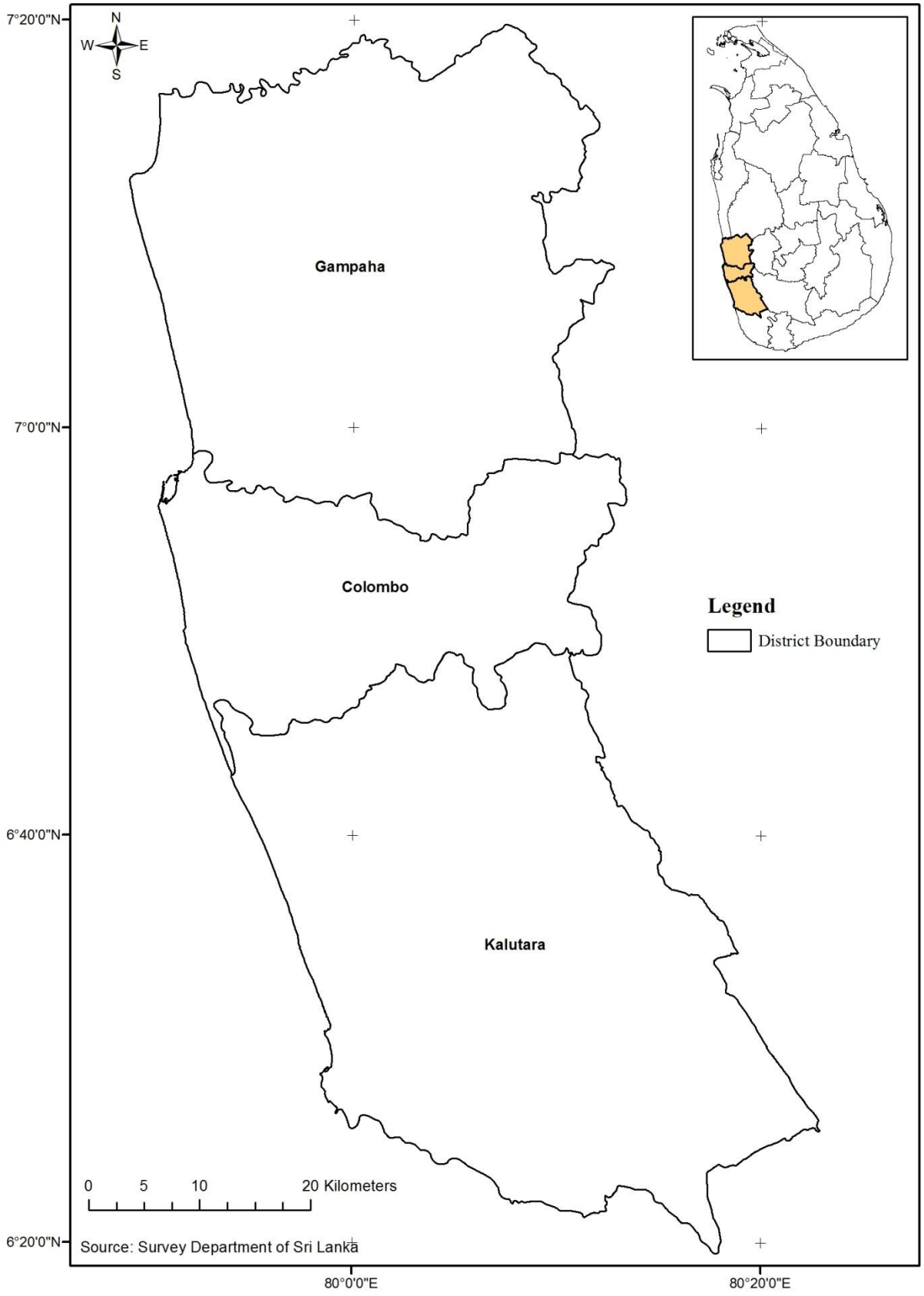


Figure 2.1 Western Province of Sri Lanka with district boundaries

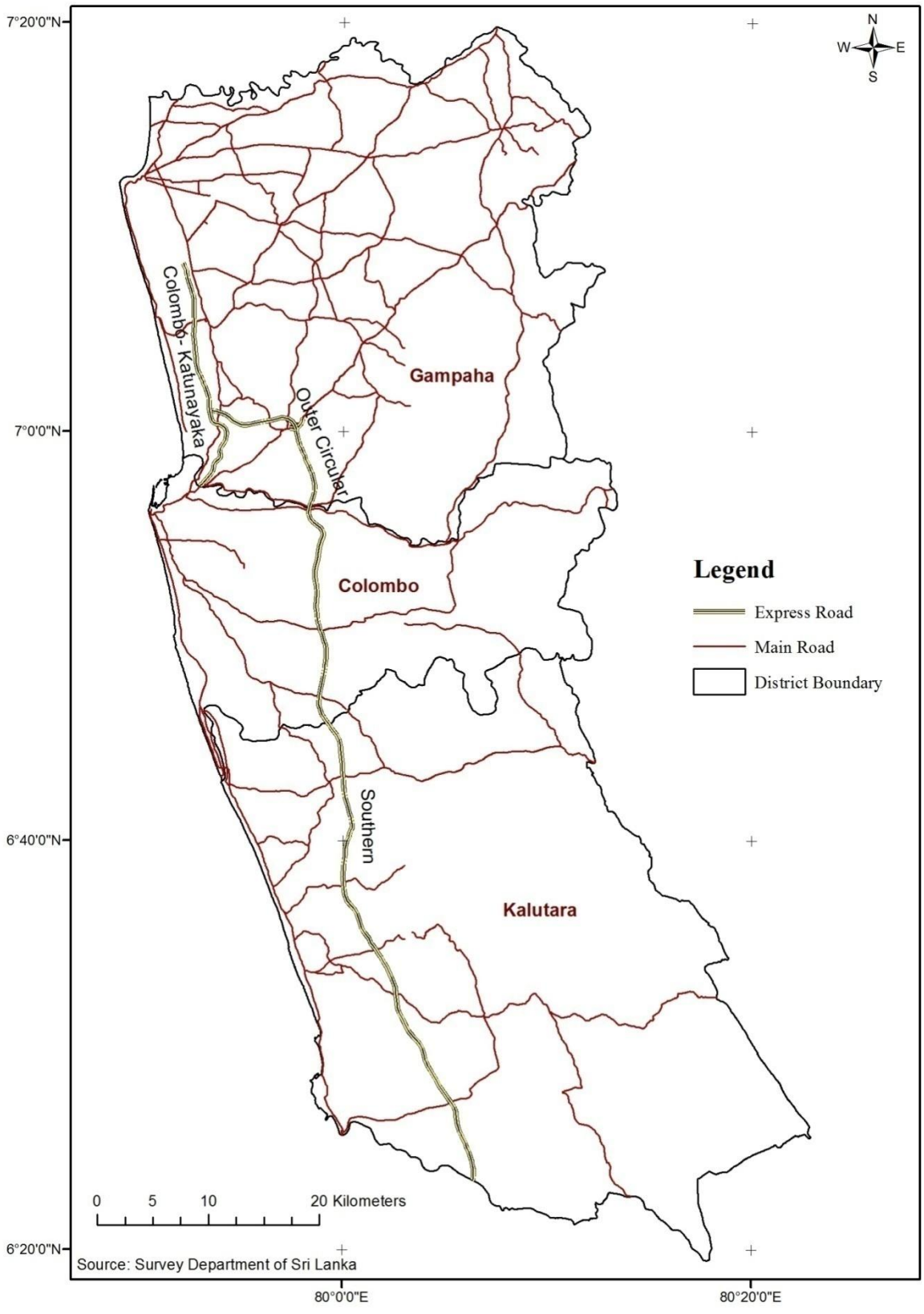


Figure 2.2 Major road network within the Western Province of Sri Lanka

Table 2.2 Population statistics of Western Province of Sri Lanka

Administrative district/province	Population (million)	Population by sectors (%)			Population density (population/sq.km)
		Urban	Rural	Estate	
Gampaha	2,305	15.6	84.3	0.1	1,714
Colombo	2,232	77.6	22.1	0.3	3,438
Kalutara	1,222	8.9	88.0	3.1	771
WesternProvince	5,857	38.8	60.4	0.8	1,514
Sri Lanka	20,359	18.2	77.4	4.4	323

Sources: DCS (2012); DCS (2013)

The land use pattern of the Western Province varies among the three districts, but generally dominated by homegardens followed by rubber plantations, paddy lands, coconut plantations and natural forests (Table 2.3; Figure 2.3). In the Gampaha district, homegardening is the dominant form of land use followed by coconut plantation, paddy farming and rubber plantation. The Gampaha district also represents the lowest extent of natural forests in the Western Province. In the Colombo district, rubber plantation is the dominant form of land use followed by homegarden, paddy farming, built up lands and coconut plantation. In the Kalutara district, land use pattern is dominated by rubber plantations followed by homegardens, paddy farming and natural forests.

Table 2.3 Land use pattern of Western Province

Land use system	Extent (ha)			Total (ha)
	Gampaha	Colombo	Kalutara	
Coconut	48,720	3,047	6,682	58,449
Tea	10	210	3,964	4,184
Rubber	4,976	17,647	56,703	79,326
Homegardens	50,781	28,617	30,850	110,248
Paddy	25,349	10,579	27,585	63,513
Other plantations	868	511	1,136	2,515
Marsh	2,043	1,311	208	3,562
Natural forests	945	1,258	18,236	20,439

Note: Only major crops and vegetations were estimated from the Figure 2.3.

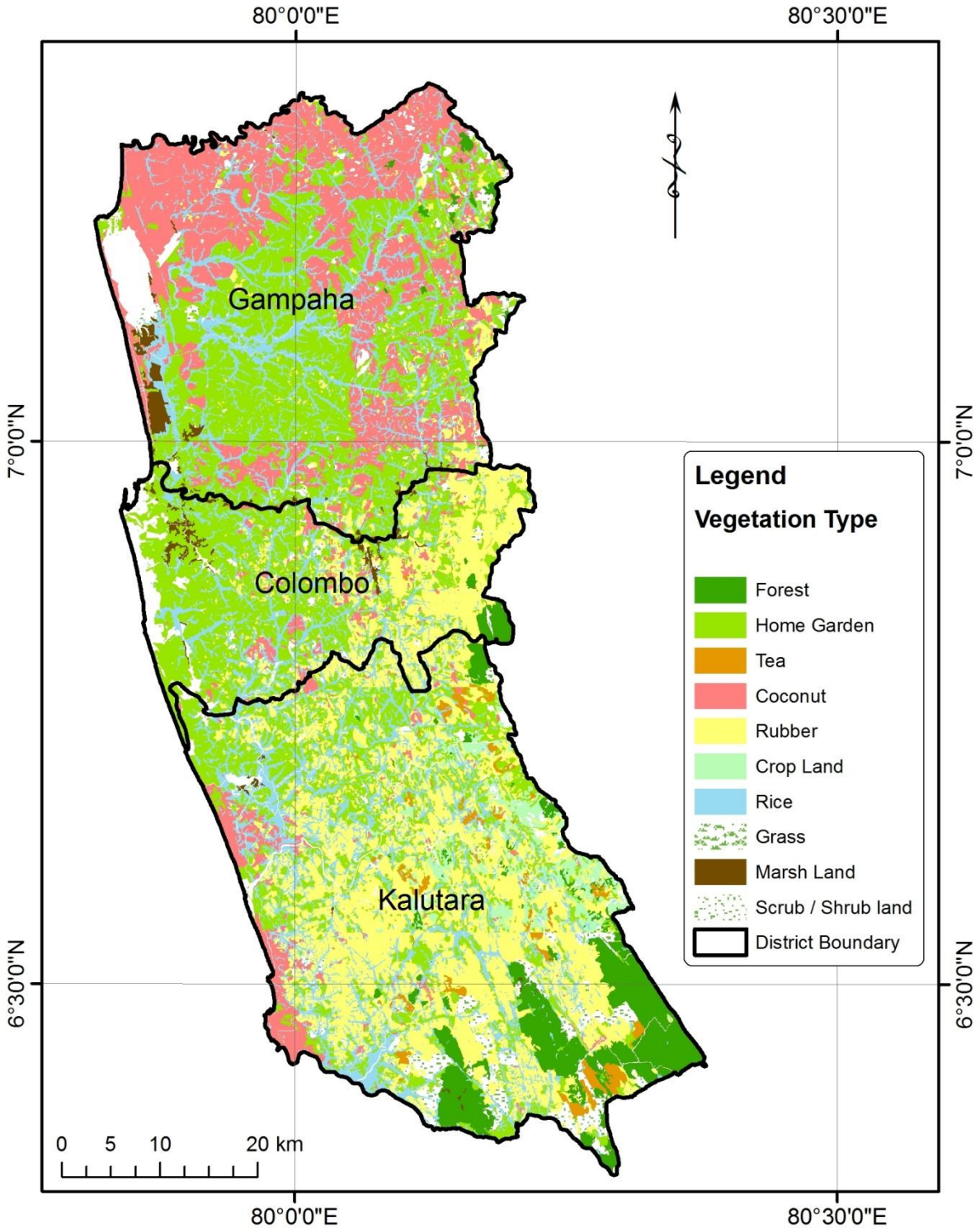


Figure 2.3 Land use pattern of the Western Province

The flag, butterfly (blue glassy tiger) and flower (white lotus, sacred lotus – a symbol of purity)of the Western Province areshown in Figure 2.4.

Figure 2.4 The flag, butterfly and flower of the Western Province

2.1.1 Climatic Zones

Except a small area close to the northern boundary (which is a part of the Intermediate zone), the entire province belongs to the wet zone (Figure 2.5;*Note*: the agro-ecological regions of the Western Province is illustrated in Figure 3.1).

2.1.2 Temperature

The average annual air temperature in the Western Province ranges from 26.2-29.7 °C. The average annual minimum and maximum temperatures vary from 22.2-26.7 °C and 29.9-32.7 °C, respectively. According to average mean monthly temperature, November to January is considered as the coolest months and April to June is considered as the hottest months of the province. As in the other areas of the country, diurnal variation of temperature (rising to a maximum early in the afternoon and fall to a minimum shortly before dawn) is also well marked in the Western Province (DCS, 2012).

2.1.3 Rainfall

The mean annual rainfall of the Western Province ranges from 1,500 to over 4,500 mm. Within the province, the coastal belt and Gampaha district receive a relatively low rainfall whereas the South Eastern areas of the Kalutara district and Southern area of the Colombo district receive relatively higher rainfall (over 3,000 mm per year; Figure 2.5). Over 70% of rainfall of the Western Province is received from the South-West Monsoon and Second Inter Monsoon (Table 2.4). The rainfall in the province, as in the case of Sri Lanka, is seasonal and has two distinct rainfall peaks in the year showing bi-modal rainfall pattern. The two peaks are termed as *Yala* (March to August consisting first Inter-monsoon and South-West monsoon) and *Maha* (September to February consisting second Inter-monsoon and North-East monsoon) seasons. A detailed analysis of rainfall patterns of different agro-ecological regions of the Western Province is given in section 3.3. The Western Province is usually wet

and humid, where the mean monthly day time and night time relative humidity varies between 68-77% and 83-91%, respectively (DCS, 2012).

Table 2.4 Contribution of rainfall mechanisms to rainfall of the three districts

Place	Annual rainfall (mm)	Time Period	Contribution (%)			
			First Inter Monsoon	South West Monsoon	Second Inter Monsoon	North East Monsoon
Gampaha	2,354	1996-2005	15	42	29	14
Colombo	2,310	1996-2005	12	41	31	16
Bombuwela	2,914	1996-2005	11	46	26	17

Source: Punyawardena(2008)

Note: First Inter Monsoon Period=Mid-March to third week of May; South West Monsoon Period =Third week of May to first week of August; Second Inter Monsoon Period=September to November; North East Monsoon Period =Last week of November/first week of December to Mid-March.

2.1.4 Topography

The topography of the landscape is generally flat in the coastal areas, with a rolling and undulating terrain towards the eastern part of the province, where the altitude increases up to about 100 m.

2.1.5 Geology and Soils

The geology of the province is dominated by Precambrian rocks of the Southwestern Group, consisting of schists, gneisses, and granulites of metasedimentary origin, as well as migmatite and granitic gneisses (Figure 2.6).

The Western Province consists of six physiographic regions (Somasiri, 1999). The coastal belt is named as coastal plain/Kotte-Bolgoda land system. The northern area of the province consists of level to undulating plantation surface/Gampaha land system and undulating to rolling plantation surface with isolated hills and hillocks/Mirigama land system. Southern areas of the province consist of rolling upland plantation surface/Mirigama land system and ridge andvalley system with low to moderate relief/Matugama land system.

As in other parts of the Wet Zone, red-yellow podzolic soils are the main soil type in the Western Province, with sub-groups (Figure 2.7). The soil in the Colombo and Gampaha districts include the sub-group with soft or hard laterite in the rolling and undulating terrain,

which also occurs to a lesser extent in the Kalutara district. The ill-drained lands in the lower coastal plain of the province include bog and half-bog soils with flat terrain (i.e. in Muthurajawela and Attidiya marshes). The beach areas from Negombo (Gampaha district) to Mount Lavinia (Colombo district) consist of a narrow stretch of latesols and regosols on old red and yellow sands. Narrow strips of alluvial soils occur along the floodplains of Kelani river, Dandugam Oya and Kalu river. In Kalutara district major soil type is red yellow podzolic sub-group with steeply dissected and hilly and rolling terrain (Figure 2.7).

Gampaha district is dominated by Boralu–Gampaha association followed by Minuwangoda–Gampaha association, Pallegoda–Dodangoda–Homagama association, Rathupasa-Katunayake association and smaller extent of Negombo–Katunayake and Wagura–Palatuwa complex. Colombo district also dominated by Boralu–Gampaha association followed by Pallegoda–Dodangoda–Homagama association, Galigamuwa–Homagama complex, Palatuwa–Wagura–Madabokka complex, Rathupasa-Katunayake association and Nigambo–Katunayake association. In the Kalutara district, the dominant map unit is Dodangoda–Agalawatta–Gampaha complex followed by Boralu–Gampaha association, Boralu–Madabokka association, Malaboda–Pallegoda association, Malaboda–Weddagala–Pallegoda lithosols complex, Palatuwa–Wagura–Madabokka complex, Wagura–Palatuwa complex, and Negombo–Katunayake association (Mapa *et al*., 1999).

2.1.6 Water Bodies and Stream Network

Of the total extent of 3,684 km^2 in the Western Province, 91 km^2 (2.5%) is occupied by inland water bodies. The floodplains of Kalu ganga, Kelani ganga and Attanagalu oya are located within the Western Province. Kalu ganga, Kelani ganga, Bentota ganga, Attanagalu oya and Bolgoda oya are the major rivers present in the Western Province (Figure 2.8). Out of the 103 river basins and 36 major river basins of Sri Lanka, five major river basins, namely Kalu and Kelani river basins, Attanagalu oya and Maha oya river basins and Bentota ganga river basin are located in the Western Province (Figure 2.9).

Out of the six aquifers identified in Sri Lanka, the Western Province consists of three aquifers, namely (i) shallow aquifiers on coastal sands, (ii) laterite (cabook) aquifier in inland areas and (iii) small fraction of alluvium aquifer.

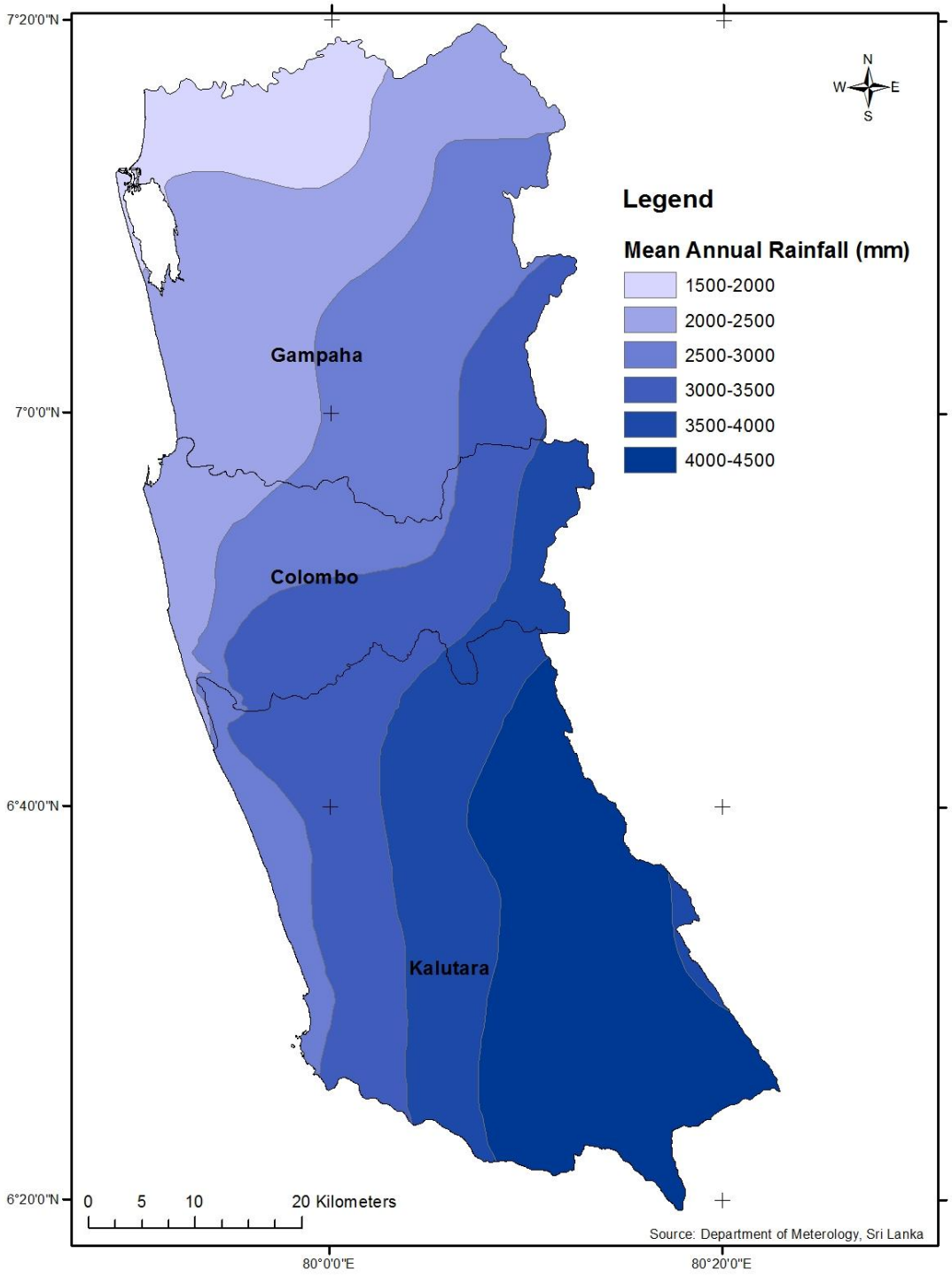


Figure 2.5 Rainfall isohytes in the Western Province

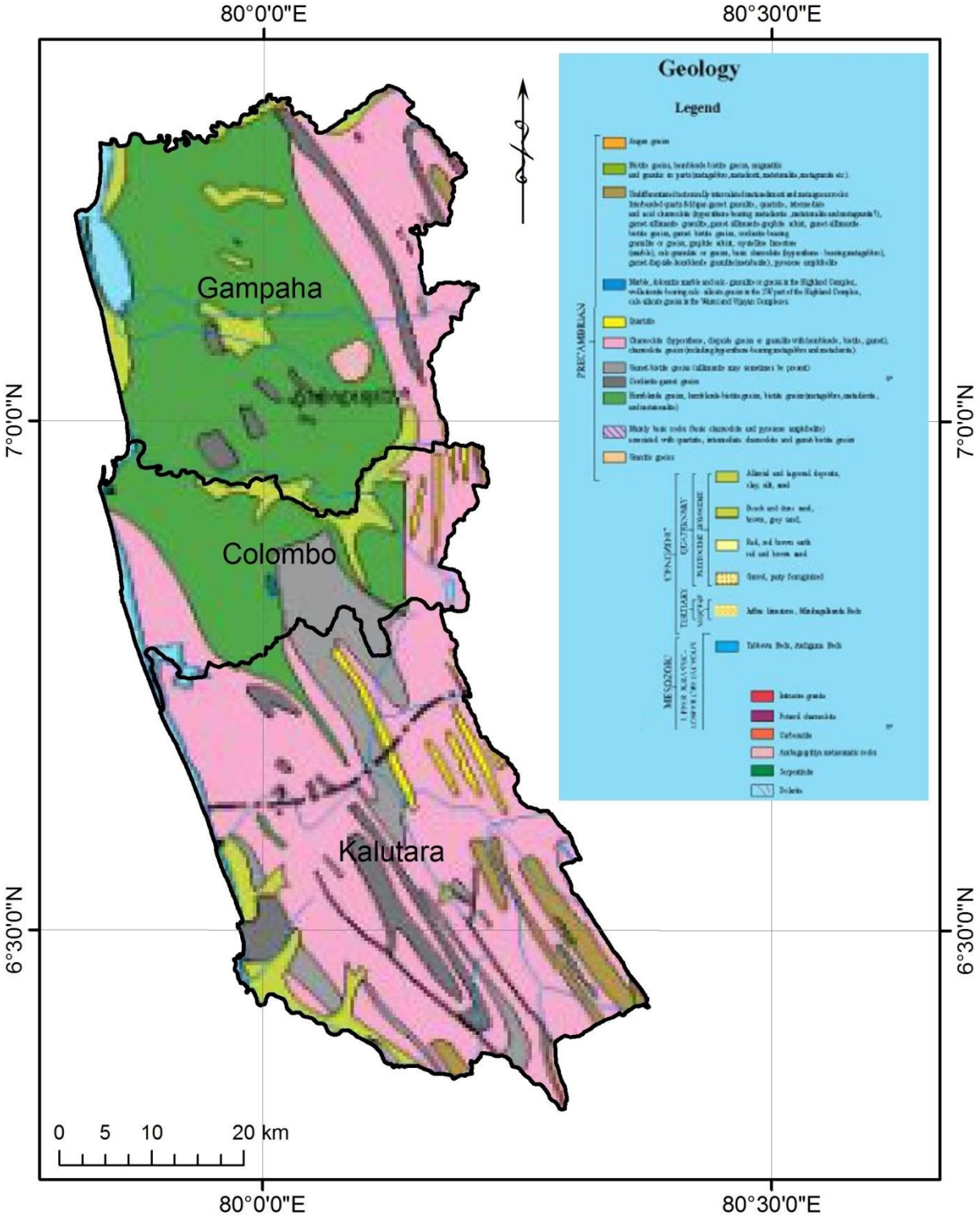


Figure 2.6 Geology Map of the Western Province

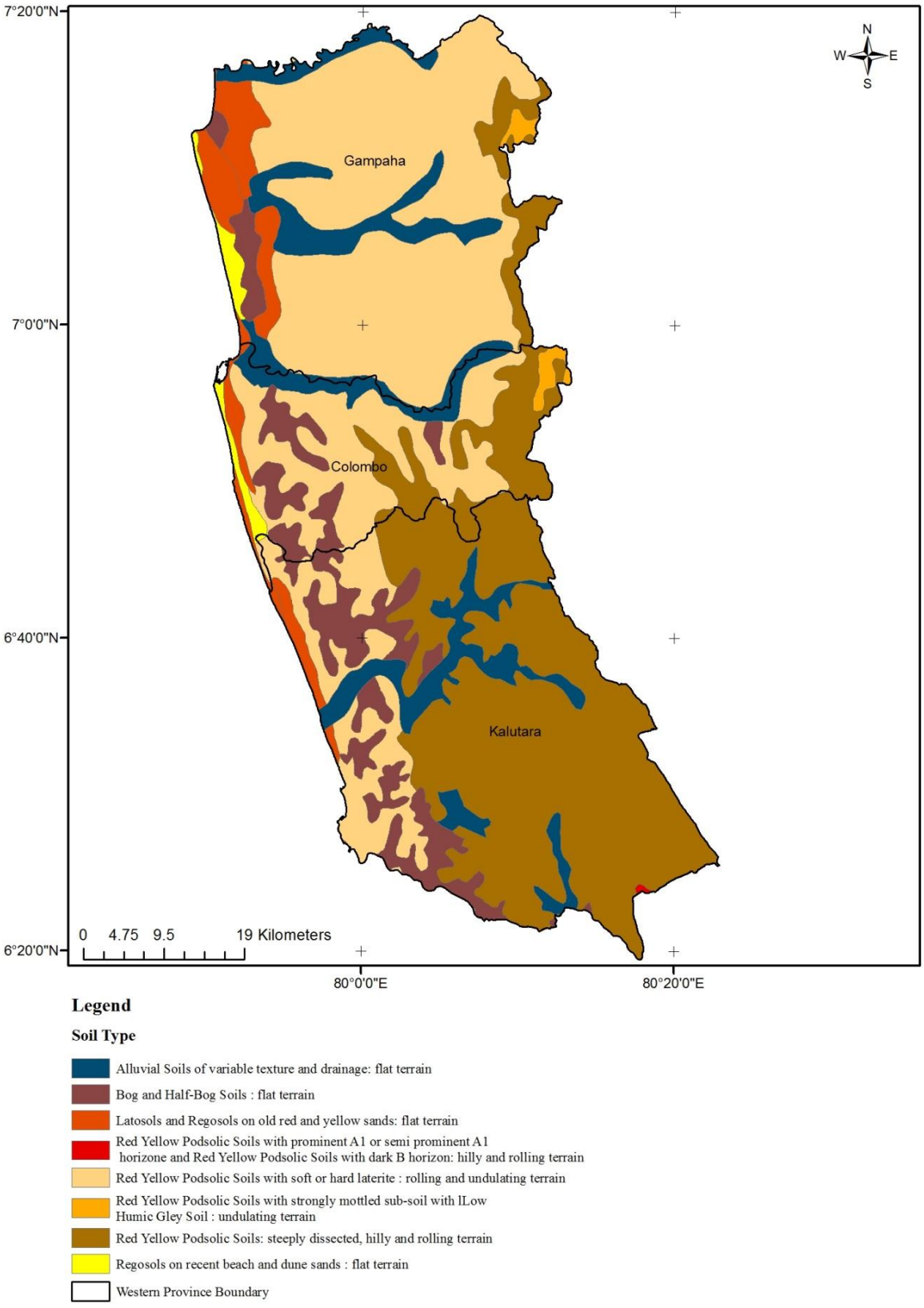


Figure 2.7 Soils of the Western Province

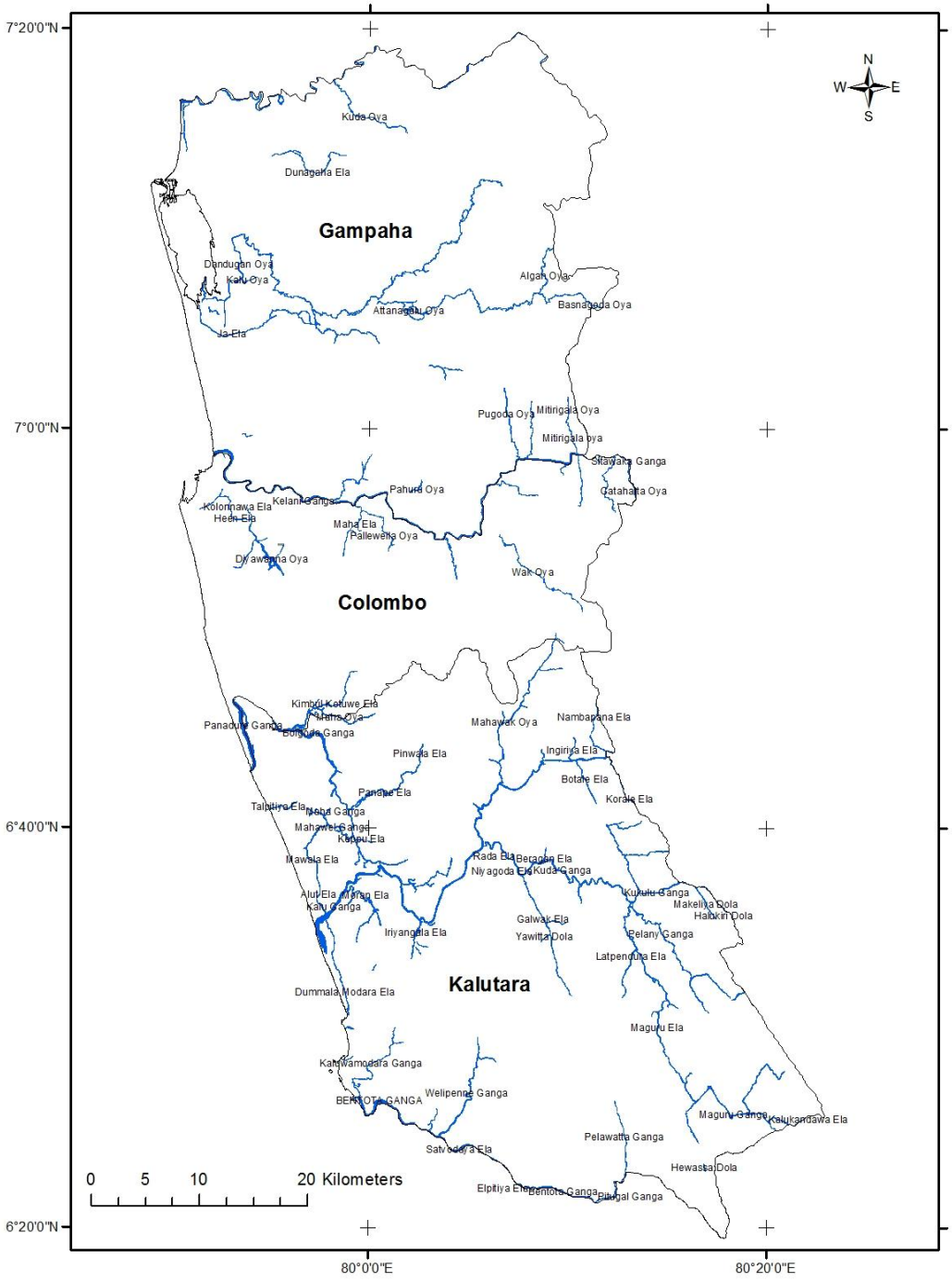


Figure 2.8 Stream network of the Western Province of Sri Lanka

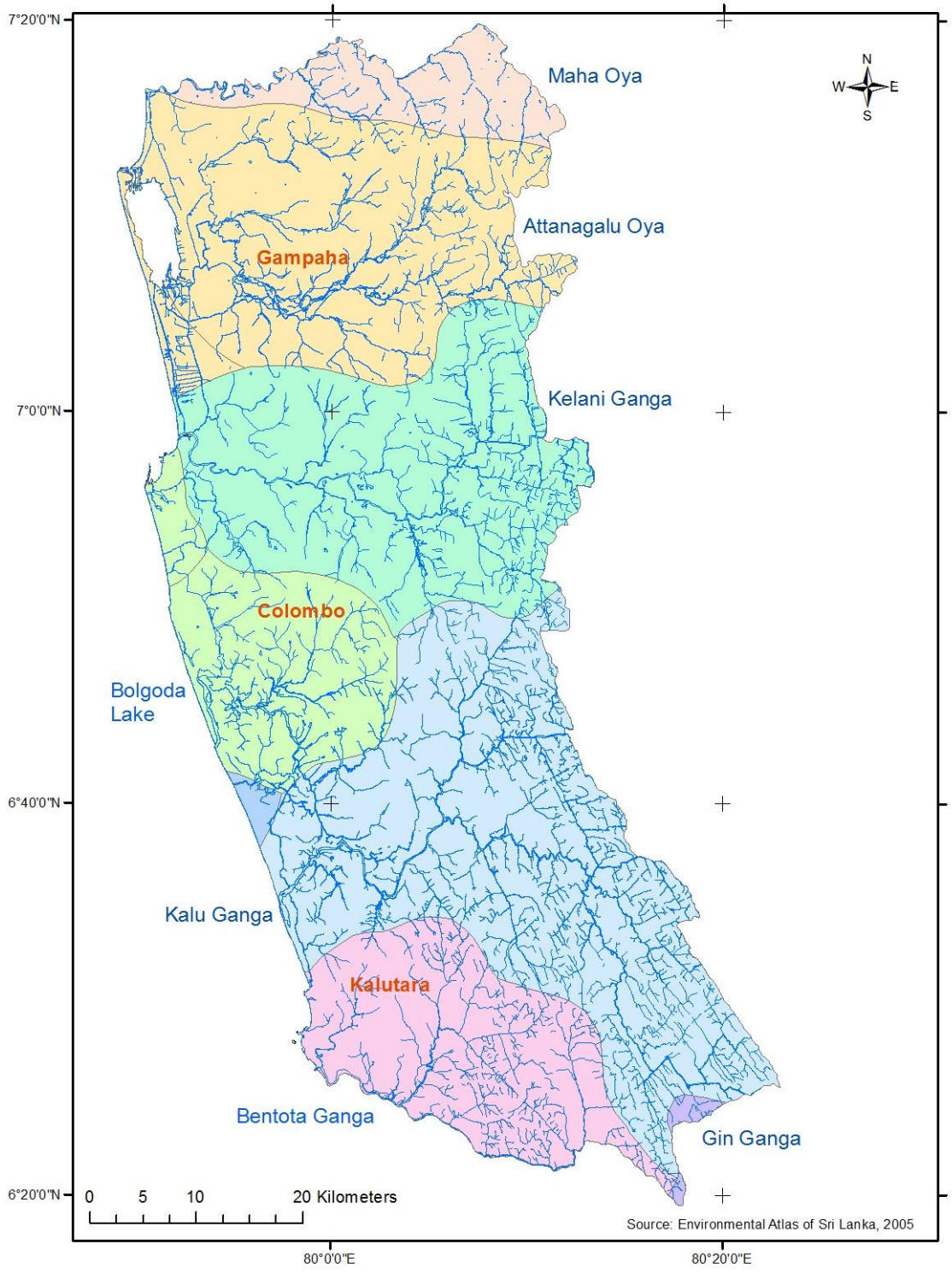


Figure 2.9 River basins represented in the Western Province

CHAPTER 3

3.1 BIO-GEOGRAPHICAL AREAS

3.1.1 Bio-Regions

Sri Lanka is divided into 15 bio-regions (MFE, 1999) based on climate and geo-physical classifications, the distribution patterns of fauna and flora, and the biodiversity richness of different parts of the country. The inland area of the Western Province belongs to the lowland wet zone bio-region (region 4 with a key climatic and biological features of tropical lowland wet evergreen forest, altitude of 0-1,000 m, annual rainfall of 2,500-5,000 mm and no dry months; floristically richest area in the country with a high percentage of endemic species among both the fauna and flora) and small fraction of the intermediate zone (region 3). The coastal zone belongs to the Chilaw to Hikkaduwa bio-region (region 12 where coastal mashes and lagoon systems (Negombo to Peliyagoda), pocketed mangrove habitats (Negombo, Bolgoda, Panadura, Kalutara and Bentota), sandstone rocky habitats and sandstone reefs (Negombo to Wattala and Gallface to Mount Lavinia), beach seine fishery, tourism associated with sandy beaches, and high human population density are key climatic and biological features (MFE, 1999).

3.1.2 Floristic Regions

Sri Lanka is divided into 15 floristic regions (Ashton and Gunatilleke, 1987). The flora of the Western Province belongs to three main floristic regions, the coastal and marine belt (floristic region 1), the northern wet lowlands (floristic region 5) and southern lowland hills (floristic region 7). A small fraction of the province belongs to the northern and intermediate lowlands (floristic region 3).

3.1.3 Agro-Ecological Regions

Out of the 46 agro-ecological regions of Sri Lanka, the Western Province consists of only eight(Figure 3.1; Table 3.1), and dominated by WL_3(41.5%) followed by WL_{1a} (31.5%), WL_{1b} (15.6%), WL_{2a} (9.9%), and less than 1% of WM_{1b},WL_{2b}, WM_{1a} and IL_{1a}.Gampaha district falls mainly under the agro-ecological region WL_3 (88.7%), followed by smaller areas of WL_{1b} (6.4%), WL_{1a} (2.4%), WL_{2b} (2%) and less than 1% of IL_{1a}. Colombo district spans across WL_3 (46%), WL_{1a} (26.6%), WL_{1b} (18.5%) and WL_{2a} (8.9%) whereas Kalutara district falls largely on WL_{1a} (57.9%) followed by WL_{1b} (22.2%), WL_{2a} (18.6%), and less than 1% of WM_{1b} and WM_{1a}.

The WL_3 agro-ecological region is largely distributed in Gampaha and Colombo districts that receive the lowest rainfall in the Western Province with a mean annual rainfall of over 1,700

mm with a relative dry period from December to mid March (Figure 3.2). This agro-ecological region is suitable for coconut plantation, mixed homegardening and paddy farming (Figure 2.3). The area also has a high potential for fruit crop cultivation. The WL_{1a} agro-ecological region is mainly distributed in Kalutara and Colombo districts and receives a relatively high rainfall, where the average annual rainfall is over 3,200 mm with a relative dry period from January to mid March (Figure 3.2). Hence, the lowland areas of this agro-ecological region are subjected to flooding. Tea, rubber, mixed homegardening and paddy farming are common in this area (Figure 2.3). The WL_{1b} agro-ecological region is distributed over all three districts and receives relatively lower rainfall than WL_{1a} with a mean annual rainfall of 2,800 mm and relatively dry period from December to mid March (Figure 3.2). Rubber, paddy farming and mixed homegardening are dominated in the area (Figure 2.3). Details of the extent of distribution of agro-ecological regions in the Assistant Government Agents (AGA) divisions of the three districts are given in Table 3.2.

Table 3.1 Summary extents of agro-ecological regions represented in three districts of Western Province

AGA Division	Land extent (ha)			
	Gampaha	Colombo	Kalutara	Total
WL_3	121,941	32,606	-	154,547
WL_{1a}	2,440	16,409	94,633	113,482
WL_{1b}	8,027	12,258	37,341	57,626
WL_{2a}		-	37,345	37,345
WM_{1b}		-	1,871	1,871
WL_{2b}	1,819	-	-	1,819
WM_{1a}		-	440	440
IL_{1a}	3,914	-	-	3,914
Total	**138,141**	**61,273**	**171,630**	**371,044**

Table 3.2 Extents of agro-ecological regions represented in AGA divisions of three districts of Western Province

AGA Division	WL_3	WL_{1a}	WL_{1b}	WL_{2a}	WM_{1b}	WL_{2b}	WM_{1a}	IL_{1a}
Gampaha district								
Attanagalla	12,233	2,469	794	-	-		-	-
Biyagama	6,167		-	-	-		-	-
Divulapitiya	19,720		-	-	-		-	363
Dompe	9,148	861	8,001	-	-		-	-
Gampaha	9,081		-	-	-		-	-

Ja-Ela	5,984		-	-	-		-	-
Katana	10,462		-	-	-		-	168
Kelaniya	2,372		-	-	-		-	-
Mahara/Kadawata	9,590		-	-	-		-	-
Minuwangoda	12,972		-	-	-		-	-
Mirigama	15,887	5	-		-	2,745	-	-
Negombo	2,467		-	-	-		-	37
Wattala	5,136		-	-	-		-	-
Colombo district								
Colombo	1,888		-	-	-		-	-
Dehiwala	1,962		-	-	-		-	-
Hanwella	298	8,526	5,931		-		-	-
Homagama	5,203		4,484	2,195	-		-	-
Kaduwela	9,139		-	-	-		-	-
Kesbewa	3,070		-	2,604	-		-	-
Kolonnawa	2,487		-	-	-		-	-
Kotte	-		-	-	-		-	-
Maharagama	5,300		-	-	-		-	-
Moratuwa	612		-	1,001	-		-	-
Padukka	-	8,921	1,657		-		-	-
Rathmalana	-		-	-	-		-	-
Thimbirigasyaya	1,787		-	-	-		-	-
Kalutara district								
Agalawatta		25,763	-	-	1,106		1,027	-
Bandaragama			7,223	868	-		-	-
Beruwala			-	7,126	-		-	-
Bulathsinhala		21,292	15	-	-		-	-
Dodangoda		22	7,597	3,998	-		-	-
Horana		12,332	7,838	245	-		-	-
Ingiriya			-	-	-		-	-
Kalutara			2	7,416	-		-	-
Madurawala		3,322	2,807	-	-		-	-
Mathugama		3,417	6,770	2,807	-		-	-
Milleniya			1,595	3,690	-		-	-
Palindanuwara		9,100	-	-	-		-	-
Panadura			-	3,779	-		-	-
Walalawita		19,060	2,265	383	-		-	-

Source: extracted from Punyawardena (2008)

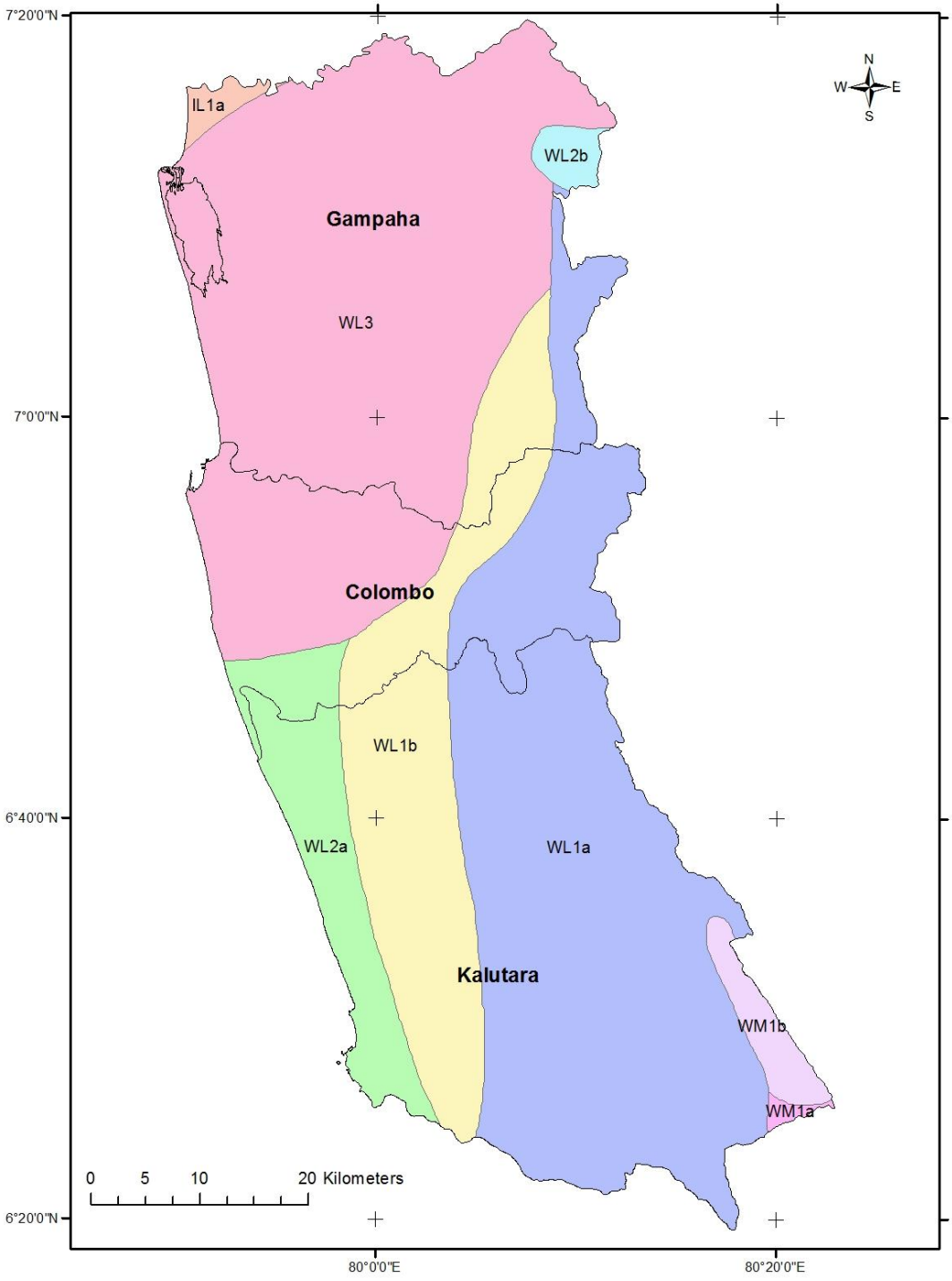


Figure 3.1 Agro-ecological regions in the Western Province of Sri Lanka

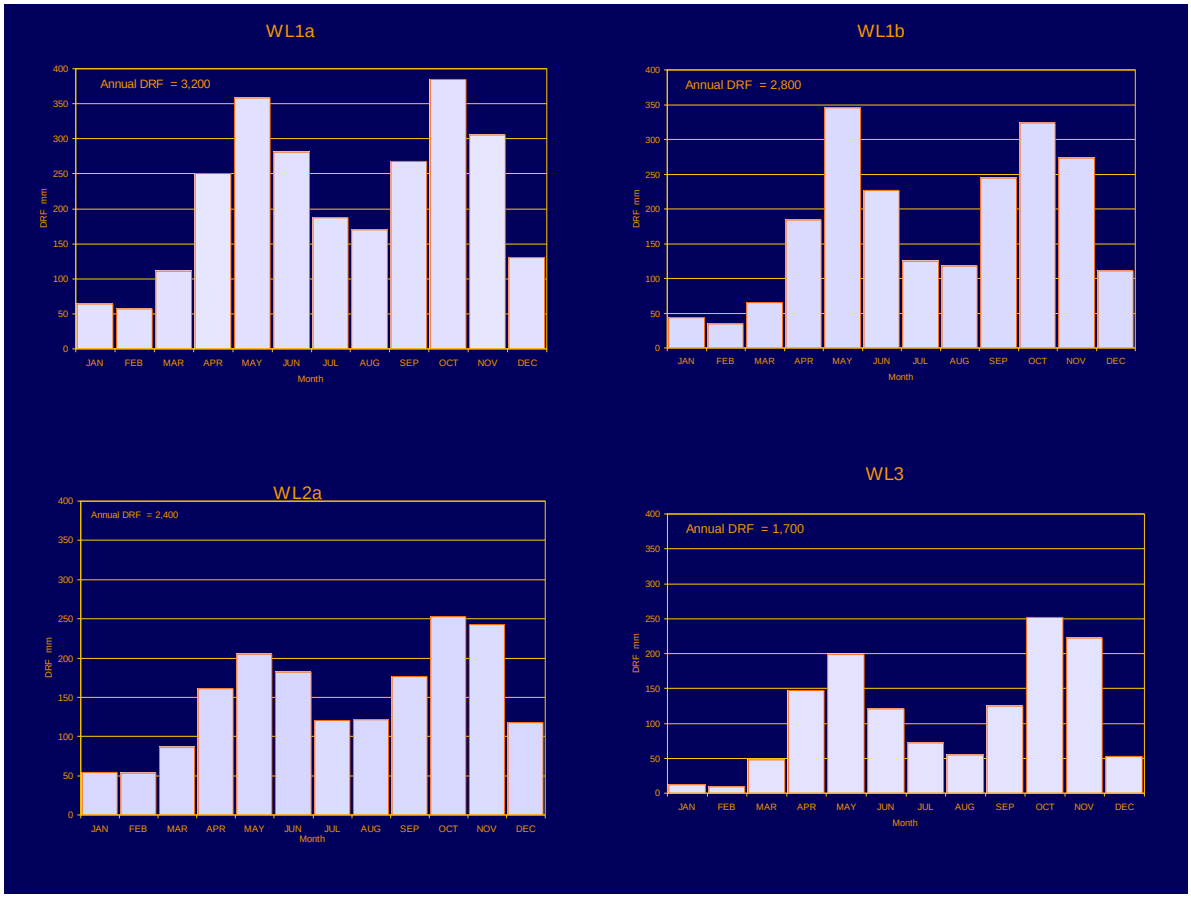


Figure 3.2 Rainfall patterns of major agro-ecological regions in the Western Province

3.1.4 Faunal Zones

Based on the distribution of animals, several zonation patterns are recognized in Sri Lanka. Based on the distribution patterns of the freshwater fish, Senanayake and Moyle (1982) have identified four ichthyological zones, namely Mahaweli Zone, Dry Zone, Transition Zone and Southwestern Zone. Out of these four zones, the South Western ichthyological zone supports the highest species richness and endemism. More than 75% of the South Western Ichthyological zone falls within the Western Province. Eisenberg and McKay (1970) also proposed a system for classifying the habitats of mammals in Sri Lanka based on the climate map of Muller-Dombois and Sirisena (1967),who recognized seven mammalian zones, namely monsoon scrub jungle in the northwest (A1) and southeast (A2), monsoon forest and grassland (B), inter monsoon forest (C), rain forests and grasslands below 3000 feet (D1), between 3000-5000 feet (914.4-1524 m; D2) and above 5000 feet (>1524 m; D3). Out of these, most of the endemic and threatened mammals of Sri Lanka are restricted to the zones D1, D2 and D3. More than 75% of the D1 zone falls within the Western Province. Sri Lanka is divided into six Avifaunal Zones based on the distribution patterns of the resident bird species (Kotagama, 1993). These include the Northern zone, Low country wet zone, Mid country wet zone, Hill country wet zone, Dry zone and the Uva zone. As in the case of

mammals, the low, mid and hill country wet zone harbours the highest species richness as well as endemicity. Approximately 50% of the low country wet zone and 25% of the mid country wet zone falls within the Western Province. Therefore, Western Province, even though has a high human density and a low coverage of natural habitats compared to other provinces, consists of some of the most critical elements of Sri Lanka's biodiversity.

Rare endemic butterfly *Arhopala ormistoni* listed as a Critically Endangered species at Wathurana

Endemic and Endangered Cherry Barb (*Puntius titteya*) at Wathurana

Endangered Golden Frog (*Hylarana aurantiaca*) at Wathurana

Native and globally nearly threatned Giant squirrel (*Ratufa macroura*) at Wathurana

CHAPTER 4

4.1 MAJOR NATURAL ECOSYSTEMS

4.1.1 Introduction

Although Sri Lanka is a small island, it has a wide variety of climatic, topographic and soil conditions that has resulted in a diverse array of aquatic and terrestrial habitats. According to the available historical records and fossil evidence, much of the island has been covered with forests in the past. However, the forests in Sri Lanka have been subjected to major remodeling by natural forces such as climate change in the past and in more recent times by activities of man. At present more than two thirds of the forest habitats in Sri Lanka are found in the dry zone. However, the tree density, diversity and endemicity in the dry zone forests are comparatively lower than the wet zone forests. The wet zone forests that represent only about 3% of the Sri Lanka's land area on the other hand have very high plant diversity where the structure of the forest shows a high degree of microhabitat complexity. Further, many of the remaining forests have remained relatively undisturbed by man for a very long time. These forests are home to a diverse faunal assemblage of which many are small organisms with low mobility. More than 75% of the endemic fauna of Sri Lanka are restricted to these forests and therefore the remaining wet zone forests are critical habitats for long term survival of Sri Lanka's biodiversity.

The Wet Zone forests show a clear stratification compared to Dry Zone forests. These include the emergent layer, canopy layer, sub canopy layer and a ground layer. Forests in the wet zone also show a marked altitudinal variation, based on which these forest are grouped into lowland, submontane and montane rain forests. These three categories have distinct differences in the structure and composition of their vegetation. While many faunal species show a wide distribution among all three types, some faunal species are restricted in their distribution to one of these forest types. The lowland rain forests have the highest land extent, and support a greater faunal diversity. Many species of endemic freshwater fish are restricted to the streams located within wet zone rain forests as they provide ideal habitat conditions for fish. In addition many species of invertebrates and vertebrates are also restricted to the lowland rain forests. The submonatne forests also support a rich faunal diversity. The montane rain forests have the lowest land extent with only 0.05% of the total land extent of Sri Lanka, and comprising about 4% of the current montane forest area.

Biogeographically, the Western Province lies within the low country wet zone. It comes under floristic regionsI (coastal and marine belt), VI (Sinharaja & Ratnapura) and VIII (Wet zone Freshwater Bodies) and tropical wet evergreen forest is the typical forest formation present.

4.1.2 Terrestrial Vegetation Types Found in the Western Province

A number of vegetation types can be seen in the Western Province (Table 4.1). Of these, the dominant natural vegetation type found in the Western Province is lowland wet evergreen forest. In addition other unique forest formations such swamp forests (Waluwatta-Wathurana forest), rock outcrop forests (Pahiyangala Forest), riverine forests (forest found on the river banks of Attangalu Oya, Kelani River, Kalu River, Bolgoda River and Gin River) can be seen in the Western Province. Further, number of forest plantations has also been established in the Western Province. Many of these plantation forests are monocultures of exotic species such as *Pinus caribaea, Albizia* spp., *Swietenia* spp.*,* and *Mahogany* spp.or indigenous species such as *Dipterocarpus zeylanicus.* The largest *Dipterocarpus zeylanicus* plantation of Asia (Kirigala Forest Reserve with an extent of 22.8 ha) is also found in the Western Province.

Table 4.1 Vegetation types represented in Western Province

Terrestrial Vegetation Type	Sites
Tropical lowland wet evergreen forest	Delmella-Yatagampitiya, Labugama-Kaltuwana, Haycock, Indikada Mukalna, Yagirala, Ingiriya, Kalugala, Morapitiya-Runakanda,
Riverine gallery forests	Natural vegetation formations found in association of the river and stream banks of Kelani, Kalu, Bolgoda and Gin Ganga and Attanagalu Oya,
Rock outcrop vegetation	Pahiyangala forest
Swamp Forests	Waluwatta-wathurana
Coastal Scrublands and sea-shore vegetation	Uswetakeiyyawa, Kalutara
Plantation forests	Kirigala, Horagolla

4.1.2.1 Tropical Lowland Wet evergreen Forests or Lowland Rain Forests

This is the main natural ecosystem type found in the Western Province. Lowland forests can spread up to a mean elevation of 900 m. These forests are highly fragmented and yet support rich faunal and floral assemblages. These forests reach about 30-45 m in height. The floral assemblage is dominated by species belonging to families Dipterocarpaceae, Clusiaceae, Sapotaceae, Bombacaceae and Myrtaceae. These forests show a clear stratification and arranged into several layers such as emergent layer, canopy layer, sub canopy layer and understorey layer. The forest canopy is dominated by *Dipterocarpus zeylanicus* and *D. hispidus* at lower elevations (<100 m) while at higher elevations (>100 m)

the canopy is dominated by *Mesua ferrea* and *Shorea trapezifolia*. The sub-canopy comprisesof species such as *Cullenia rosayroana, C. zeylanica* and *Myristica dactyloides* while the understorey layer comprise of species such as *Xylopia championii* and *Garcinia hermonii.* The lowland forests show extremely high species diversity with nearly 60 – 75 % of the tree species being endemic to Sri Lanka (Gunatilleke *et al.,* 2008).

The highest forest cover of the Western Province is found in the Kalutara district followed by Colombo and Gampaha districts (Table 4.2; Figure 4.1).

Table 4.2 Theextent forest cover in the Western Province

District	Forest type	Area (ha)	Forest cover (%)
Gampaha	Natural Forest	429	0.31
(Extent 134,100 ha)	Plantation forest	346	0.25
	Total Forest Cover	775	0.56
Colombo	Natural Forest	1,868	2.8
(Extent 67,600 ha)	Plantation forest	178	0.26
	Total Forest Cover	2,046	3.06
Kalutara	Natural Forest	21,576	13.2
(Extent 157,600 ha)	Plantation forest	1,070	0.65
	Total Forest Cover	22,646	13.82
WesternProvince	Natural Forest	23,873	6.64
(Extent 359,300 ha)	Plantation forest	1,594	0.44
Sri Lanka	Natural lowland forest	141,506	17%[a]
(Extent 6,561,000 ha)	Plantation Forest	102,000	1.6%[a]

[a]The percentage present in the Western Province out of the total extent of the respective forest types found in Sri Lanka

Negambo lagoon

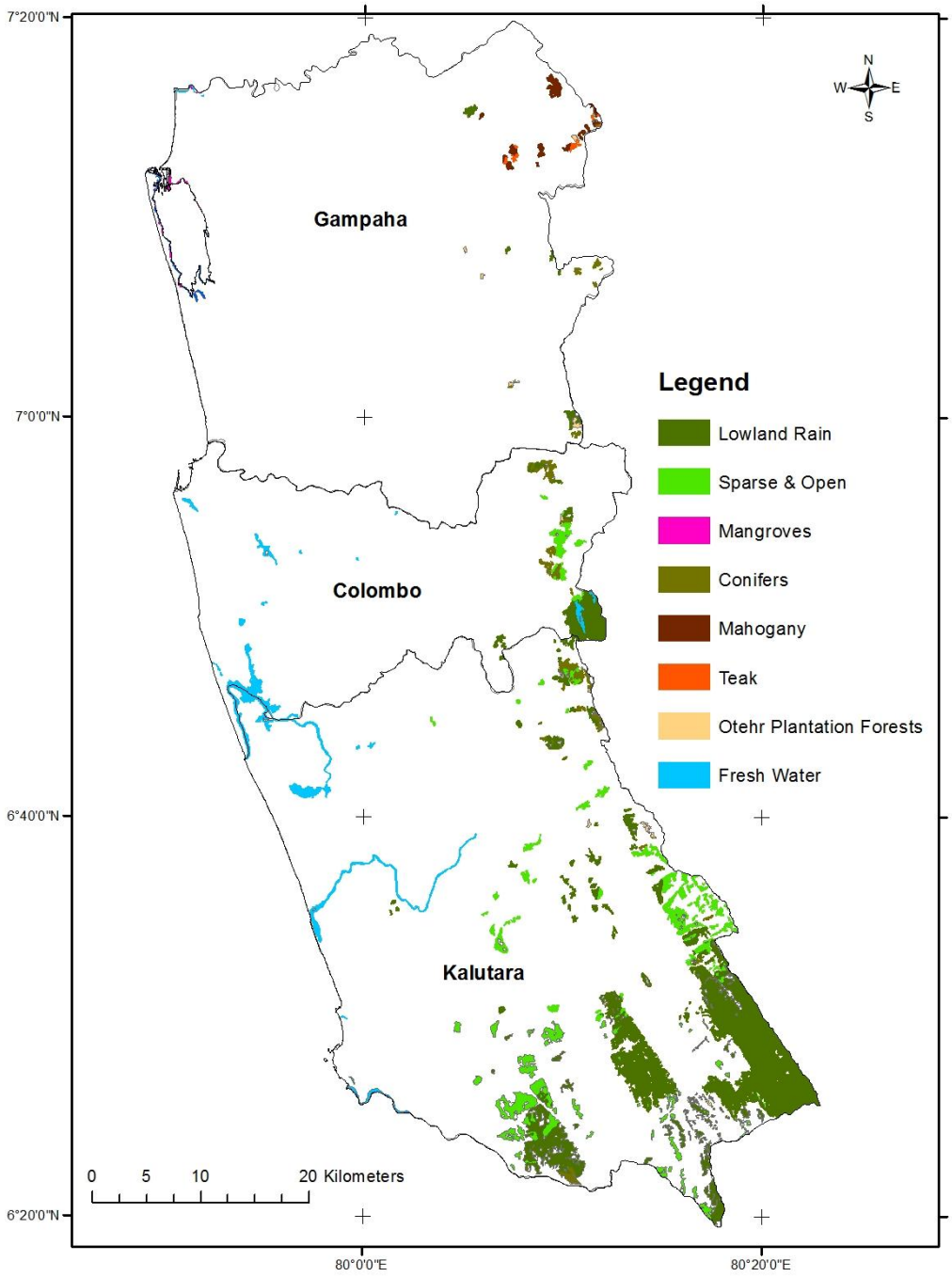


Figure 4.1 Distribution of natural vegetations, plantation forests and major water bodies in the Western Province

4.1.3 Wetland Ecosystems

Out of the total extent of the Western Province (3.684 sq. km), nearly 2.5% (91 sq. km.) is covered with water. Further, all three districts that belong to the Western Province have a coastal edge. Therefore, the Western Province comprises of freshwater, brackish water as well as off shore wetland ecosystems. These include natural freshwater wetlands such as swamps, marshes, canals, floodplains, rivers, streams as well as man-made tanks and reservoirs. Further, coastal wetlands such as lagoons and estuaries support unique coastal vegetation types such as mangroves and salt marshes. Sand stone reefs and man-made rip rap structures also support a unique species assemblage dominated by marine algae and marine invertebrates. There are many offshore wetland ecosystems especially in the coastal stretch from Colombo port to Mount Lavinia that has offshore coral reef ecosystems as well as small patches of sea grass beds.

A list of different types of freshwater, coastal and offshore wetland ecosystems that can be seen in the Western Province is given in Table 4.3.

Table 4.3 Wetland ecosystems in Western Province

Wetland type	Sites
Freshwater based wetlands	
Freshwater Swamps	Waluwatta-wathurana
Freshwater Marshes	Bellanwila-Attidiya, Muthurajawela, Parliamentary water retention area, Sri Jayawardenapura Kotte, Greater Colombo flood retention area (Heen-ela/Kolonnawa/Kotte)
Rivers and Streams	Attanagalu Oya, Kelani ganga, Panadura ganga, Weras ganga, Kalu ganga, Gin Ganga and their tributaries and stream network
Man made Tanks	Beira lake, Thalangama tank, Boralesgamuwa tank, Kesbewa tank, Gammanpila tank and large number of irrigation tanks located mainly in the Gampaha district
Reservoirs	Labugama-Kaltuwawa
Paddy fields and abandoned paddy lands	Nearly 17% of the land area of the Western Province is under paddy cultivation and these paddy field functions as important wetland habitats for number of freshwater fish species as well as aquatic birds
Coastal Wetlands	

Lagoons	Negombo and Lunawa lagoon
Estuaries	Pandaura, Bentota, Kelani and Kalu ganga
Mangroves	Mangroves associated with Negombo lagoon, Benthota and Kaduruduwa
Offshore wetlands	
Sand stone reefs	Negombo to Colombo port, Mount Lavinia, Benthota area
Off shore coral reefs	Extending from Colombo port to Mount Lavinia

Gampaha (mainly in Muthurajawela and Negambo lagoon), Colombo (close to Modara) and Kalutara districts consists of 313 ha, 39 ha and 200 ha of mangrove forests in Sri Lanka, respectively. All together, the Western Province share 4.35% of mangrove vegetations in Sri Lanka. Negambo lagoon is considered as the second richest mangrove forest in Sri Lanka in terms of number of mangrove species recorded. It consist 13 species out of 19 mangrove species recorded in the country (Prasanna, 2008).

Beira Lake

CHAPTER 5

5.1 SPECIES PROFILE

5.1.1 Introduction

Even though the natural habitat coverage of the Western Province is extremely low compared to other provinces, it is one of the richest provinces in terms of species diversity, which is a unique feature of Sri Lanka's biodiversity. As reported in Table 5.1 nearly 50% or more of the total number of species of many taxonomic groups (especially butterflies, dragonflies, freshwater fish and birds) is recorded from the Western Province. However, it should be noted that most of the natural forest patches in the Western Province have not been inventoried properly and therefore the representation of species in the Province is likely to be much higher than what reported in Table 5.1. The number of endemic and threatened species also follows the same trend. The information summarized here is mainly based on the National Red List Database of 2012 that has the most updated information on the species profile. As the data generated in the redlist is an outcome of a different methodology, a comparison was not done with the National Conservation Review done in 1991-1996.A detailed list of species recorded in the three administrative districts of the Western Province is provided in Annex 1.

Table 5.1 Species diversity recorded in the Western Province (numbers in parenthesis indicate the percentage value of the national total).

Taxonomic Group	Total No. of Species		Endemic Species		Threatened Species	
	SL	WP	SL	WP	SL	WP
Freshwater crabs	51	10 (20)	50	10 (20)	46	8 (17)
Dragonflies	118	70 (59)	47	24 (51)	61	29 (48)
Butterflies	245	159 (65)	26	14 (54)	99	41 (41)
Land snails	253	23 (9)	205	17 (8)	179	15 (8)
Freshwater fish	91	65 (71)	50	29 (58)	45	27 (60)
Amphibians	111	29 (26)	95	19 (20)	73	15 (21)
Reptiles	211	66 (31)	124	28 (23)	107	21 (20)
Birds	240	182 (76)	33	16 (48)	67	26 (39)
Mammals *	95	45 (47)	21	6 (29)	53	17 (32)
Flowering plants	3,154	1,359 (43)	894	381 (43)	1,385	468 (34)

Source: National Redlisting Database(2012)

* Only Terrestrial Mammals are considered. Marine Mammals are excluded.

Out of the species recorded in the Western Province the highest number of species, endemic species and threatened species has been recorded in the Kalutara district followed

by Colombo and Gampaha districts (Table 5.2). This is to be expected as shown in the previous chapter as the highest natural habitat coverage was observed in the same order.

5.1.2 Land Snails

Compared to the other taxonomic groups, a relatively fewer number of land snail species has been recorded in the Western Province. This may have resulted due to lack of data on many of the natural habitats present in the Western Province of Sri Lanka. The highest number of land snails has been reported from the Kalutara district, which can be attributed to the presence of higher level of forest cover (see Annex 1 for details and endemic species).

5.1.3 Dragonflies

Nearly 59% of the Dragonflies listed for Sri Lanka including 51% of the endemic species have been recorded from the Western Province. Out of the three districts, the highest species richness was reported from the Colombo district, which may have resulted due to the presence of an extensive network of wetland ecosystems in the District (see Annex 1 for details and endemic species).

5.1.4 Butterflies

Nearly 65% of the butterflies listed for Sri Lanka including 54% of the endemic species have been recorded in the Western Province. Out of the three districts, the highest number of species, endemic species and threatened species was reported from the Kalutara district. This can be attributed to the presence of higher level of natural forest cover in the Kalutara district (see Annex 1 for details and endemic species).

5.1.5 Freshwater Crabs

Compared to other taxonomic group representation of freshwater crabs is relatively low (20% of the species). The highest number of freshwater species, endemic species and threatened species of freshwater crabs has been reported from the Colombo district. As in the case of dragonflies the high freshwater crab diversity in the Colombo district can be attributed to the extensive network of wetlands present on the Colombo district (see Annex 1 for details and endemic species).

Table 5.2 Details of species recorded in the three administrative districts of Western Province of and Sri Lanka

Taxonomic Group	Sri Lanka			Gampaha			Colombo			Kalutara		
	T	E	TH	T	E	TH	T	E	TH	T	E	TH
Land Snails	253	205	179	2	1	0	4	2	1	23	17	15
Freshwater Crabs	51	50	46	1	1	0	7	7	5	4	4	3
Dragonflies	118	47	61	34	6	7	56	16	18	31	16	21
Butterflies	245	26	99	117	7	17	104	5	13	123	12	34
Freshwater Fish	91	50	45	45	18	14	57	25	21	59	26	23
Amphibians	111	95	73	10	3	1	25	15	10	20	14	12
Reptiles	211	124	107	38	10	6	39	10	5	58	26	17
Birds	240	33	67	134	11	5	163	15	12	172	24	18
Mammals	95	21	53	25	4	8	27	3	7	39	6	15
Flowering Plants	3154	894	1385	418	48	81	652	111	174	902	338	361

Note: T=Total number of species; E=Endemic species; TH=Threatened species.

Source: National Redlisting Database (2012)

5.1.6 Freshwater Fish

Nearly 70% of the freshwater fish listed for Sri Lanka including 58% of the endemic species have been recorded in the Western Province. Out of the three districts, the highest number of species, endemic species and threatened species has been reported from the Colombo and Kalutara districts. This can be attributed to the presence of extensive riverine network in these two districts (Kelani ganga and Weras ganga in Colombo district and Kalu ganga and part of the Gin ganga basin in the Kalutara district (see Annex 1 for details and endemic species).

5.1.7 Herpetofauna

Compared to other taxonomic groups, both amphibians and reptiles are under-represented in the Western Province. Out of the three districts, the highest species richness was reported from the Colombo and Kalutara districts, which may have resulted due to the presence of an extensive network of wetland ecosystems in the Colombo District. This can be attributed to the presence of higher forest cover in these two districts compared to the Gampaha district (see Annex 1 for details and endemic species).

-

5.1.8 Avifauna

Nearly 76% of the native birds listed for Sri Lanka including 48% of the endemic species has been recorded in the Western Province. Further, nearly 40% of the migrant bird species have been recorded in the Western Province. Out of the three districts, the highest number of species, endemic species and threatened species was reported from the Kalutara district, followed by Colombo district and Gampaha District. This may have resulted due to the presence of higher extent of forest cover in the Kalutara District. This is further supported by the fact that species richness of the Colombo district was as high as Kalutara district, but number of endemic and threatened species is significantly lower than the Kalutara district (see Annex 1 for details and endemic species).

5.1.9 Mammals

Mammals are under-represented in the Western Province. The number of endemic species and threatened species reported form the Western Province is comparatively low. This could be attributed to the fact that many of the endemic mammal species are restricted to forests in the mid and higher elevations while the Western Province contains only lowland rain forests. Further, many of the endemic mammals are small mammals which will be recorded only if more detailed assessments are carried out and many of the forest habitats in the Western Province has not been systematically inventoried. However, the number of

mammal species in urban habitats is relatively high including globally threatened species such as the globally endangered western purple-faced leaf langur *Semnopithecus vetulus nestor* that is a common inhabitant of urban home gardens in the Western Province(see Annex 1 for details and endemic species).

5.1.10 Flowering Plants

Even though the forest cover of the Western Province is less than 10% of its extent it harbors 43% of the plant species including 43% of the endemic species recorded in Sri Lanka. The number of species, endemic species and threatened species recorded in the Kalutara district is significantly higher than the other two districts. This can be attributed to high level of natural forest cover still remaining intact in the Kalutara district (see Annex 1 for details and endemic species).

5.2 Need for Strict Conservation

The presence of a high number of species, endemic species and threatened species in the Western Province despite the forest cover of the province being less than 10% of the total extent indicates the value of the remaining natural habitats albeit highly fragmented and converted at a rapid rate to human use. Therefore, there is an urgent need for protecting the remaining natural habitats of the province. Further, several species of plants and animals are restricted to the Western Province and almost all of these species are listed as Critically Endangered (possibly extinct), Critically Endangered or extinct in the wild (Table 5.3). Further, one endemic plant species *Crudia zeylanica* has already been declared as extinct while 25 more species in the Western Province are listed as possibly extinct along with one species of freshwater fish. These are clear indicators of the pressure that operate on remaining natural ecosystems in the Western Province which are highly fragmented and being encroached by people for cultivating cash crops.

Town Hall

Table 5.3 Species restricted to the Western Province

Scientific Name	Family	Common Name	TS	NCS	District
Laubuca varuna	Cyprinidae	Varuna Laubuca	E	CR	Kalutara
Rasboroides nigromaginata	Cyprinidae	Black-lined Golden Rasbora	E	CR	Kalutara
Stenogobius malabaricus	Gobiidae	Malabar Goby	N	DD	Kalutara
Stiphodon martenstyni	Gobiidae	Martenstyni's goby	E	CR (PE)	Kalutara
Ophisternon bengalense	Synbranchidae	Asian Swamp Eel	N	CR	Kalutara
Monopterus desilvai	Synbranchidae	Lesser Swamp Eel	E	CR	Kalutara
Chaerephon plicatus	Molossidae	Common wrinkled-lip bat	N	CR	Kalutara
Doona ovalifolia	Dipterocarpaceae	Pini Beraliya	E	EW	Gampaha
Stemonoporus moonii	Dipterocarpaceae	Hora wel	E	CR	Kalutara
Mesua stylosa	Calophyllaceae	Suwanda	E	CR	Kalutara

Note: TS=Taxonomic status; NCS=National Conservation Status; E=Endemic; N=Native; CR=Critically endangered; EW=Extinct wild; PE=Possibly extinct; DD=Data deficient.

Critically endangered point endemic species, *Stemonoporus mooniia*t Wathurana

Critically endangered point endemic species, *Mesua stylosa*at Wathurana

Endangered endemic species, *Areca concinna*at Wathurana

Endangered endemic species, *Drypetes lanceolata*at Wathurana

CHAPTER 6

6.1 GENETIC PROFILE

6.1.1 Agricultural Biodiversity

Agricultural biodiversity (as defined in the COP decision V/5) is a broad term that includes all components of biological diversity of relevance to food and agriculture, and all components of biological diversity that constitute the agricultural ecosystems, also named agro-ecosystems: the variety and variability of animals, plants and micro-organisms, at the genetic, species and ecosystem levels, which are necessary to sustain key functions of the agro-ecosystem, its structure and processes. Agricultural biodiversity is the outcome of the interactions among genetic resources, the environment and the management systems and practices used by farmers, and the result of both natural selection and human invention developed over millennia.

The continuing loss of biological diversity, including agricultural biodiversity, and its components, genes, species and ecosystems, is an issue of global concern. Studies, which have been done in the last four decades, have shown that both the diversity and the identity of the various species have a fundamental influence on the magnitude and stability of the ecological processes that occur at the ecosystem level. There are significant interrelationships between the degradation of ecosystems, the loss of animal and plant species, market globalization, and poverty. The loss of plant and animal genetic resources at the global scale as reported in many studies has been attributed to worsening of environmental pollution levels, overfishing, introduction of exotic species, civil conflict and war, climate change and the marginalization of environmental management institutions and conservation programs. Modern agriculture, which concentrates on a small range of crops and animals, is designed for intensive farming and increasing industrialization of agriculture have added to the woes.

Conservation and sustainable use of agricultural biodiversity have experienced human, ecosystem and climatic change interaction from time immemorial. These collective factors have contributed to the evolution and variation of biological diversity within genes, individuals, populations, species, biotopes, landscapes and ecosystems, or their components. The presence or absence, or patterns of variation, of these biological entities may be measured over spatial scales from micro levels to countries, continents, ocean basins or the entire biosphere. This chapter deals with the profile of the species and crop varieties and animal breeds cultivated in the Western Province, and also focuses on the wild relatives.

6.1.2 Agricultural Crops - Rice

Among all agricultural crops, rice (*Oryza sativa* L.) assumes an important position among the cereal crops cultivated in the Western Province. Though new high yielding rice varieties are popular among Sri Lankan rice farmers, several species of traditional rice cultivars are still grown by small-scale farmers in the Western Province. About five decades ago, the commonly cultivated traditional rice varieties in the four months age class in the Western Province were *Murungakayam*, *Vellailllankalayan, Hondarawalu, Gangala* and *Beruwee,* which were grown during the *Maha* season. The traditional varieties belonging to the three months age class were *Heenati*, *Dahanala*, *Pokkali*, *Kanni Murunga*, *Pachhaperumal*, *Kuruwee* and *Suwandel*, which were grown during the *Yala* season. A six to eight month old variety namely, *Mawee*, has also been cultivated. However, these traditional rice varieties have largely been replaced by new improved high yielding varieties. A species of wild rice namely, *Oryza rufipogon* L. has been documented from the Muthurajawela marsh in the Gampaha district, which is used to be an area widely used for rice cultivation during the kingdom of Kotte. The rice varieties and their cultivated extent in the Western Province of Sri Lanka during *Maha* (2013/2014) and *Yala* 2014 are shown in Table 6.1.

Table 6.1 Rice varieties cultivated in the Western Province of Sri Lanka

District &age class	**Rice varieties grown and extent cultivated**			
	***Maha* (2013/2014)**		***Yala* 2014**	
Gampaha	**Varieties**	**Extent (ha)**	**Varieties**	**Extent (ha)**
3 months	Bg300, At303, At307, At308	40	Bg300	477
3 ½ months	Bg357, Bg358, Bg359, Bw364, Bw 367, Bw368	7,138	Bg357, Bg358, Bg359, Bw367, 89-366	2,357
4 – 4 ½ months	Bg400, Bg403, Bg406, Bg450, Bg379/2, Bg407H, Bg11-11, H4	3,102	Bg	184
Others	Bg745, Bg38, Bg3-5	110	Bg379/2, Bg450	-
Colombo	**Varieties**	**Extent (ha)**	**Varieties**	**Extent (ha)**
2 ½ months	Bg250	35	Bg250	15
3 months	Bg300, Bw272/6B	611	Bg300, Bg276-6B	299
3 ½ months	Bw361, Bw365, Bw367, Bg357, Bg358, Bg359, Bg360, Bw363,	3,220	Bg357, Bg358, Bg359, Ld365, Bw360, Bw361, Bw363, Bw364	858

	Bw364, Bg366			
4 – 4 ½ months	Bg379-8, Bg403, Bg450	43	Bg450, Bg379-2, Bg96-741	21
Others	Bg745, Bg38-8, Bg3-5, Traditional	988	Traditional	23
Kalutara	**Varieties**	**Extent (ha)**	**Varieties**	**Extent (ha)**
2 ½ months	Bg250	35	-	-
3 months	Bg300, Bw272/6B, At303, At307, At308	5,407	Bg300, Bw272/6B, At303	2,923
3 ½ months	Bg358, Bg359, Bg360, Bw361, Bw363, Bw364, Bw367, Ld356, Ld365, Ld368, At362, Bw267-3	8,329	Bw267/3, Bw361, Bw 364, Bw367, Bw368, Bg358, Bg359, Ld365, Ld368, At368, Bg94-741	3,214
4 – 4 ½ months	Bg379-2, Bg403, Bg404, Bg450, H4	70.5	Bg379-2, Bg400, Bg450	23
Others	Unknown, Mawee, Traditional	633	Suwandal, Mawee, other	106

6.1.3 Agricultural Crops - Horticultural, Plantation and Spice Crops

Among the horticultural crops, a wide variety of fruit and vegetable crops are grown in small-scale farms in the Western Province (Table 6.2), while two species of wild banana (*Musa acuminata* and *M. balbisiana*) have also been recorded in isolated localities. The endemic wild mango (*Mangifera zeylanica*) is the present in the isolated patches of rainforests mainly in the Kalutara district.

Coconut (*Cocos nucifera* L.) and Rubber [*Hevia brasiliensis* (Mull.) Arg] are the main plantation crops grown in the Western Province, and the Rubber Research Institute is located in the Kalutara District (Agalawatta). Limited extent of Tea is also grown in the WesternProvince with Kalutara District having the highest tea grown extent within the province. The cultivated extents of Coconut, Rubber and Tea in the Western Province are shown in Table 6.2. Five coconut hybrids (CRIC 60, CRIC 65, CRISL 98, Kapruwana and Kapsetha) and local types are grown mainly in the Gampaha andColombo districts (CRI, 2012).

Table 6.2 Coconut, rubber and tea cultivation in the Western Province in 2010

District	Small holder sector (ha)	Estates (ha)	Total Extent (ha)
Coconut plantation			
Colombo	6,863	429	7,292
Gampaha	36,969	6,161	43,130
Kalutara	10,682	594	11,276
Rubber plantation			
Colombo	4,309	3,393	7,702
Gampaha	3,603	223	3,826
Kalutara	19,058	10,241	29,299
Tea plantation			
Colombo	93	60	153
Gampaha	12	-	12
Kalutara	6,117	1,054	7,170

Sources: Coconut Research Institute; Rubber Research Institute; Tea Research Institute

Among spices, wild species of Cinnamon (*Cinnamomum* spp.), Cloves (*Syzigium* spp.), Nutmeg (*Myristica* spp.)and Pepper (*Piper* spp.) have been recorded from the Kalutara district in the Western Province.

6.1.4 Crop Wild Relatives

Eco-geographic survey on crop wild relatives of Sri Lanka revealed that out of the wild relative populations of rice, banana, *Vigna*, Cinnamon and pepper, several species are recorded from the Western Province of Sri Lanka. Out of the five wild relatives of rice, *Oryza rufipogon* is mainly distributed in Bandaragama, Battaramulla, Kotte, Boralasgamuwa and Kesbewa areas of Colombo district, Kalutara, Kamburugoda, Paragastota, Moronthuduwa, Palpola, Waskaduwa, Wadduwa areas and Bolgoda river and Bolgoda lake of Kalutara district and Seeduwa, Mirigama, Yakkala, Katunayake and Muthurajawela areas of Gampaha districts. It is commonly found on banks of streams, marshy lands, swamps and deep water lake edges. Some populations are grown under submerged and saline conditions. This indicates that much of the diversity of *O. rufipogon* is conserved *in situ* in the Western Province, which may provide resistant genes for flood and salinity tolerance, iron toxicity, acid sulphate soils and also a good source of cytoplasmic male sterility (Liyanage, 2010).

Out of nine *Vigna* spp., populations of *Vigna trilobota* has been identified from Mount Lavinia area of Colombo district whereas *Vigna marina* has been identified from Payagala areas of Kalutara and sea coast of Mount Lavinia in Colombo district. Out of nine wild *Piper*spp., *Piper longum* (many areas of Kalutara district and Kirindiwela areas of Gampaha

district), *P. chuvya* (Colombo and Kalutara cities) *P. siribola*(Nahalla and Kalutara areas of Kalutara district), *P. sylvestre*(Kalutara and Palinda Nuwara areas of Kalutara district and Meethirigala areas of Gampaha district), *P. zeylanicum* (Pahiyangala, Baduraliya, Palinda Nuwara, Ingiriya, Warakagoda areas of Kalutara district and Kirindiwela and Mirigama areas of Gampaha district) and *P. trineuron* (one location in Morapitiya area of Kalutara district) have been identified from the Western Province. Out of the seven the wild relatives of Cinnamon, three wild relatives namely *Cinnamomum dubium*, *C. capparu-coronde* and *C. revulorum* are found in natural forests of Kalutara (Liyanage, 2010). In addition, a wild durian species (*Cullinia* spp.) have been identified from Kalugala aranya forest of Kalutara district.

6.2 Profiles of Food Related Biodiversity – Crops Sector

Paddy is cultivated in all three districts of the Western Province (see Table 6.1). The main fruit crops in the province grown at commercial scale include Banana (*Musa* spp.), Rambutan (*Nephelium lappaceum* L.), Papaya (*Carica papaya* L.), Mangosteen (*Garcinia mangostana* L.) ,Passion fruit (*Passiflora edulis* Simm) and Pineapple [*Ananas comosus* (L.) Merr.](Table 6.3).All these fruits are cultivated in a commercial scale in all three districts of the Western Province. The Gampaha district is popular for the fruit crops such as Pineapple and Rambutan, which has become a main income earner for many households in the district.

The major commercial vegetable cultivations in the Western Province in 2014 (*Maha* 2013/2014 and *Yala* 2014 seasons) are given in Table 6.4. A wide diversity of vegetable crops are grown in the three districts of the province as depicted by the varieties cultivated (Table 6.5). The introduction of hybrids imported to Sri Lanka from various sources of origin has also contributed significantly to the genetic diversity of the vegetable crops grown in the province.

Owita and *Koratuwa/kotuwa* farming systems are unique to the WesternProvince of Sri Lanka. *Owita*is a boundary system between a wetland and a highland. It is a unique agro-ecosystem in peri-urban land use system in Colombo and Kalutara districts between rice paddies and the uplands (Wijesekera and Hunter, 2010). It is typical to find "*puwak aramba*" a few trees of Areca nut (*Areca catechu* L) trees, bulath kotuwa (betel vine section; *Piper betle* L.), *pan wila* (*Cyperus* spp.), *kohila kotuwa* (*Lassia spinosa*L.), few clumps of banana, few plants of king coconut, *Sesbania grandiflora* tree, several root and tuber crops (taro, innala, yams, sweet potato, vegetables and leafy vegetables). This unique system is disappearing rapidly in the Western Province due to urbanization and population pressure. The leafy vegetables are mainly cultivated in *Keera Kotuwa*, a farming system commonly found in the Western Province. The leafy vegetables in the *Keera Koratu* mainly consist of

Gotukola [*Centella asiatica* (L.) Urban], Mukunuwenna (*Alternanthera sessilis* (L.)R.Br.*ex*DC.], Kankun (*Ipomoea aquatic* Forssk), Kathrumurunga [*Sesbania grandiflora* (L.) Poirett], Nivithi (*Basella alba* L.), Sarana (*Trianthem aportulacastrum* L.) and Thampala (*Amaranthus* spp.).

Table 6.3 Extent of major fruit crops in the Western Province

Fruit Crop	Gampaha	Colombo	Kalutara
Banana (*Musa* spp.)	1,152	370	1,781
Pineapple (*Ananas comosus*)	1,231	142	150
Papaya (*Carica papaya*)	57	71	202
Mango (*Mangifera indica*)	393	0.6	499
Rambutan (*Nephelium lappaceum*)	1,282	259	464
Passion fruit (*Passiflora edulis*)	17.7	2.1	91
Mangosteen (*Garcinia mangostana*)	14.8	13.5	153
Durian (*Durio zibethinus*)	73	-	94
Guava (*Psidium guajava*)	18	-	25
Orange (*Citrus aurantium*)	-	-	181
Star fruit (*Averrhoa carambola*)	-	-	20
Jamanaran (*Citrus grandis*)	-	-	18.5

Source: Western Province Department of Agriculture

Table 6.4 Extent of vegetable cultivations (including leafy vegetables) in the Western Province

District	*Maha* season 2013/2014 (ha)	*Yala* season 2014 (ha)
Colombo	278.4	535.5
Gampaha	333.9	494.7
Kalutara	1,107.1	1,595.8
Total	1,719.4	2,626.0

Source: Western Province Department of Agriculture

The tubers and yams grown in commercial scale in the Western Province (Table 6.6) include five dominant species namely, Manioc (*Manihot esculenta* Crantz; varieties Kirikawadi and MU51), Sweet potato [*Ipomoea batatas* (L.) Lam.], Kiriala [*Xanthosoma sagittifolium* (L.) Schott], and Innala (*Plectranthus rotundifolius*).Apart from these, about 160 ha of ginger are also cultivated in the Western Province, yielding about 1,100 mt annually. Apart from the commercial fruit crop plantations, the multi-species home gardens in the Western Province consist of many fruit plants (Table 6.7).

Table 6.5 Varieties of vegetable crops cultivated in the Western Province

Crop	Varieties
Capsicum (*Capsicum annuum* L.)	CA 8, Hybrid
Raddish (*Raphanussativus* L.)	BeeraluRabu
Snake Gourd (*Trichosanthescucumerina*L.*)*	TA2, Hybrid
Bitter Gourd (*Momordicacharantia* L.)	MC43, Matale Green, Hybrid
Brinjal (*Solanummelongena* L.)	SM164, Lena iri, Padagoda, Hybrid
Luffa (*Luffaacutangula* Mill)	LA33, Hybrid
Long bean (*Vignaunguiculata* subsp. sesquipedalis)	Hawari me, Polon Me, Hybrid
Tomato (*Solanumlycopersicum* L.)	Thilini
Cucumber (*Cucumissativus* L.)	Kalpitiya, Hybrid
Okra [*Abelmoschusesculentus* (L.) Moench]	MI5, MI7, Hybrid
Green chillies (*Capsicum annuum* L.)	Hybrid
Bushita (*Vigna* spp.)	B51

Source: WesternProvince Department of Agriculture

Table 6.6 Tubers and yams cultivated in the Western Province of Sri Lanka

District	*Extent* (ha)
Gampaha	87.2
Colombo	123,4
Kalutara	476.9
Total	687.5

Source: Western Province Department of Agriculture

Table 6.7 Fruit plants in homegardens of the Western Province

Family	Scientific Name	Local Name
Annonaceae	*Annonamuricata* L.	Anoda
Moraceae	*Artocarpusaltilis*(Parkinson) Fosberg	Del
Moraceae	*Artocarpus heterophyllus* Lam	Kos
Oxilidaceae	*Averrhoabilimbi* L.	Bilincha
Palmae	*Cocosnucifera* L.	Coconut
Rubiaceae	*Coffeaarabica* L.	Kopi
Anacardiaceae	*Mangiferaindica* L.	Amba
Moringaceae	*Moringaoleifera*Lam.	Murunga
Musaceae	*Musa* spp.	Kesel

Sapindaceae	*Nepheliumlappaceum* L.	Rambutan
Lauraceae	*Persea americana* Mill.	Alipera
Myrtaceae	*Psidiumguajava* L.	Pera
Myrtaceae	*Syzygiumjambos* (L.) Aiston	Jambu
Fabaceae	*Tamarindusindica* L.	Siyambala
Combretaceae	*Terminalia catappa* L.	Kottamba
Caricaceae	*Carica papaya* L.	Papol
Elecarpaceae	*Elaeocarpus serratus* L.	Weralu
Rutaceae	*Citrus reticulata* Blanco	Naran
Anacardiaceae	*Anacardiumoccidentale* L.	Kaju
Tiliaceae	*Muntingiacalabura*L.	Jam
Anacadiaceae	*Spondiasdulcis* L.	Emberella
Clusiaceae	*Garciniaquaesita* Pierre	Goraka
Euphorbiaceae	*Phyllanthusemblica* L.	Nelli

6.3 Food related biodiversity - Livestock and Poultry

Compared to other provinces, the Western Province is the most densely populated province in the country. Hence, the resource availability for rearing livestock is highly limited and competitive. A considerable number of livestock and poultry farms are spread in rural areas as well as the peri-urban areas of the province. Among the livestock, several breeds of cattle, buffaloes, pigs and goats occur in smallholder farms and government farms in the Western Province. Chicken dominated the poultry species while ducks are limited to few smallholder farms. As in the case of the rest of the country, the livestock and poultry species in the Western Province in general, could be categorized into three main groups namely, locally adapted, recently introduced and continually imported livestock.

6.3.1 Locally adapted breeds of Livestock and Poultry

Livestock and poultry breeds that have been localized for more than 40 years and continued to perform under present context resulting in more than seven generations are categorized here as a locally adapted breed type. Genetic and phenotypic characterization of locally adapted species has not yet been completed, hence there are no native or indigenous breeds identified in any of the livestock species, hence remain non-descript. These locally adapted species have the ability to withstand harsh environments, toleration to specific diseases and environmental stresses better than their counterpart breeds. Some of the breed types have been evolved from their wild ancestors and are adapted to different geographical locations for centuries.

***Lankan Cattle* (*Bos indicus*)**: The locally adapted species of cattle type distributed in varying environments in Sri Lanka (*Bosindicusvar. ceylonicus*) are called Lankan Cattle or "*Batu Harak*" and they are the locally adapted cattle in the country that has been used for milk and meat production and for draught purposes as well (Candrasiri, 2004). Information on existence of this type of cattle in the Western Province is very scanty. Description of this animal is given in Silva *et al*. (2010), and the origin of the cattle is not very well documented. Given the resource limitations, especially the land resources in the WesternProvincefor cattle rearing, livestock farmers in the province in general pay attention to the high producing dairy breeds. Given the fact that there is a well-developed infrastructure facilities and good network of artificial insemination service in the province existence of Lankan cattle is highly unlikely. However, there is a possibility of few genotypes of Lankan cattle being present in isolated pockets of the province, especially in the inner-side boundaries of the Kalutara district.

***Buffaloes* (*Bubalus bubalis*)**: Lankan Buffalo (*Bubalus bubalis bubalis*) is classified as the swamp type, since their phenotypic features are similar to the swamp type buffaloes. However, they posses 50 number of chromosomes, which indicate genotypic similarity to the river type. Buffaloes are one of the first species of livestock raised by early ancestors of Sri Lanka and they have been raised to provide much needed draught-power for agriculture activities, especially in rice-based farming systems which were mainly concentrated around kingdoms of ancient Sri Lanka, the existence of Lankan Buffalo in the Western Province is not practicable. Increased use of technology and mechanization of farming activities and fast urbanization process in Western Province has made the Lankan buffaloes confined to isolated pockets in inner-boundary of the Kalutara District. The representation of Lankan buffalo in the buffalo herd of the province could be as low as 1%. However, these remaining populations are now subjected to cross breeding in great extent with improved breeds (Murrah, Nili-Ravi) introduced to the country.

***Non-descript Goats* (*Capra hircus*):** Majority of goats in Sri Lanka belongs to locally adapted nondescript breed types. However, it is not the trend that could be seen in WesternProvince where a majority belongs to the improved exotic breeds. The Lankan Goats are small in size and performances are poor compared to exotic breeds. In the absence of ancestral species of goats in Sri Lanka, the locally adapted nondescript breed type goats might be a result of alternative inter-breeding and inbreeding of number of breeds in isolated habitats (Silva *et al*., 2010).

***Pigs* (*Sus* spp.):** Local (village) pig in Sri Lanka is distinctly recognised as an animal reared in the western costal belt area of the country. The body parameters, production and reproduction information of village pigs are well described (Subalini *et al*., 2010) as it is playing an important role in the rural economy of the Western Province. Village pigs make

an integral component in some farming systems in the coastal area, where there is a niche market (Subalini *et al*., 2010). However, local pig population is on a declining trend due to indiscriminate cross breeding with exotic breeds such as Large white, Landrace and Duroc. Though the native pigs are of little value for commercial pork production, their hardiness and adaptability to existing conditions compensate for their continued existence as a valuable genetic resource.

***Wild Boar* (*Sus scrofa*):** Wild pig is the only the wild relative that can be found in WesternProvince of Sri Lanka. Though the recent findings indicate that the village pigs are a genetically distinct population compared to Wild boar in Sri Lanka (Subalini *et al*., 2013), Wild boars are still contributing to the breeding of domesticated pig herds in some parts of the Western Province. The statistics on the population of wild boar in Western Province is not available.

Village Chicken (*Gallusgallus domesticus*): Village chicken is an essential component in the rural backyard poultry system in Western Province. Though they produce 80 eggs/hen/year (Wickramaratne, 2000), which is non-comparable with commercial layers, production system is sustainable with low or no inputs under restricted resources. The products demand for a premium price and ensure the sustainability of the system. These birds show a wide variation in appearance as well as the status of production. Thus, they are different in size, colours and shapes indicating that the population is a natural harbour of wealth of genetic diversity. There are several village chicken types already identified but have not phenotypically characterized in detail. Game birds are also a popular type in Western Province of the country. Village chickens are well adapted to the harsh environment and mainly depend on backyard system of rearing where no monitory input is made.

There were some attempts in the past to upgrade the production potential of village chicken by introducing high producing stabilized layer lines (CPRS white and CPRS brown) in the WesternProvince, especially in the village poultry farms in coconut plantations. This breeding program was later discontinued and the introduced genotypes still segregate in the area.

Wild Rabbits (Lepus nigricollis) / Wild Hare: Wild Hare is a graycolored small animal found throughout the island. They are popular as hunted animals as they produce good quality red color flesh. Wild hare has long hind legs and erect ears compared to commercial rabbits (Silva *et al*., 2010).

6.3.2 Continuously Imported Breeds of Livestock and Poultry

Cattle: The cattle breeds, which are being continually imported during the past few decades are Holstein Friesian, Jersey, Ayrshire, AFS and Sahiwal (Chandrasiri, 2004), among them Friesian, Jersey and AFS are the breeds which are commonly found in WesternProvince (Table 6.8). Jersey crosses are the most prominent genotype.

Buffaloes: Nili-Ravi, Murrah and Surti are the improved dairy buffalo breeds found in the WesternProvince (Chandrasiri, 2004) (Table 6.8).

Goats: Jamnapariis are the improved goat breed introduced to the Western Province. The only goat genotype found in the area is Jamnapari crosses at present (Chandrasiri, 2004; Table 6.8).

Swine: Large White, Land Race and Duroc are the three breeds recommended for the country's pig improvement program (Department of Animal Production and Health, 2010). Hence, these three breeds have been importing to the country regularly and bred in the breeding station in Western Province by the state sector as well as private sector breeders to cater to the needs of the breeding materials within as well as outside the province.

Table 6.8 Different livestock breeds found in the Western Province

Species	Breeds introduced
Cattle	
Bos taurus	Friesian, Jersey Ayrshire
Bos indicus	AFS (Synthetic breed)
Buffaloes	Murrah, Surti, Nili-Ravi
Goats	Jamnapari
Pigs	Large White, Land Race, Duroc
Chicken	Improved strains of Layers and Broilers
Ducks	Indian Runner, Pekin, Ilesburry
Muscovy	White variety, Black variety
Quails	Japanese quails

Sources: based on information in Wickramaratne(2000); Hevakopara(1995)

Poultry: Improved strains and hybrids are being imported; mainly the Brown egg lines and White egg lines. These lines are widely known by company or commercial names, which represent a majority of the chicken population in the Western Province.

Miscellaneous Poultry Species: Few duck breeds, Turkeys and quails have been imported occasionally and found in few government and private farms in the province.

Turkey: Few breeds have been imported occasionally. No any special breeds that import continually or regularly.

6.4 Fisheries Biodiversity

There are many fish species found in coastal wetlands in the Western Province (Table 6.9). The commonly captured crustaceans in saline water wetlands in the province include the Giant Freshwater Prawn (*Macrobrachium rosenbergii*), Mud lobster (*Thalassina anomala*) and White Prawn (*Penaeus indicus*) and Mud Crab (*Scylla serreta*).

Table 6.9 Common fish species found in fish catch in coastal lagoons and estuaries in the Western Province

Family	Species	Common name
Anguillidae	*Anguilla bicolor*	Short-finned Eel
Carangidae	*Caranx sexfasciatus*	Big-eye Trevally
	Caranx heberi	Black-tipped Trevally
Cichlidae	*Etroplus maculatus*	Orange Chromide
	Etroplus suratensis	Pearl Spot
	Oreochromis mossambicus	Tilapia
Channidae	*Channa striata*	Murrel
Lutjanidae	*Lutjanus argentimaculatus*	Red Snapper
Chanidae	*Chanos chanos*	Milkfish
Mulidae	*Liza micolepis*	Largescale Mullet
Centropomidae	*Anbessis commersoni*	Common Glass fish

Western Province is bound by the western coast of the country where all three districts have several fishing villages. Majority of these communities depend on marine and coastal fishery for their livelihood. In year 2009, the province ranked 2nd in marine fisheries production in Sri Lanka with nearly 37,490 mt of marine fish capture, which carry five major fish categories (Table 6.10). The marine fish caught in the catch include at least 30 species of bony fish, 12 species of cartlilaginous fish (sharks, skates and rays), 10 crustacean species (prawns, crabs and lobster), five molluscs species (cuttlefish, squids and octapus) and several holothurians (sea cucumbers). Among the three districts of the province, Kalutara and Gampaha districts account for the highest annual average marine and inland fish production, respectively (Tables 6.10 and 6.11).

Table 6.10 Marine fish production in Western Province as reported in the 2002

Major Fish Category	Species	Common Name	Production(mt)
Tuna(Skipjack and Yellowfin)	*Thunnus albacores*	Kelawalla	31,900
	Karsowonus pelamis	Balaya	
Other Large Pelagic (Spanish Mackerel, Sail fish, Marlins, Swordfish, Shark, Skate and Rays)	*Scomberomorus commersoni*	Thora	13,950
	Istiophorus platypterus	Thalapath	
	Makaira spp.	Koppara	
	Auxis spp.	Alagoduwa,Ragoduwa	
	Euthynnus affinis	Atawalla	
	Isurus spp.	Mee mora	
	Alopias spp.	Kasa mora	
	Carcharhinus spp.	Bala mora	
	Dasyatis spp.	Welli maduwa	
	Aetobatus narinari	Vavoul maduwa	
Demersal(Rockfish, Paraw)	*Carangoides* spp.	Parawa	3,250
	Caranx spp.	Paraw	
	Lethrinus spp.	Atissa	
	Lutjanus spp.	Ranna, Thambalaya	
	Epinephelus spp.	Gal kossa	
	Liza spp.	Godaya	
	Sphyraena spp.	Jeelawa	
Show Seine/Small Pelagic Varieties (Sardines, Anchovy, Halfbeaks, Flying fishes, Silverbiddies, Shad)	*Amblygaster clupeoides*	Keeramin	7,720
	Dussumiera acuta	Thondaya	
	Sardinella spp.	Sudaya, Kalawenna	
	Stolephorus spp.	Halmessa	
	Leiognathus spp.	Karalla	
	Gerres spp.	Thirali	
	Hemiramphus spp.	Moralla	
	Cheilopogon spp.	Piyamessa	
Other Marine (shrimps, prawns, lobsters, cuttlefish, squid, crabs, other)	*Macrobrachium rosenbergii*	Kara issa	2,120
	Panaeus spp.	Kiri issa	
	Panulirus spp.	Poikirissa	
	Scyllarus spp.	Sapaththuwa	
	Loligo spp.	Della	
	Sepia spp.	Pothu Della	
	Octopus spp.	Buwalla	
	Portunas pelagicus	Muhudu Kakuluwa	
	Scylla serrata	Kalapu kakuluwa	
	Total marine fish production in year (mt)		**58,940**

Table 6.11 Marine and inland fish production in the three districts of the Western Province

District	Average Marine Fish Production (mt)	Inland and Aquaculture Fish Production (mt)
Colombo	1,212 (0.3%)	115.0 (0.2%)
Gampaha	32,100 (12.8%)	385.4 (0.4%)
Kalutara	31,466 (11.3%)	219.0 (0.2%)

Source: Ministry of Fisheries and Aquatic Resources (2009)

6.5 Production Systems and Utilization of Livestock and Poultry

Based on the agro-climatic factors, resource availability and socio-economic conditions many livestock production systems could be found within the province and even within ecological zone in the country. Table 6.12 shows different categories of main farm animal species found in different agro-ecological, geographical and cultivation zones in the country.

Table 6.12 Types of farm animals distributed in different zones in the Western Province

Climatic Zone	Type of Animal				
	Cattle*	Buffalo	Goat/ sheep	Pigs	Poultry
Coconut Triangle	Pure European cattle and their crosses, Zebu crosses, Lankan cattle and crosses	Murrah, Surti and their crosses	Jamnapari and their crosses	Large white, Landrace and Duroc	Village chicken and commercial breeds
Wet Lowlands	Pure European and crosses Zebu crosses	Murrah, Surti and their crosses, Lankan buffaloes	Jamnapari and their crosses	Large white, Landrace, Duroc and village pigs in western coast	Village chicken and commercial breeds

Source: adopted from Ibrahim *et al.* (1999)

Livestock is an integral component of rural agriculture, where smallholder operations are predominant. Despite the fact that crop cultivation, especially paddy cultivation and coconut plantation are dominant in the province. Many of the production systems are crop based or plantation based farming systems and livestock appears as a component of the system.

6.6 Trends in Change of Livestock and Poultry Population

The most recent livestock statistics did not include breed wise description of any species of livestock. Hence, there is no possibility of estimation of population trends of different breeds of livestock and poultry for the province. However, when the population data of different livestock species for the past decade is considered, an increasing trend could be observed in almost all the species except for ducks. When number of animals is considered cattle and chicken are the predominant species. The rate of change of population in different species showed a wide variation (Table 6.13).

Table 6.13 Changes of the populations of farm animal species during past decade

Species	2004	2005	2010	2012	2013
Neat Cattle	57,300	60,590	62,100	63,520	63,540
Buffaloes	23,700	24,400	37,730	38,900	37,850
Sheep/ Goats*	20,470	21,770	24,025	25,570	25,640
Pigs	24,770	24,100	31,555	36,490	37,250
Chicken	2,434,700	2,572,960	3,150,740	3,299,840	3,375,540
Ducks	4,170	3,418	3,760	3,640	3,485

Source: www.statistics.gov.lk/agriculture/index.htm

*No separate sheep population data available after the year 2009, where goat and sheep are counted together.

The animal population dynamics mainly depend on the change of the resource bases in different farming systems. Given the fact that Western Province is the most densely populated area of the country, the land extent is the main deciding factor in the resource availability especially in the case of large ruminants (cattle and buffaloes). The number of animals reared in different farming system varies widely according to the extent of land available for farming. As in the case of the whole country, in Western Province too there are several threats operating against livestock production in Sri Lanka. Some of the threats are common to the whole country and some are specific to the provincial situation. Based on Silva *et al*. (2010) these threats are : (i) Human population growth; (ii) Land fragmentation; (iii) Disruption of habitats due to development activities; (iv) Natural disasters; and (v) Social concerns. Some of those threats could be avoided by proper planning and policy implementation. For instance the livestock breeding policy guidelines of Sri Lanka (Department of Animal Production and Health, 2010) has identified strategies for livestock breeding for efficient utilization of animal genetic resources.

Kankun (*Ipomoea aquatica*) in a *Keera Kotuwa* of the Westren Provence

Selling leafy vegetables in a local market in the Westren Provence

Village chicken in the backyard of a homestead in the Westren Provence

Lankan cattle types in black and brown shades

CHAPTER 7

7.1. *IN SITU* CONSERVATION

The best strategy for long term conservation of biodiversity is the conservation of communities and populations in natural sites or habitats where they occur, through on site or *in situ* conservation. The *In situ* conservation of biodiversity is well achieved through protected area network of the country, which consists around 23% of total land area with some sort of protection and 12% is devoted to complete protection.

7.1.1 Protected area network in the Western Province

Protected areas within the Western Province are administrated by the central government. The major custodians are Forest Department, Department of Wild Life Conservation, Central Environmental Authority, Department of Fisheries and Aquatic Resources and SLLRDC. It is observed that the Western Provincial Council also bears certain responsibilities in this regard. However, the least extent of protected areas is located in the Western Province compared to the rest of the country. This is true in both Gampaha and Colombo districts having 0.3 and 2.8% of natural forests, respectively. Kalutara district consists of 12% of natural vegetations, which is also below the national average natural forest cover of 23%. The details of protected areas of the province are given in Table 7.1 and Figure 7.1.

Table 7.1 Protected area network of the Western Province

Protected Area	District	Area (ha)	Protected Under
Bellanwila - Attidiya Sanctuary	Colombo	385	DWLC
Sri Jayawardenapura - Kotte Sanctuary	Colombo	250	DWLC
Getamarawa - Dunkolahena PR	Colombo	129	FD
Indikada Mukalana PR	Colombo	176	FD
Kananpella FR	Colombo	298	FD
Miriyagalla FR	Colombo	123	FD
Parliamentary Water Retention Area	Colombo	42	SLLRDC
Greater Colombo Flood Retention Area (Heen-ela, Kolonnawa and Kotte marshes)	Colombo	365	SLLRDC
Thalangama ESR/EPA	Colombo		CEA
Bolgoda Wetland ESR/EPA (Panadura ganga, Werasganga, Bolgoda South Lake, Bolgoda North Lake)	Colombo Kalutara		CEA

Labugama - Kalatuwana FR	Colombo - Kalutara – Rathnapura	2,150	FD
Horagolla National Park	Gampaha	13	DWLC
Muthurajawela Sanctuary	Gampaha	1,300	DWLC
Alawala - Ataudakanda PR	Gampaha	352	FD
Bajjangoda PR	Gampaha	175	FD
Dambukanda PR	Gampaha	41	FD
Halpankanda PR	Gampaha	158	FD
Karagahatenna PR	Gampaha	55	FD
Kebalawita PR	Gampaha	115	FD
Kotakanda PR	Gampaha	242	FD
Mahakanda PR	Gampaha	103	FD
Mirigamkanda PR	Gampaha	139	FD
Mithirigala FR	Gampaha	500	FD
Walbotalekanda PR	Gampaha	42	FD
Wilikulakanda PR	Gampaha	310	FD
Negambo Lagoon	Gampaha	3,350	DFAR
Muthurajawela Buffer Zone	Gampaha	285	CEA
Badagama PR	Kalutara	40	FD
Delmella - Yatagampitiya PR	Kalutara	1,4`13	FD
Ingiriya FR	Kalutara	450	FD
Kaharagala PR	Kalutara	32	FD
Kalugala PR	Kalutara	4,288	FD
Kirigala Mukalana PR	Kalutara	35	FD
Kudaganga FR	Kalutara	137	FD
Latpandura PR	Kalutara	42	FD
Mahagama FR	Kalutara	227	FD
Meegahatenna PR	Kalutara	277	FD
Morapitiya - Runakanda PR	Kalutara	7,108	FD
Nahalla PR	Kalutara	35	FD
Neluketiya Mukalana PR	Kalutara	2,384	FD
Pelawatte FR	Kalutara	110	FD
Polawattekanda FR	Kalutara	29	FD
Ranwaragalakanda PR	Kalutara	192	FD
Vellihallure OSF	Kalutara	425	FD
Wagawatte PR	Kalutara	113	FD
Yagirala FR	Kalutara	3,000	FD
Yagirala PR	Kalutara	34	FD

Bolgoda Reservoir	Kalutara	1,200	DFAR
Wathurana ESR/EPA	Kalutara		CEA
Plenda West PR	Kalutara	145	FD
Haycock FR	Kalutara	380	FD

Notes: DWLC=Department of Wild life Conservation; FD=Forest Department; CEA=Central Environmental Authority; SLLRDC=Sri Lanka Land Reclamation and Development Cooperation

A majority (39) of the protected areas are under the jurisdiction of the Forest Department, where several of them are proposed Reserves (PR's). The largest protected area is the Morapitiya - Runakanda forest (7,000 ha) located in the Kalutara District, followed by Kalugala forest, Neluketiya forest, Yagirala forest and the Delmella – Yatigampitiya forest. The others are below 1,000 ha in extent. There are four protected areas under the jurisdiction of the DWLC in the WesternProvince, including the smallest national park in Sri Lanka (Horagolla NP – 13ha). The Central Environmental Authority has declared three wetlands in the WesternProvince as Environmentally Sensitive Regions (ESR's), under the National Environmental Act (Table 7.1; Figure 7.1).

Wathurana swamp Forest: Wathurana swamp forest, even though small in extent (12 ha) is a critically important site in the wet zone as number of endemic and threatened species of fauna and flora are present in this habitat. A total of 179 plant species have been identified from Wathurana swamp forest which consists 6 critically endangered (CR) plant species including 3 endemic and 2 point endemic plant species. Out of these 6 species, two species namely*Stemonoporus moonii* (Hora Wel) and *Mesua stylosa* (Suwanda) are endemic to Sri Lanka and restricted to Wathurana swamp forest, hence they are point endemic species. Further, the population size of both species remains low (estimated to be less than 250 plants). *Areca concinna* (Lenteri), *Vatica paludosa* (Mandora), *Drypetes lanceolata* are the other critically endangered (CR) endemic plant species observed at this site. *Mitragyna tubulosa* (Helamba), a critically endangered (CR) non endemic plant species was also recorded within the Waturana forest. Total number of 117 faunal species has also been recorded in the forest representing dragonflies, butterflies, inland fishes, amphibians, reptiles, birds and mammals. This included 24 species that are endemic to Sri Lanka (20%) while 3 species of birds that were observed are designated as proposed endemics (23% when these are included).The faunal assemblage also included 5 species of migratory birds (Weerakoon, 2012).

Bellanwila - Attidiya marsh: Bellanwila-Attidiya sanctuary is a wetland area located in the suburbs of Colombo. It is an area that was under paddy cultivation until recently. However paddy cultivation in the area has been slowly abandoned over years resulting in the creation of a wetland that supported a rich fauna, especially wetland birds (as much as 168 species of

birds were recorded in the sanctuary including 5 globally threatened species). Five main vegetation types have been recorded from Bellanwila-Attidiya sanctuary, namely marshland vegetation, *Annona glabra* dominated the woodland vegetation, open water vegetation, canal bank vegetation and home garden vegetation. The area consists of 138 species of plant including six alien invasive species. A 372 ac area in the Bellanwila-Attidiya area has been declared as a Sanctuary in July 1990 to preserve its rich faunal diversity from number of growing threats such as pollution, encroachment, extensive spreading of alien invasive species, garbage dumping etc. However, its declaration has not contributed a great deal towards abatement of these threats, which has reduced the sanctuary to a mere wasteland over the past decade. Even though there have been many attempts in the past to revive the status of the sanctuary by implementing a carefully constructed management plan, most of these efforts have died out at the planning stages itself (Weerakoon *et al*., 2006).

Pahiyangala forest reserve: Pahiyangala forest reserve located in Yatagampitiya, a small hamlet located about 5 km from Bulathsinhala town in the Kalutara district is such a unique habitat. The forest fragment is better known due to the Fa Hsien's cave (more commonly referred to as the Pahiyangala caves), one of the largest caves in Asia that is approximately 175 feet tall and over 200 feet long. The name of the cave is believed to have been derived from the Chinese Buddhist priest "Fa- Hsien" who visited the cave during the 5th century AD. It is believed that the priest had lived several months in the Pahiyangala cave on his way to Adam's peak. Later this cave has been converted to a Buddhist temple by Ven. Porogama thera.

Fragmentary remains belonging to humans that dates as far back as 33,070 $\pm$ 410 BP years before present has been discovered from the cave (Deraniyagala, 1992). These bear evidence to the fact that these caves were inhabited by prehistoric man, which makes this cave one of the oldest pre-historic human settlement in Asia. Pahiyangala Manawakaya or Pahiyangala Man, according to fossil evidence had a short vertebral structure with wide jaw bones, a large palette and big grinding teeth. The archaeological survey has also yielded remains of animals, plants, stone, bone and antler tools, geometric microliths, shell beads from the cave (Perera, 2010).

The vegetation at the foothills consists of a highly disturbed lowland rainforest. The forest along the either face of the rock outcrop consists of lowland rainforest that is in good condition. The vegetation present at the top of the rock is predominantly a grassland with a open scrub predominated by shrubs, herbs and invasive tree species. The faunal assemblage was dominated by common species that can be seen among disturbed lowland rainforest with number of endemic species (Weerakoon, 2012).

Muthurajawela marsh: Muthurajawela Marsh (3,068 ha) is located in both Gampaha and Colombo districts. Together with Negombo Lagoon, Muthurajawela forms an integrated coastal wetland system of high biodiversity and ecological significance, especially for flood control. Altogether 192 species of plants, distributed over seven major vegetation types were identified in the Muthurajawela marsh by a study done in 2002 by IUCN. This study has also recorded 40 species of fish, 14 species of amphibians, 31 species of reptiles, 102 species of birds, 22 species of mammals, 48 species of butterflies and 22 species of odonates indicating that Muthurajawela is an important wetland habitat. The ecosystem is listed as one of 12 priority wetlands in Sri Lanka, and in 1996 an area of some 1,777 ha in the northern section of Muthurajawela was declared as a wildlife sanctuary. Despite its protected status, Muthurajawela is subject to intense and growing pressures. Wetland species are harvested at high and often unsustainable levels, land is being rapidly reclaimed and modified for agricultural, commercial and residential purposes, and heavy loads of industrial and domestic wastes are discharged untreated into the marsh. The wetland area has been seriously degraded over time, and these threats continue to intensify (Emerton and Kekulandala, 2003).

Negombo estuary: Negombo Lagoon is a large estuarine lagoon(3,164 ha) located in Gampaha district. The lagoon is fed by a number of smallrivers and a canal. It is linked to the sea by a narrow channel to the north, near Negombocity. It is surrounded by a densely populated region containing rice, coconut plantations and grasslands. The lagoon has extensive swamps and attracts a wide variety of water birds including cormorants, herons, egrets,gulls, terns and other shorebirds. The Lagoon is found to be of prime importance for wintering sea gulls and terns. The mud flats and beaches of the mangrove islands are used as roosting and resting sites by two species of gulls and several species of terns, which makes Negombo lagoon one of the most important wintering habitats for sea birds in the wet zone. The lagoon is also an important habitat for waders as well as other aquatic birds. The area is attractive tourist destination in the country. Negombo Lagoon is a productive fishing ground and more than 133 species of fish have been recorded in the lagoon, many of them being marine species that move in to the lagoon to feed and spawn. The lagoon also functions as a sink for many anthropogenic effluents draining from its surrounding urban area. High concentration of phosphate and occurrence of pollution indicator species reveal organic pollution in the lagoon. It is reported that abundance of plankton has been strongly influenced by the water circulation pattern and direct or indirect human impacts, and need immediate attention for management of lagoon (Gammanpila, 2010).

Bolgoda Lake System: Bolgoda lake system is located between longitudes 79° 55’ to 79° 58’ and latitudes 6° 40’ to6° 48’. The system is made up of two inter connected lakes, the North Lake and South Lake. The North Lake lies between Colombo and Kalutara districts and is fed by Weras ganga and Bolgoda ganga and discharges to the sea through Pandura Estuary. The

South Lake lies in the Kalutara district and is fed by Panape ela. The south lake is connected to the sea through the Thalpitiya ela. The two lakes are connected by the Bolgoda ganga. Bolgoda lake system is a rich biodiversity repository and a study done by Young Zoologist's Association in 1995 has recorded 45 species of fish, 16 species of Amphibians, 40 species of reptiles, 97 species of birds and 31 species of mammals.

Important Bird Areas: Out of the 70 "Important Bird Areas" in Sri Lanka identified by the Field Ornithology Group and the Birdlife International, eight are located in the WesternProvince. These include the Bellanwila-Attidiya marsh, Muthurajawela marsh, Labugama Forest, Morapitiya-Runakanda forest, Haycock forest, Bodhinagala forest, Yagirala forest and the Kalugala forest.

Cultural diversity sites: Three sites in Western Province are included in the palaeobiodiversity sites of Sri Lanka. They are Makevita near Biyagama (Colombo district where pit burial pots, clay bowls and pottery have been observed), Alavala Pothgul lena (Gampaha is a Mesolithic cave where human remains, faunal remains, botanical remains, stone tools, geometric microliths, bone tools, ornaments and fossils of *Panthera tigris* have been identified as artefacts), and Fa Hien cave (in Kalutara the oldest human remains that dates back to 40,000 years BP has been found along with faunal remains, botanical remains, stone tools, geometric microliths, bone tools, ornaments and fossils of *Panthera tigris*) (BS, 2014; Weerakoon, 2012).

Historical Kalutara Bo Tree

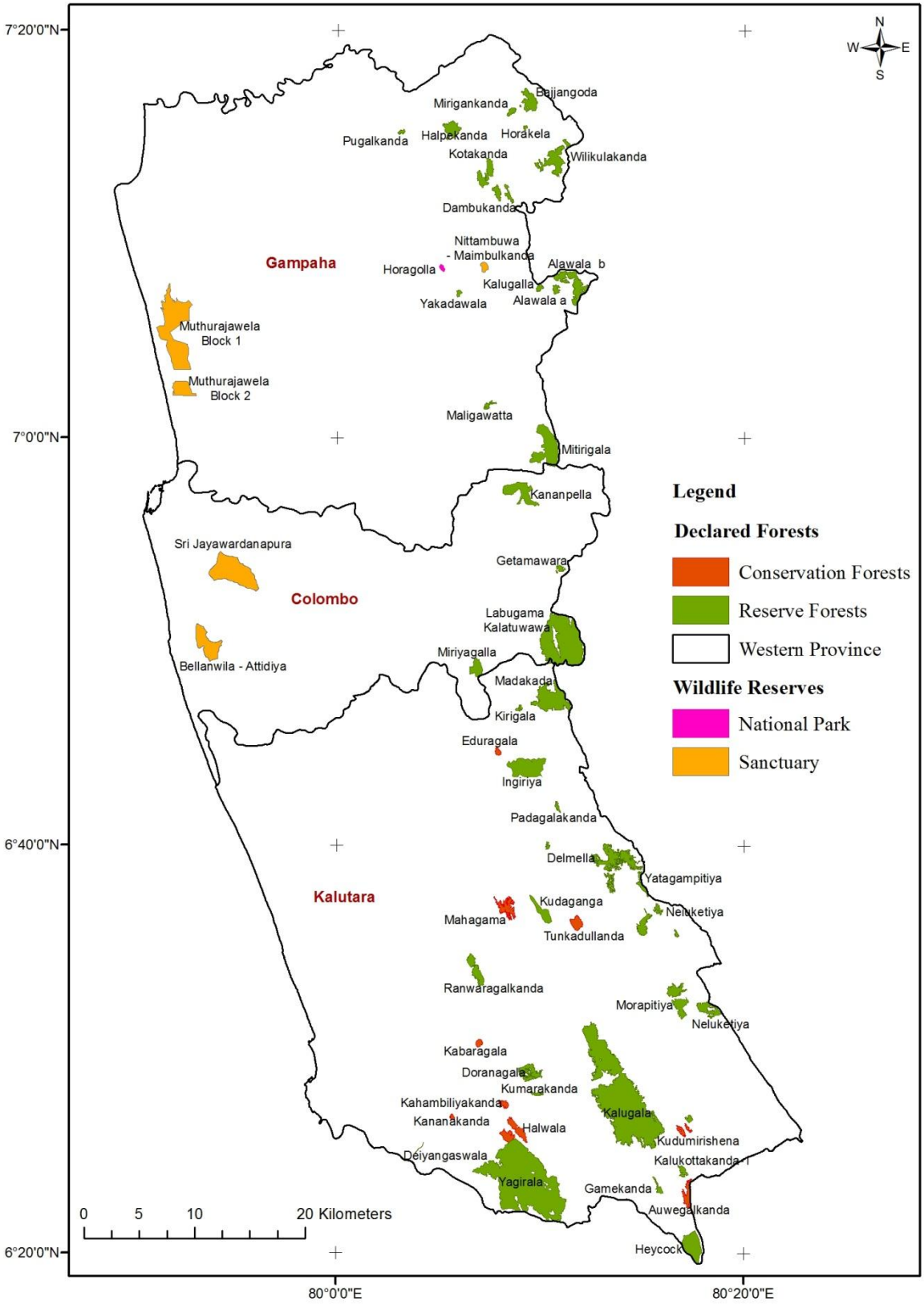


Figure 7.1 Protected area network in the Western Province of Sri Lanka

Pahiyangala rock with the surrounding forest where the cave is located towards the base of the rock outcrop

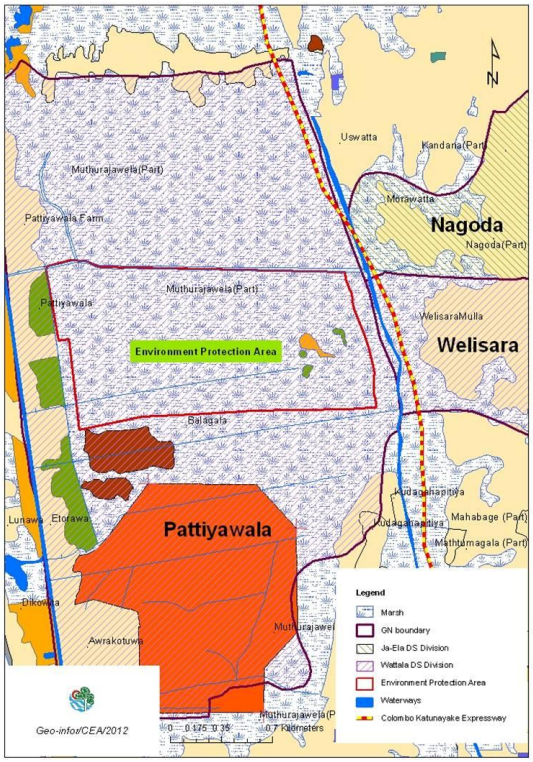


Figure 7.2 Muthurajawela Environmental Protection Area

CHAPTER 8

8.1 *EX SITU* CONSERVATION

Ex situ conservation, or conservation outside natural habitats, is regarded as a complementary process along with *in situ* conservation in order to ensure effective long-term conservation of biodiversity. In today's context, despite efforts at *in situ* conservation, species may still be lost in the wild, and *ex situ* collections may turn out to be the only surviving germplasm of a given species. Furthermore, unpredictable events and natural hazards could result in destruction of natural habitats and extinction of rare species. However, *ex situ* conservation is not regarded as a substitute for in situ conservation.

The *ex situ* conservation facilities in the Western Province could be considered under locations with live plants and animals maintained under human care, fauna and flora repositories, plant genetic resource centers, and biodiversity information systems as listed in Table 8.1.

Table 8.1 *Exsitu* conservation options in the Western Province

Ex situ facility	District	Location
Locations with live plants and animals under managed conditions		
National Zoological Gardens	Colombo	Dehiwala
Water World (Private Aquarium)	Colombo	Kelaniya
Henerathgoda Botanical Gardens	Gampaha	Henerathgoda
Avissawella Botanical Gardens	Colombo	Avissawella
Medicinal plant garden	Colombo	Meegoda
Medicinal plant garden	Colombo	BMARI, Navinna
Medicinal plant garden	Gampaha	Wickramarachchi Ayurvedic Institute
Fruit Crop Research Institute	Kalutara	Kananwila, Horana
Rubber Research Institute	Kalutara	Darton Field Estate, Agalawatta
School Gardens	All districts	In many schools of WesternProvince
Homegardens	All districts	Throughout the province
Temple gardens and Aranya senasana	All districts	-
Parks, cemeteries, road side vegetations	All districts	Throughout the province

Fauna and flora repositories		
National Museum (Fauna repository in the natural History Section)	Colombo	Colombo 7 (Colombo district)
Colombo, Kelaniya, Jayawardenapura and Open University (faunal and floral repositories) and other universities	Colombo Other districts of Sri Lanka	Colombo 3, Kelaniya, Sri Jayawardenapura and Nawala Other districts of Sri Lanka
Bandaranaike Memorial Ayurveda Research Institute (BMARI) and Institute of Indigenous Medicine, Medicinal plants herbaria	Colombo	Navinna and Rajagiriya
Plant nurseries		
Nurseries of Fruit Plants (registered under the Department of Agriculture)	All districts	Colombo (6); Gampaha (17); Kalutara (10)
Data bases		
Wetland Database (Central Environmental Authority and International Water Management Institute)	Colombo	Battaramulla (Colombo district)
National Conservation Review Database (Forest Department)	Colombo	Battaramulla (Colombo district)
Species Database (Biodiversity Secretariat of MOENR and IUCN)	Colombo	Battaramulla (Colombo district)
Forest Reserve and Proposed Reserve database (Forest Department)		Battaramulla (Colombo district
Wildlife Protected Areas Database (Department of Wildlife Conservation)	Colombo	Battaramulla (Colombo district)

Rubber Research Institute: Rubber Research Institutes collection consists of 8,664 accessions.

Botanic Gardens: The Botanic garden at Henerathgoda consists of about 500 plants species. Recently established botanical garden at Avissawella also added number of species to *ex situ* conservation list.

Medicinal Gardens: The medicinal garden in BMARI consists of 552 live specimens. The herbarium of BMARI harbours 1,500 herbarium specimens of medicinal plants and over 2,500 voucher specimens.

Other Parks: The Viharamahadevi park in Colombo harbours more than 200 species of trees, including native and exotic forms.

Digital Databases: The National Database on Species Prepared and maintained by Ministry of Environment includes distribution records and ecological information related to 3,154 flowering plants and 1,415 faunal species. This database would facilitate the periodic revision of the national list of threatened species, using IUCN global red list criteria. The database on wetlands, developed by the International Water Management Institute (IWMI) has information on nearly 80 wetlands in Sri Lanka, which could be used as an important tool to manage these wetlands ecosystems.

Zoological Gardens: The National Zoological Gardens has a collection of native and exotic vertebrate species, including about 53 fish species, 32 reptiles, 130 birds and 98 mammals. About 1.4 million people had visited the National Zoo, in year 2000. Ex situ conservation research centers could thus be financially viable and perform a valuable service through awareness-building, in addition to contributing to conservation outcomes. A private aquarium in Kelaniya (Water World) holds more than 100 native and exotic fish species.

National Museum: The national Museum holds a biorepository on vertebrates (mammals - 2,885, birds-3,243, reptiles - 7,128, amphibians - 1,059, fish - 15,064) and invertebrates (mollucs - 4,671, polychaetes - 2,001, arthropods- > 100,000).

School Gardens: Almost all schools of the Western Province consist of school gardens.

Homegardens: In Sri Lanka, homegardens have been identified as an integral part of the landscape and culture for centuries. Even today, homegardens remain one of the major and oldest forms of land use in the country (Pushpakumara *et al*., 2012). Homegardens in Sri Lanka have evolved to provide food and other requirements of households through generations under the influence of resource constraints such as population pressure, and shortage of arable lands and capital and also to suit the socio-economic, cultural and ecological needs of the island's diverse communities and landscape. The homegarden land use system started receiving the national recognition only recently, and now increasingly recognized as an example of traditionally developed sustainable agroforestry land use systems with a promise of satisfying both the production and environmental functions in the future. Gampaha, Colombo and Kalutara districts have 40.1%, 12.5% and 20.2% of their land extents as homegardens (Ariyadasa, 2002). Homegardens acts as an*ex situ*conservation option for agro-biodiversity of Sri Lanka. For example, out of 38.6 million coconut plants and 10.4 million jackfruit plants in Sri Lanka, homegardens of the Western Province consists of 20.3% and 13.4% tree populations. High tree density in homegardens (ranging from 194-318

trees/ha) of the Western Province makes them having a similar environment to natural vegetation. Homegardens of varied sorts are found all over the province providing economic, environmental and aesthetic benefits to their owners and to the community at large. They are also cultural markers of indigenous knowledge that have spread through time and space. Several studies have identified home gardens as an important source of timber (over 70% of the country's supply of construction and industrial wood) and fuelwood in the country.

Vihara Maha Devi Park

National Meseum

CHAPTER 9

9.2 CULTURE AND BIODIVERSITY

9.2.1 Cultural and Other Related Diversity

9.2.1.1 Bio-Archaeological Sites

The Fa-Hien's Cave (in Bulathsinhala, Kalutara District) is a prehistoric cave, named after the famous Chinese Buddhist monk Fa-Hien who travelled in India and Sri Lanka from AD 399 to 414, and he had stayed in this cave for the major part of his sojourn in Sri Lanka. The cave is important for the late pleistocene human skeletal remains discovered there in the 1960s and 1980s. A female body remains embedded in a rock dating back to 30,500 years as well as world's oldest proof of consumption of rice, maize and salt is found there. The Kotte marshes and the Muthurajawela marsh were part of the Kotte kingdom, where extensive paddy cultivation has been carried out.

There are several ancient Buddhist temples ('Raja Maha Vihara'), in the Western Province, most of which are surrounded by temple gardens and/or forest (Table 9.1). Some of these temples also harbor rock-outcrops and caves, which have not been explored/excavated up to now. These caves are believed to be located where humans lived since prehistoric periods. All archeologically important sites are shown in Figure 9.1.

Table 9.1Some ancient temples in the WesternProvince with bio-archaeological significance

Temple	Location/District	Prominent landscape features
Gallena Rajamaha Viharaya	Kalutara	Caves, forest and Medicinal Plants garden
Weligalpotte monastery	Kalutara	Caves
Pahurakanda Viharaya	Walallawita, Kalutara	Caves and forest
Pokunuvita Viharaya	Kalutara	
Korathota Viharaya	Colombo	Rock outcrops and caves
Maniyangama Viharaya	Colombo	Caves
Bellanvila Viharaya	Colombo	Ponds, marshes
Attanagalla Viharaya	Gampaha	Temple forest garden
Maligatenna and Pilikutuwa monasteries	Gampaha	Caves, forest
Varana Gal Viharaya	Gampaha	Rock- outcrops and caves

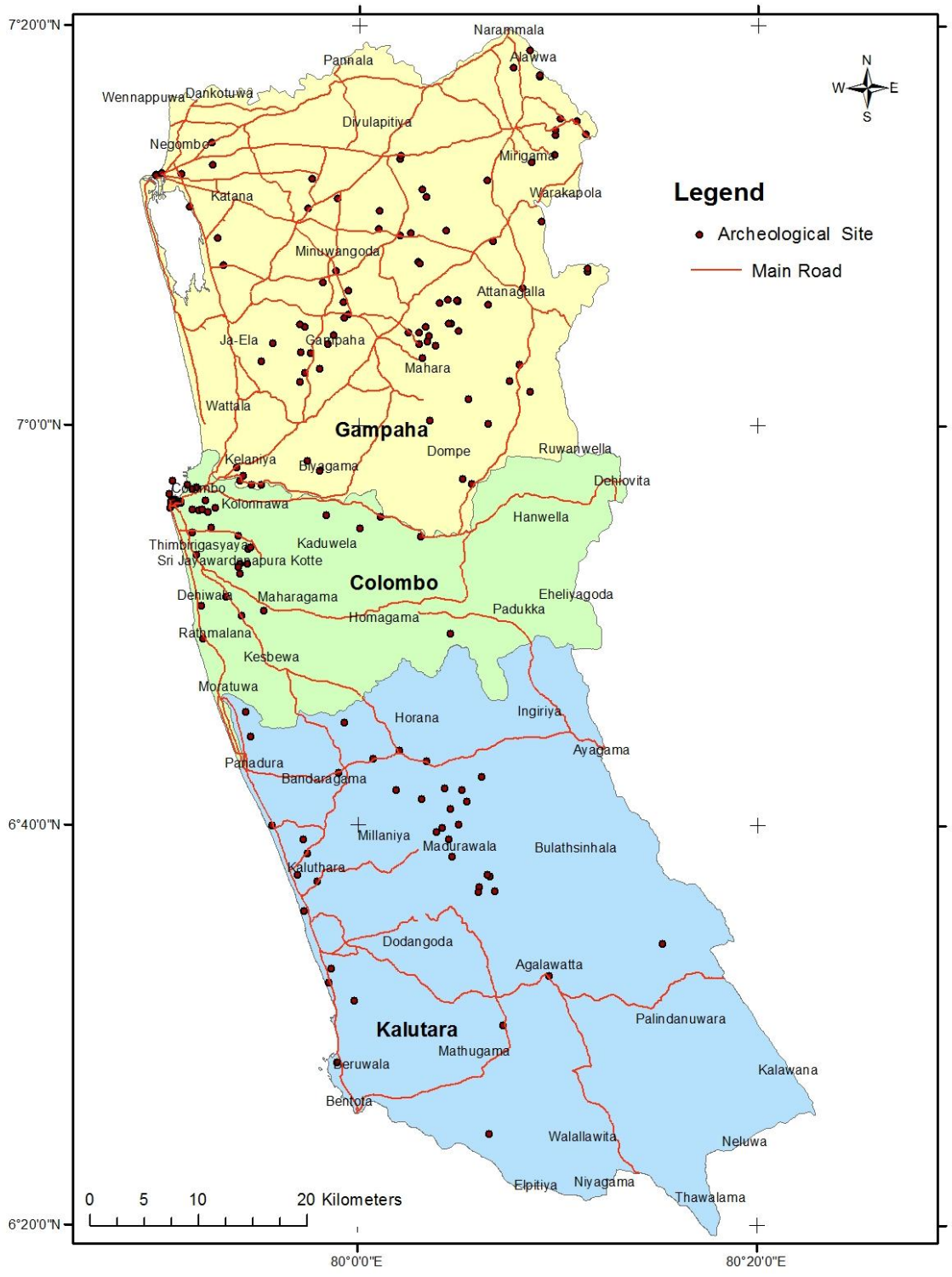


Figure 9.1 Archaeological sites of the Western Province

9.2.1.2 Bio-Cultural Aspects

Traditional dance techniques related to the environment are prevalent in the Kalutara district. Several other ancient folk rituals related to the environment are practiced mainly in the Kalutara District. Some of these include ceremonial dance rituals (i.e. “Shanthi

karmayas'), which are performed to ward off illness and bring prosperity to the local people. These ceremonies comprises of different dance routines, chants, drum-beats and dance-parades. Preparations for these ceremonies are made in an open-air hall, where banana tree trunks, natural varieties of flowers, herbal trees, and creepers are used in decoration as well as in wresting the different sections in the dance ritual such as paths (vidi), beds (yahan) and elevated seats (Ayik). An example is the Sooniyam Yagaya or Sooniyam Kepilla practiced in Horana and Kalutara areas. Plant species Such as '*Mesua nagasarium*' (Na)*Musa* spp., (Kesel), *Atalantia zelanica* (Yakdehi), *Morinda citrifolia* (Ahu), *Cocos nucifera* (Pol), *Areca catechu* (Puwak), *Cerbera manghas* (Kaduru), *Hibiscus* spp., (Wada mal),(Puhul) and *Piper betel* (Bulath) and *Piper chuya* (Siviya bulath) are commonly used for such traditional rituals.

A variety of folk recital of poems related to environment and biodiversity exist in the province and most of them are verses associated with various stages of agriculture, while some are related to childcare/baby sitting, religious ceremonies and traditional dances. Documentations related to folk and traditional art in the province could be located at the Folk/Traditional Art Units of the Sri Lanka Broadcasting Corporation, and Sri Lanka Rupavahini (TV) Corporation. In addition, the libraries of the Department of Aesthetic Studies, University of Kelaniya, also has a valuable collection of literature related to traditional folklore and art. The District Secretariat of Kalutara has prepared adatabase and a handbook related to traditional art and folklore in the district.

9.2.1.3 Traditional Knowledge Profile

The communities in the rural areas of the province possess an immense wealth of traditional knowledge related to biodiversity, which can be examined under species used for traditional ayurvedic medicine, species used for food and preparation of various dishes (local cuisine), agricultural pest control methods, traditional harvesting practiced targeting specific biological resources (extraction of non-timber forest products, fisheries extraction etc.), and production of handicrafts and other useful items using biological resources.

9.2.2 Human Ethnic Diversity

The Western Province probably has the highest human ethnic diversity in Sri Lanka at present, with communities belonging to the races of Sinhala, Tamil, Muslim, Burgher, and Malay being settled, especially in the Colombo district (Table 9.2).

Table 9.2 Percentage distribution of population in the Western Province

District	Sinhala (%)	SL-Tamil	Indian Tamil	SL-Muslim	Burgher	Malay	SL-Chetti	Other
Colombo	76.6	11.0	1.1	9.0	0.7	1.0	0.1	0.5
Gampaha	91.0	3.2	0.4	3.8	0.5	0.7	0.3	0.1
Kalutara	67.1	1.2	2.7	8.7	0.1	0.1	0.0	0.0

Source: DCS,2012.

9.2.3 List of Historical, Important, Rare and Memorial Trees

There are several historically significant trees occurring in the Western Province, most of which have been planted by eminent personalities (Table 9.3). Species such as *Ficus religiosa* and *Mesua nagasarium* in ancient temples in the province are of religious significance to the Buddhist. The first imported rubber tree to Sri Lanka (The Para rubber tree – *Hevea brasiliensis*) was first planted in the Henerathgoda Botanical Gardens in Gampaha, in 1876 AD, where it is still visible. In fact, it is supposed to be the site of the first seedlings of Brazilian rubber tree ever planted in Asia.

Table 9.3 List of memorial/historically significant tree species in the Western Province

Species	**Significance**	**Location**
Mangifera indica (Amba)	Planted on a day of independence 4th of February, 1948 by Hon. D.S. Senanayake (First Prime Minister in Sri Lanka)	Polwatte Temple, Bambalapitiya (Colombo District)
Pterocarpus marsupium (Gammalu)	Planted by Hon. Nehru (First Prime Minister in India)	Ayurvedic research Institute, Navinna (Colombo District)
Tamarindus indicus (Siyambala)	Planted by the great poet Rabindranath Thagore	Sri Pali College, Horana (Kalutara District)
Sweitenia macrophylla (Mahogany)	Planted in 1957 by Ernasto Che Guveira	Yahalekelle Estate, Horana (Kaluthara District)
Several trees	Planted by King Edward VII	Hanwella (Colombo District)
Cassia fistula (Ehela)	Planted by Hon. J.R. Jayawardena (first Executive President in Sri Lanka)	Sri Pali College, Horana (Kaluthara District)
Santalum album (Sudu	Planted by Hon. Mrs. Sirimavo	Ayurvedic research

hadun)	Bandaranaike(first Women Prime Minister in the World)	Institute, Navinna (Colombo District)
Bambusa aroundinacea (Pathangoda Una Pandura) (Katu Una)	King Rajasinghe was injured by a thorn, leading to his death	Pethangoda, Awissawella (Colombo District)
Mesua nagassarium (Na)	Shade tree of Ven. Sri Rahula	Kotte (Colombo District)
Mesua nagassarium (Na)	A sacred tree with historical relevance of Prince Sapumal	Kotte (Colombo District)
Mesua nagassarium (Na)	A tree where an ornament of God Pattini was hidden	Kaduwela (Colombo District)
Artocarpus heterophyllus (peni waraka)	An ancient tree	Awissawella (Colombo District)
Ficus religiosa (Sacred Bo)	Religious significance to Buddhist	Kalutara (Kalutara District)
Ficus religiosa (Sacred Bo)	Religious significance to Buddhist	Nitta Bodhiya, Nittambuwa (Gampaha District)
Ficus religiosa (Sacred Bo)	Religious significance to Buddhist	Sudu Bodhiya, Makewita (Gampaha District)
Ficus religiosa (Sacred Bo)	Religious significance to Buddhist	Bellanwila temple (Colombo District)
Cycus circinalis (Madu)	A group of cycus trees	Gampaha (Gampaha District)
Hevea brasiliensis (Rubber)	First Rubber tree planted in Sri Lanka	Henarathgoda (Gampaha District)
Alstonia scholaris (Rukattana)	An ancient tree	Gahanuwela, Padukka (Kalutara District)
Tetrameles mudiflora (Maha Mugunna)	Giant Tree	Salgala Forest, Galapitamada

9.2.4 Bio-Industry and Bio-Prospecting

Several types of industries that are dependent on biological resource are located in the Western Province (Table 9.4)

Table 9.4 Bio-industries in the Western Province

Industry	Species used	Examples/Statistics
Trade of Ornamental species (export and import)	Fish, reptiles, birds and plants	Lumbini Aquaria; Wayamba Aquaria, Mike flora

Canaries	Edible fruits (i.e. Dehydration of jackfruit, etc.)	KVC, SMAK, MD, Lanka Canaries Ltd. Cicil foods
Production of cosmetics, soaps etc.,	*Azadirachta indica*, pavatta, *Aloe vera*, Carrot, Avocado, Bee Honey	Nature secrets, Janet Products, Swadeshi Industries, Delma; Lever Brothers
Production of pharmaceuticals	Venivel (*Coscinium fenestratum*)	Link, Hettigoda Industries, Vendol, Ayurvedic Drug Corporation
Handicraft production	Rattan furniture, Masks, Coconut Coir products, Reed, Mats, Spoons, Packing material (Coir)	Weveldeniya village
Trade of agricultural produce (fruits, vegetables – export and local)	Cashew; Rambutan; Pineapple; Ginger; Dragonfruit; fruits and vegetables	Kajugama, Malwana, Gampaha, Bulathsinhala
Forestry	Teak, Mahogany	Touchwood, Helpgreen
Plant nurseries	Ornamental plants, fruit plants, tree species (i.e., teak, mahogany)	33 registered fruit plant nurseries in the WesternProvince (Registered under Department of Agriculture)
Trade of cut flowers	Roses, Anthuriums, Orchids	Undertakers/florists; Lakmalsala; Mike flora
Fisheries	Freshwater, brackish and marine fish	Fishing village in Colombo (38), Gampaha (82) and Kalutara (33) Districts; 58.940 mt of marine fish in year 2000
Fisheries products (exports)	Export of fish, shrimps, crabs, lobster	Several companies
Rubber and Pinus Products	Treated Rubber and Pinus	Singer, Damro
Wood processing	Production of Plywood etc.	Merbok Ltd
Culture of Lotus flowers in abandoned paddy lands	Nymphaea spp.	Kaluthara
Restaurants/Culinary trade	Fish, fruits, vegetables, poultry	Several
Mushroom cultivation	Mushrooms (Agaricales)	Several household

		operations – about 3,000 producers in the WesternProvince; 39, 750kg in 2006/2007
Other export agricultural produce (spices etc.)	Bulath (Betel), Pepper, coffee, vanilla, cinnamon, cocoa	1,716ha of pepper, 3,387 ha of cinnamon in province
Oil extraction	Coconut	Watawala Plantation Ltd.
Production of Bee Honey	Honey bees (*Apis cerana*)	261 producers in WesternProvince; 1,690 kg in 2006/2007
Production of milk, yoghurt and curd	Cows and buffaloes	A few house-hold operations

Agricultural produce (rice, vegetables, fruits, yams, leafy vegetables) is in heavy demand in the Western Province, as a result of the high human population density. Apart from catering to the demand in the local population in the province, agricultural produce such as fruits and vegetables are also exported to the Middle-east and Maldives. There are several industries in the province that are involved in preserving and processing fruit varieties for the local and export markets. Similarly several species of spices are also processed by several industries in the province.There are several industries in the WesternProvince that produce ayurvedic pharmaceuticals, which use a variety of medicinal plants. In most instances, the local supply is inadequate to meet the demand, and large quantities are imported from India. Several species of ornamental plants and fish (freshwater and marine) are exported from Sri Lanka, for the ornamental trade. Most of these export industries are based in the Western Province.

Access to biological material within the province and outside the province: Although the province has several agricultural produce and fisheries, the high population demand in the threedistricts has resulted in the transportation of fruits, vegetables, cereals and fish from other provinces, to meet the high demands. Similarly, the timber for constructions purposes and furniture production is mainly obtained from other provinces. Ornamental species such as freshwater fish and plants are also collected from wild habitats in other provinces and transported to the Western Province.

Income, social welfare and benefit sharing related to bio-industries: A major issue related to export-oriented bio-industries in the province is lack of benefit sharing mechanisms, to facilitate sharing of benefits with local communities. A typical example is the ornamental aquatic plant and fish trade, which is currently dependent mainly on wild collections. The advanced technology of today has provision for captive breeding/propagation of these

species, through involvement of local communities. Value additions to export of these species would enhance foreign exchange earnings of the country.

9.2.5 Tourism in the Western Province

Western province can be considered as the tourism hub in Sri Lanka as it is the centre of distributional channels of tourism industry in the Island. All three districts of the Province has an beach front and the total length of the coastline is around 100 km and contains some of the key beach tourism destinations of Sri Lanka such as Negombo, Uswetakeiyawa, Mount Lavinia, Wadduwa, Kalutara, Beruwala and Bentota.

Some of the natural ecosystem types in the Western Province attract visitors (foreign and local), which has led to small-scale business initiatives by local communities. For instance, some local people in Muthurajawela, Negombo lagoon, Bolgoda river, Kalu river and Benthara operate motor boats and/or canoe trips for visitors in the above aquatic ecosystems, to observe nature. Several holiday homes have been built on either side of the Bolgoda river and its islands (i.e. Ruskin Island apartments).

There are several waterfalls in the Kalutara district, which are visited by local tourists. The more popular ones include the Thudugala Ella, Ahasabokku Ella and the Makeli Ella. Several other waterfalls are located in isolated rainforests with a hilly terrain (i.e., in Morapitiya Runakanda, and Yagirala forest areas). The wetlands such as Muthurajawela, Bellanwila Attidiya, Thalangama tank and Kotte marshes are visited by bird-watchers. The Pasgama village (Gampaha district) and depicts all aspects of an authentic Sri Lankan village life with Sri Lankan hospitality and smiling people. Here, a visitor is able to witness traditional pottery, brick making, crafts and various other livelihood activities in pristine form here. Visitors will find here gently sloping pathways through a landscape of multi-colored foliage and typical village homes to the open spaces of paddy fields. The Ministry of Tourism is also promoting the Madurawala and Ittapana villages in the Kalutara district, and Ape Gama at the Colombo District as traditional village tourist attractions.

Figure 9.2. Tourism Destinations in the Western Province (Source: Western Province Tourist Board Sri Lanka

Some of the Key tourist Attractions in the Western Province Includes

- Number of scenic beaches such as Talahena, Pandaura, Talpitiya, Kalido, Beruwala and Moragolla Beach is located in teh western province. Further, several off shore dive sites are found off the coastline of the western province.
- The Kelaniya Raja Maha Vihara or Kelaniya temple is located on the left bank of the Kelani river is one of the most revered Buddhist historic temples located in the western province. In addition there are many other ancient religious places such as Attanagalla Raja Maha Viharaya, Nachchimale Madakada Monastery, Brandi Mosque, Basilica Church are found in the western province (Refer figure 9.2 for more information on religious places)
- River tours conducted using passenger boats such as the Maha Naga. It cruises up the Kelani river from Hamilton Canal starting from Peliyagoda through the Muthurajawela wetlands up to Negombo Lagoon.
- Two of the five Botanical Gardens in Sri Lanka, Henarathgoda Botanical Gardens (Gampaha District) and Seetawaka Botanical Garden, or Seethawaka Wet Zone Botanical Garden (Colombo District) are located in the western province.
- The oldest human cave habitation recorded in Asia, the Pahiyangala Cave is located in the Kalutara district.
- The western province also contains many other historical places such as forts, ramparts belonging to Seethawaka period (Kotte area) and sites where Angam pora competitions had been held (Kotte area).
- There are also many other places to visit in the Western province such as the National Museum, National Zoological Gardens, National Philatelic bureau, National Planetarium, Water world, etc.,

Many natural resources of the Western province are underutilized at present even though most of these sites have a high potential to be developed as tourism destinations. The coastline of the Western province is one of the most visited tourism destinations in the country and many of these tourist travel long distance to observe nature while the same experience can be provided within the basin with less travel time and this would also contribute to enhancement of local economy.

CHAPTER 10

10.1 IMPACTS ON BIODIVERSITY

10.1.1 Human Population Pressure

The Western Province consists of the highest human population density (1,600 individuals/km^2) in Sri Lanka. The census carried out by the Department of Census and Statistics in Sri Lanka in 2012 reported that the population density in Colombo District is 3,438 individuals/km^2, in Gampaha district 1,719 individuals/km^2, and in Kalutara district 760 individuals/km^2. These figures are much higher than the national average (325 individuals/km^2), highlighting the pressure on the remaining natural and semi-natural habitats within the province. The population in the Colombo and Gampaha districts has continued to increase also as a result of migration from other provinces, for employment opportunities.

10.1.2 Habitat Loss, Fragmentation and Transformation

The high human population density in the Western Province has resulted in an immense pressure on thenaturaland semi-natural habitats, resulting in the transformation of most of these areas into human settlements, industrial areas and related infrastructure. The closed canopy forest cover in the Colombo and Gampaha districts is extremely low, while the Kalutara district maintains 13% of its land area as forests.

10.1.3 Population Loss/Reduction of Wild Species

According to the national red-list of threatened species in 2012, several species of endemic and/or threatened animals have already undergone local extinctions from several places in the Western Province, over the past two to three decades. For instance, among the threatened mammals, isolated populations of three arboreal endemic mammals - the Purple-faced Leaf Monkey (*Semnopithecusvetulus*), the Golden Palm Civet(*Paradoxurus aureus*) and the Red Slender Loris (*Loris tardigradus*), have disappeared from several localities in the Western Province, due to loss of tree cover.

Reclamation of lowland marshes and swamps especially in the Western Province has led to local extinction and drastic reduction of the populations of two species of blind eels (*Monopterusdesilvai* and *Ophisternon bengalense*). These species were once known to be common and widely distributed in lowland marshes in the western part of Sri Lanka (Deraniyagala, 1952). Among the threatened mammals, the Fishing Cat (*Prionailurusviverrinus*) and the Otter (*Lutralutra*) have also been subjected to local

extinctions, due to loss of lowland marshes. The latter two species of threatened mammals are also subjected to frequent road accidents, due to access roads being built across marshes and paddy fields.

Many species of colourful endemic freshwater fish species (*i.e.Puntius nigrofasciatus*, *P. tilteya*, *P. cumingii*, *Rasboravaterifioris*) are over-exploited from the streams in the WesternProvince for export trade, leading to drastic declines in their populations. Similarly, the endemic aquatic plants such as *Cryptocoryne*spp., *Aponogeton*spp. and *Lagenandra*spp. are also over-exploited from wild habitats for export purposes.

10.1.4 Environment Pollution

Amajority of the threatened freshwater fish species is concentrated in the major river basins of the wet zone (*i.e.*Kelani, Kalu, Nilwala and Gin) and the water quality of these rivers and their tributaries are adversely affected by gem mining, sand mining, and discharge of agrochemical residues. The lower reaches of the Kelani river also receives the highest load of domestic sewage and other organic waste. It is also the largest recipient of industrial effluents in the country. The Kelani river is also affected by salinity intrusion resulting from over-extraction of water for human use, and sand mining.

Discharge of chemical effluents from rubber factories and water treatment plants has resulted in the pollution of certain stream segments of the Kalu and Kelani rivers. The Lunawa lagoon has been reported to have heavily polluted by the industrial effluents and sewage, while the Bolgodalake is polluted by wood powder dumped by furniture manufacturers in the Moratuwa and Panadura areas. Other wetlands such as the Muthurajawela marsh and the Beira Lake have been continuously subjected to organic pollution, due to garbage disposal and sewage, respectively, until the recent rehabilitation and beautification programs initiated by the government.

The Kelaniya estuary has been subjected to conventional organic pollution. Garbage disposal is a serious environmental issue in the Western Province, especially in the greater Colombo area. The presence of open garbage dumps, and roadside garbage piles have become a serious issue as well for the urban dwellers. Clogging of drains in the greater Colombo area as a result of non-biodegradable material such as polythene has resulted in frequent flashfloods.

Overuse of agrochemicals (pesticides, fertilizers) for paddy and leafy vegetable cultivations is a serious environmental issue in the Gampaha and Kalutara districts, which could lead to human health implications as well, in the long run.

Population in the Colombo city limits is on a steady increase and so does the vehicle emissions that contain particulate matter. Emission of greenhouse gases such as CO_2, CH_4, SO_2 is also a growing concern in the heavily populated urban areas of the Western Province. These gases are released by vehicles (especially due to traffic blocks), industries, open garbage dumps and excessive use of air conditioners and power generators in the cities. A study conducted in2004, using the diversity of lichens as an indicator of airquality, has highlighted that the quality of air in the Colombo City Center is relatively poor comparedto its suburbs and rural areas.

10.1.5 Spread of Invasive Alien Species (IAS)

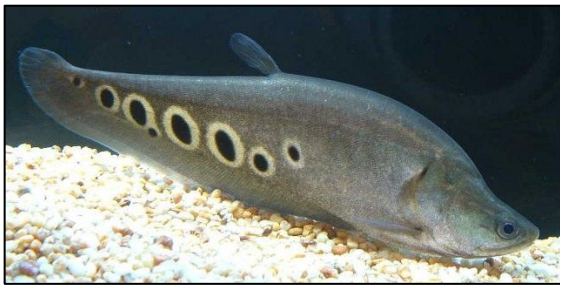
Invasive alien species (IAS) has been globally identified as the second most important cause for loss of biological diversity apart from the habitat destruction by the human beings Several species of invasive alien flora and fauna have established breeding populations in natural and semi-natural habitats of the Western Province. Field research carried out by many organizations and scientists has enabled to document more than 12 species of invasive alien flora (Table 10.1) and more than 14 species of invasive fauna (Table 10.2) from the Western Province. These invasive species have caused adverse impacts on native fauna, flora and their habitats, by functioning as superior competitors for resources, predators, pests and disease vectors. The ornamental fish importers and horticultural traders are the main sources that have contributed to the introduction and spread of IAS in the WesternProvince. Several species of aquatic invasive flora and fauna have been reported from wetlands such as Bellanwila-Attidiya marsh, Sri Jayawardenapuramarsh and Muthurajawela marsh.

The Clown Knife Fish (*Chitalaornata*) was introduced to Sri Lanka as an ornamental aquarium fish, and soon escaped into the wild habitats. Today, this voracious carnivore has established breeding populations in streams and reservoirs in the wet zone, which provide the habitat for several species of threatened endemic freshwater fish. It has been reported that the populations of many species of endemic fish have been reduced subsequent to the introduction and spread of *C. ornata*.The spread of invasive alien flora such as *Annona glabra, Dilleniasuffruticosa* and *Eichhorniacrassipes*has resulted in further degradation of the remaining marshy habitats of the threatened blind eels (*Monopterus* spp.) in the Western Province of Sri Lanka.

A post-entry risk assessment has been carried out by the Ministry of Environment and Renewable Energy in 2010 to identify the IAS in Sri Lanka with the adoption of a scientifically valid protocol and participation of stakeholders. The Tables 10.1 and 10.2 provide information on such IAS that was identified after the post-entry risk assessment process.

Eichhornia crassipes
(Water hyacinth, Japan Jabara)

Salvinia molesta
(Salvinia)



Chitala ornata
(Clownknife fish)

Hypostomus plecostomus
(Tank clerner)

Table 10.1 Invasive alien flora reported from the natural ecosystems of the Western Province based on post-entry risk assessment

Species and life-form	Mode: source: purpose	Affected habitats/ ecosystems	Gampaha	Colombo	Kalutara
Eichhornia crassipes free-floating (Water hyacinth)	Negligence/Deliberate; Ornamental plant	Tanks, ponds, marshes, streams	X	X	X
Salvinia molesta free-floating (Salvinia)	Negligence/Deliberate; Ornamental plant	Tanks, ponds, marshes, streams	X	X	X
Annona glabra Small tree/shrub (Pond Apple)	Unknown	Coastal lagoons, marshes, riverbanks, stream banks	X	X	X
Dillenia suffruticosa Small tree ('Para').	Negligence; horticulturists; Ornamental plant	Marshes, stream banks, riverbanks.	X	X	X
Altemanthera philoxeroides Runner (Alligator weed)	Deliberate; Horticulturists; Food	Fallow fields, marshy/riparian areas	X	X	X
Lantana camara Shrub(Lantana)	Negligence; Horticulturists; Ornamental plant	Scrubland, degraded open forests	X	X	X
Chromolaena odorata ShrubSiam weed	Negligence; Horticulturists; Ornamental plant	Forest edge & pathways	X	X	X
Clidemia hirta Shrub (Hairy Clidemia/Koster'scurse)	Unknown	Rainforest	X	X	X
Swietenia macrophylla	Deliberate; State;	Disturbed Forests.			X

Large tree (Mahogany)	Forestry/Timber				
Mikania micrantha Vine (Mile-a-minute weed)	Negligence; Horticulturists; Ornamental plant	Disturbed forests and scrubland	X	X	X
Alstonia macrophylla Tree ('Hawarinuga')	Deliberate; State; Forestry/ Timber	Secondary forests	X	X	X
Panicum maximum Grass (Guinea grass)	Unknown	Disturbed forests and scrubland	X	X	X

Table 10.2 Invasive alien fauna reported from the natural ecosystems of the Western Province based on post-entry risk assessment

Species	**Mode; Source; Purpose**	**Affected Habitats/ Ecosystems**	**Gampaha**	**Colombo**	**Kalutara**
Chitalaornata Clownknife fish	Negligence; Aquarists; Ornamental fish trade.	Tanks, ponds, slow-flowing rivers, marshes.	X	X	X
Hypostomusplecostomus Plecostomus catfish	Negligence; Aquarists; Ornamental fish trade.	Tanks, ponds, slow-flowing rivers, marshes.	X	X	X
Clariasbatrachus Walking catfish	Negligence; Aquarists; Ornamental fish trade.	Marshes, streams and canals	X	X	
Poeciliareticulata Guppy	Deliberate; State; Mosquito control Ornamental fish	Tanks, ponds, slow-flowing rivers, marshes, streams	X	X	X
Gambusiaaffinis Western mosquito fish	Deliberate; State; Mosquito control	Marshes, streams and canals	X	X	X
Oreochromismossambicus	Deliberate; State;	Tanks, ponds, slow -flowing	X	X	X

Mozambique Tilapia	Commercial fishery	rivers, marshes.			
Cyprinuscarpio Carp	Deliberate; State; Commercial fishery	Tanks, reservoirs	X	X	X
Trachemysscripta Red-eared slider turtle	Negligence; Aquarists; Ornamental fish trade.	Marshes, streams and canals		X	
Pomaceabridgsi Apple snail	Negligence; Aquarists; Ornamental fish trade	Tanks, ponds, marshes		X	
Lissachatinafulica Giant african snail	Negligence; British planter; Research/Hobby	Natural and managed terrestrial habitats	X	X	X
Musmusculus House Mouse	Accidental; Ships	Natural and managed terrestrial habitats	X	X	X
Rattusrattus Ship rat	Accidental; Ships	Natural and managed terrestrial habitats	X	X	X
Feliscatus Feral cat	Deliberate; Pet trade	Natural and managed terrestrial habitats	X	X	X
Canisfamiliaris Feral dog	Deliberate; Pet trade	Natural and managed terrestrial habitats	X	X	X

10.1.6 Natural Disasters

Colombo and Kalutara have been identified as most multi-hazards (flooding, drought) districts in Sri Lanka those can also affect the biodiversity of the province.

CHAPTER 11

11.2 BIODIVERSITY AND RELATED INSTITUTIONAL NETWORK (GOVERNMENT, PRIVATE SECTOR, NGO's ETC.)

11.2.1 Introduction

The biodiversity related institutional network in the Western Province includes government institutes (under the central government), provincial government institutes, the corporate (private) sector, non-governmental organizations (NGO's) and international organizations. Among the government institutes, some are involved in the conservation and sustainable use of biodiversity (Table 11.1(a); 11.1(b)), while many of the activities of others(especially the industry) have some degree of adverse impacts on the biodiversity in the Western Province (see Table 11.2).

A few private corporate located in the Colombo district have invested on biodiversity conservation activities, such as awareness raising and publication of useful books, posters and monographs (see Table 11.3). Similarly, more than 10 local NGO's are involved in biodiversity conservation activities in the Western Province as well as in other areas in Sri Lanka (see Table 11.4). Afew international organizations that promote biodiversity conservation activities are based in the Colombo district (see Table 11.5), and these include a few donors as well.

11.2.2 Human Resources for Biodiversity Conservation and Sustainable Use

The four government universities in the Western Province offer undergraduate and postgraduate courses related to biodiversity, forestry and environmental conservation. The university of Colombo and Kelaniya offer undergraduate studies related to indigenous medicine. There are four district agricultural training centers in the province, to conduct training programmes related to agriculture.

The main human resources related to biodiversity conservation and sustainable use activities in the Western Province include protected area managers (under the Department of Wildlife conservation and Forest Department). Divisional Environmental Officers (attached to CEA), Agriculture Research and Development Officers and Instructors (under the Provincial Agricultural Ministry), Development Officers (under Agrarian Services), District Fisheries Officers (under the Fisheries Ministry), Aquaculture Extension Officers, provincial livestock Development Officers and Provincial Veterinary Officers. The Department of Customs has separate task force for monitoring of illegal trade of species.

Table 11.1(a) Central government institutions related to conservation and sustainable use of biodiversity

Department	Main mandate
Ministryof Environment and Renewable Energy (ME&RE)	Policy development, information generation and management,
Department of Wildlife Conservation (DWLC)	Management of Protected Areas under Fauna and FloraProtection Ordinance
Forest Department (FD)	Management of Protected Areas under Forest Ordinance
Central Environmental Authority (CEA)	Review of EIAs, Declaration of environmentallysensitive areas under National Environmental Act
Customs Department (Biodiversity Unit)	Monitoring illegal trade of biological resources andprosecution under Customs Ordinance
Universities of Colombo, Kelaniya, Sri JayewardenaPura, and Open University	Education, research and awareness raising
National Science Foundation (NSF)	Administration of research grants, knowledge dissemination
National Research Council (NRC)	Administration of research grants
National Aquatic Resources Research and DevelopmentAgency (NARA)	Implementing and coordinating research, development and management activities on Aquatic Resources
National Aquaculture Development Authority (NAQDA)	Manage, conserve and develop aquatic resources used for aquaculture and aquaculture operations
Marine Environment Protection Authority (MEPA)	Protect the marine and ocean resources ofthe country fromship based and shore and offshore based marine pollution
Coast Conservation Department (CCD)	Conservation of the coastal zone, through the Coast Conservation Act.
Department of Fisheries and Aquatic Resources	Manage, regulate, conserve and develop fisheries activities in a sustainable manner
Department of Agriculture (DOA)	Promotion of agricultural activities
Divisional Secretariat	Issue of Licenses
Geological Survey and Mines Bureau (GSMB)	Issue of Licenses for mining
State Timber Corporation (STC)	Production of timber
Ministry of Indigenous Medicine and	Promotion of indigenous medicine;

Department of Ayurveda	maintenance ofmedicinal plant arboreta
Ministry of Lands (Land use and Policy Planning Division)	Establish land use policies
Irrigation Department	Maintenance of irrigation systems
Department of Agrarian Development	Promotion of agriculture
Urban Development Authority	Urban development, including the design of urban parks
Bandaranaike Memorial Ayurvedic Research Institute (Navinna, Maharagama)	Research on ayurvedic medicine and medicinal plants

Table 11.1(b) Provincial Government Agencies related to biodiversity conservation and sustainable use

Provincial Government Agency	**Main mandate**
Provincial Department of Agriculture	Promotion of agricultural activities, capacity development for agriculture
Provincial Land Commissioners Department	Allocation and approval of land for development
Provincial Department of Animal Production and Health	Livestock development
Provincial Irrigation Department	Maintenance of irrigation systems

Table 11.2 Government agencies acts in relation to impacts on biodiversity in the WesternProvince

Agency	**Biodiversity related issue/Impact**
Provincial Road Development Authority	Soil erosion, loss of natural habitats
Sri Lanka Land Reclamation and Development Corporation (SLLRDC)	Reclamation of wetlands and low-lying areas for development activities
Urban councils, Pradeshiya Sabhas	Disposal of solid waste, land sales, building approvals (affects on sensitive areas)
Board of Investment (BOl)	Pollution, loss of natural habitats, over-exploitation of biological resources (approval of harmful industries i.e., mini-hydropower projects)
Ceylon Petroleum Corporation (CPC)	Dumping of oil wastes
Ministry of Defense and Urban Development Authority (UDA)	Landscaping and Land sales

Table 11.3 Private corporate involved in biodiversity conservation activities in the Western Province

Private corporate	Main Activities
SINGER Sri Lanka Ltd	Sponsoring the publication of books related to biodiversity conservation by expert authors
Sri Lanka Telecom Ltd	Sponsoring the biodiversity conservation projects implanted to NGOs; sponsoring useful publications; publication of calendars with aspects related to nature conservation
ODEL	Sponsoring useful publications
WHT Publications Ltd	Publication of useful books, guides, monographs etc
Dilmah Teas Ltd	Sponsor biodiversity conservation projects
Jetwing Eco Holidays Ltd	Nature related publications; awareness raising
NDB	Awareness and Education
Ceylon Chamber of Commerce	Awareness and Education
CSR Lanka	Support national development activities including biodiversity conservation

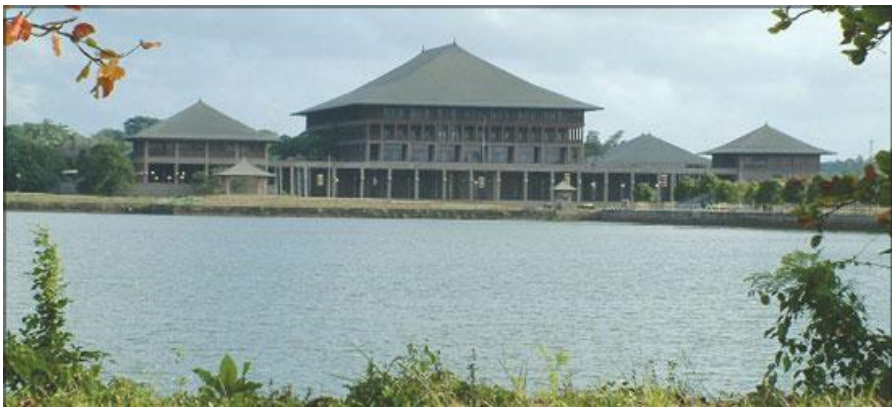
Table 11.4 Main NGO's in the Western Province involved in biodiversity conservation

NGO	Main Activities
Wildlife & Nature Protection Society (WNPS)	Education and Awareness raising
Wildlife Heritage Trust (WHT)	Research (Taxonomy and Ecology)
Young Zoologists Association	Research, Education and Awareness
The Natural History Society (NHS)	Awareness raising
Ceylon Bird Club (CBC)	Bird Census, Research and Awareness
Field Ornithology Group (FOG)	Avifaunal research, Education and Awareness
RukRekaganno	Education and Awareness
Environmental Foundation Limited (EFL)	Policy development, Litigation
Sri Lanka Wildlife Conservation Society (WCS)	Networking, Research and Awareness
Sri Lanka Environmental Journalists Federation (SLEJF)	Communication, Awareness raising
HarithaMithuro	Education and Awareness raising
Sarvodaya	Education, Research and Awareness raising
Green Movement	Education and Awareness raising
Janathakshan	Education and Awareness raising

Table 11.5 Some international organizations involved in conservation activities

Organization	Main Activities
UN Agencies (UNEP, UNDP)	Operate grants for environmental conservation
IUCN (The World Conservation Union)	Field assessments and research, pilot projects on conservation and sustainable livelihoods, ecosystem restoration, policy development; identification of endangered species; capacity development for conservation
IWMI (International Water Management Institute)	Research related to water management, wetland conservation, development of related policies
CIDA	Donor
JICA	Donor
CARE International	Promotion of sustainable agriculture and livelihoods
GTZ	Promotion of sustainable agriculture and livelihoods

Old Parliament Building - Fort



New Parliament Building - Battaramulla

CHAPTER 12

12.2 POLICIES AND LEGISLATIONS ON BIODIVERSITY

12.1.1 National Laws, Customary Laws, Traditions, Codes and Other Non-Legally Binding Instruments

At national level, Sri Lanka has drafted and enacted many legal instruments to conserve its biological diversity. The article 27(14) of Chapter 6 of the Constitution of 1978 of the Democratic Socialist Republic of Sri Lanka, which states directive principles of state policy and fundamental duties, clearly indicate that "the State shall protect, preserve and improve the environment forthe benefit of the community". This shows the highest recognition that the country has given to the biodiversity and environment. Under the directive principles of the constitution, the main national laws and regulations relevant to biodiversity conservation are presented in Table 12.1. The environmental resources come under the jurisdiction of various institutions to whom the state has delegated legal authority, under the power of different acts, ordinances and regulation, to manage them.

Table 12.1 National laws related to biodiversity conservation and sustainable use, under different institutions, relevant for Western Province

Law	What it covers	Responsible Institution(s)
Fauna and Flora Protection Ordinance No 2 of 1937 (as amended)	Conservation of plants and animals which have been declared protected, or which are found within gazetted protected areas. Defines protected areas where no commercial exploitation is permitted	Department of Wildlife Conservation
Forest Ordinance No 16 of 1907 (as amended)	Consolidates laws relating to forests, and to the felling and transport of trees. Declare forest protected areas (plantation and natural forests), and establishes other state land as forests	Forest department
National Environmental Act No 47 of 1980	Umbrella environmental protection legislation. Sets up licensing procedures,	Central Environmental Authority

	environmental standards and project approval procedures, Allows CEA to prosecute and enforce environmental safeguards	
Coast Conservation Act No. 57 of 1981	Identifies coastal zone and regulates activities within it	Coast Conservation Department
Land Acquisition act No 9 of 1950 (as amended)	Acquisition of lands by the state for public purposes, including environmental conservation	Ministry of Agricultural Development
Marine Pollution Prevention Act No 35 of 2008	Measures to minimize and controls marine pollution	Marine Environment Protection Authority
Fisheries and Aquatic Resources Act No 2 of 1996	Protect and conserve fisheries and aquatic biodiversity and marine and freshwater areas	Ministry of Fisheries and Aquatic Resources; Department of Wildlife Conservation
National Aquatic Resources Research and Development Agency Act No 53 of 1998	Protect aquatic resources	National Aquatic Resources Research and Development Agency
Customs Ordinance No 17 of 1869 (as amended)	Covers import and export of any plant or animal, and their products	Custom Department
Soil Conservation Act No 24 of 1986	Conservation of soil resources, mitigation of erosion, protection of land against floods and drought	Ministry of Agriculture
Pesticides Control Act No 33 of 1980 (as amended)	Regulates importation, sale, production and use of pesticides	Office of Registrar of Pesticides
Plant Protection Act No 35 of 1999	Prevents the spread of wild plants, weeds and plant diseases, and controls the introduction of new species	Department of Agriculture. Customs Department
Urban Development Authority Act No 41 of 1978	Empowers UDA to deal with the Management of the urban environment	Urban Development Authority
Animal Diseases Act No 59	Measures to prevent the spread	Department of Livestock

of 1992	of animal diseases	Development
Sri Lanka Land Reclamation and Development Corporation Act No 51 of 1968	Allows SLLRDC to reclaim low lying lands and wetlands	Sri Lanka Land Reclamation and Development Corporation
Food Act No 26 of 1980	Bio-safety	Ministry of Health
State Lands Encroachments Ordinance No 12 of 1815 (as amended)	Prevents illegal occupation of encroachment on state lands	Ministry of Agricultural Development; District Secretaries ; Police
Irrigation Ordinance No 32 of 1856 (as amended)	Deals with the environmental aspects of water and land use in irrigated agriculture	Irrigation Department
Agrarian Services Act No 58 of 1979	Agricultural land	Department of Agrarian Development
Land Development Act No 49 of 1953 (as amended)	Reservations	Sri Lanka Land Reclamation and Development Corporation
Crown lands Ordinance No 12 of 1840(as amended)	Reservations	Department of Land settlement
Botanic Garden Ordinance No 31 of 1928 (as amended)	*Ex situ* conservation	Department of National Botanic Gardens
National Zoological Gardens Act No 41 of 1982	*Ex situ* conservation	Department of National Zoological Gardens
Ayurvedic Act No 31 of 1961	*Ex situ* conservation and sustainable utilization	Department of Ayurveda

12.1.2 Provincial Policies Related to Biodiversity Conservation and Sustainable Use

Apart from a Statute on Solid Waste Management for WesternProvince (under the Provincial Solid Waste Management Authority), other biodiversity conservation and sustainable use related provincial policies are scanty. Falling in line with the national Agriculture Policy (2007), the provincial Ministry of Agriculture has initiated several programs to enhance agricultural productivity at the provincial level.

12.1.3 Impact/Influence of National Policies

The main Policies, Strategies and Action Plans related to biodiversity conservation in Sri Lanka are: (i) The National Conservation Strategy - 1988, (ii) National Conservation Review,

(iii)National Environmental Action Plan-1990 and 1990-2001, (iv)National Forest Policy - 1995, (v) Forestry Sector Master Plan, (vi) Biodiversity Conservation in Sri Lanka:A Framework for Action-1999, (viii) Biodiversity Conservation in Sri Lanka: Addendum - 2007, (viii) Wetland Conservation Plan, (ix) Coast Conservation Master Plan, (x) National Wildlife Conservation Policy (2000), (xi) Pollution Abatement Strategy, (xii) Clean Air 2000 Action Plan. (xiii) National Climate Change Policy (2012) (xiv) National Climate Change Adaptation Strategy and Action Plan 2011-2016,(xiv) National Biosafety Guidelines, (xv) National Agriculture Policy – 2007, (xvi) National Livestock Development Policy – 2007, (xvii) National Fisheries and Aquatic Resources Policy – 2006, (xviii) National Agricultural Research, Policy – 2012, and (xix) Haritha Lanka Action Plan (2009),(xx)Pollinator Action Plan(2012), (xxi)Butterfly Conservation Action Plan(2014) and (xxii)Action Plan for conservation and Sustainable Use of Paleobiodiversity in Sri Lanka. The National Invasive Species Policy is currently being drafted and awaiting approval for implementation. At present, these national policies strategies and action plans cover the entire island. However, parallel provincial level policies are yet to be developed.

12.1.4 Policy Conflicts and Gaps

As at present, the national policies related to biodiversity conservation cannot be implemented at the provincial level, since the subject of Environment is not devolved subject and not integrated to the Provincial CouncilAct No 42 of 1987. There are no concurrent policies and legislation at provincial level to implement relevant conservation policies and legislation under central government. However, the WesternProvince has adopted a policy on ‘Urban Agrculture and A Guide to Urban Agriculture’ in 2014, which helps in biodiversity (agrobiodiversity) conservation at the *Ex situ* level. The Central Government Acts have not provided adequate power to provincial agencies to implement actions related to the environment. Although there is a statute related to provincial lands, the central government has also not provided authority to implement it. This has resulted in the inability to address issues related to illegal settlements and deeds, and allocation of land for suitable development activities.When providing approval for buildings, residential areas and industrial areas, no proper analysis and evaluation has been conducted to see whether these development activities have negative impacts on the environment. In this context, the need of a Strategic Environmental Assessment (SEA) is imperative for the three districts of the WesternProvince. Lack of suitable guidelines is a further constraint related to the latter aspect. This is so critical as natural vegetations of three districts are the lowest and need strict conservation and protection.

12.2 Implementation Constraints

The following could be highlighted as constraints in implementing national laws and policies at the provincial level:

- Lack of coordination and planning among central government and provincial government line ministries and departments
- Inadequate understanding on functions/responsibilities/duties;
- Inability to utilize funds for development in an efficient manner;
- Lack of ownership (due to lack of clarity/understanding);
- Dearth of suitable sites for disposal of solid waste (issues related to identification);
- Inadequate funding for conservation and sustainable use of biodiversity;
- Inadequate human resources for conservation and sustainable use of biodiversity;
- Inefficient use of available human resources for environmental conservation activities;
- Lack of clarity regarding boundaries of conservation areas,
- Inadequate awareness of available central government policies, legislation and regulations related to conservation and sustainable use of biodiversity;
- Inadequate knowledge/data on biodiversity at provincial council level;
- Contradictory interpretation in legislation/regulations (i.e., livestock development related legislation vs. farms);
- Cattle grazing and security zones (closure of farms in Kotte/Jayawardenapura area), and
- The subject of environment is not holistically covered by the provincial council

CHAPTER 13

13.2 RECOMMENDED ACTIONS FOR CONSERVATION AND SUSTAINABLE USE OF PROVINCIAL BIODIVERSITY

13.2.1 High Priority Recommendation

1. Conduct awareness programs on available central government policies, legislation and regulations related to conservation and sustainable use of biodiversity for provincial administration officers and field officers.

2. Establish an institutional mechanism to coordinate the environmental conservation activities in the Western Province (Chaired by the Provincial Secretary, represented by provincial authorities, NGO's and the private sector).

3. Conduct an inventory of biodiversity in the Western Province (sites that are already not assessed), and identify critical areas for conservation of biodiversity and related ecological services.

4. Establish a provincial register of traditional knowledge (including cultural aspects) related to biodiversity.

5. Conduct a policy, legal and institutional analysis related to biodiversity conservation and sustainable use, to identify relevant gaps and needs (capacity, infrastructure etc.)

6. Implement the solid waste management plan developed by the provincial council, and monitor its progress.

7. Develop a provincial land policy (to address illegal reclamation, and avoid constructions in sensitive areas).

8. Demarcate the boundaries of existing protected areas in the Western Province, under the relevant central government departments.

9. Conduct strategic environmental assessments (SEA's) on major development projects proposed/identified for the Western Province.

13.2.2 Priority Recommendations

1. Conduct an evaluation of bio-industries in the province, to identify the species used and their origins, and elucidatehow these industries could contribute to sustainable use of species and benefit sharing with local communities.

2. Promote the propagation of ornamental aquatic plants in abandoned paddy fields, for export trade.

3. Identify the industries, which release untreated effluents into rivers and streams, and ban/regulate these practices through legal and fiscal instruments.

13.2.3 General Recommendations

1. Promote school biodiversity parks among urban and sub-urban school premises.

2. Promote urban agricultural programmes (demonstration plots, homegardens, roof-top gardens, plant towers etc.

3. Promote organic farming and use of organic fertilizer and preparation of them through waste.

4. Encourage the government departments and private sectors to estimate their carbon footprint, and take appropriate steps to reduce carbon emissions.

5. Encourage the corporate sector to invest on carbon sequestration activities such as reforestation of degraded areas, and biodiversity offsets related to development projects that have a significant negative impact on natural ecosystems in the province

CHAPTER 14

14.1 ACTION PLAN

The following strategic areas are considered for preparing Action Plan to conserve the biodiversity of the Western Province.

1. Establishment of baseline information on biodiversity
2. Promote *insitu* conservation
3. Promote *exsitu* conservation
4. Strengthen institutional mechanisms, legislative frameworks and law enforcement
5. Regulation and management of species exploitation for trade
6. Development of capacity for conservation
7. Promote education and awareness rerated to biodiversity conservation
8. Promote community participation in conservation
9. Promote private sector involvement in conservation
10. Promote provincial/district cooperation for biodiversity conservation

Strategy 1: Establishment of Baseline Information on Biodiversity of Western Province

Assumption: A good baseline database is an essential tool to monitor the status of biodiversity in a particular region.

Issues: (i) Inadequate information on the occurrence and abundance of plant and animal species in the province and specific threats to them; (ii) Lack of a central database on biodiversity of the province; (iii) Lack of a data sharing mechanism (formal and informal); (iv) Lack of reference material/updated bio-repository

Specific Actions to address issues are given in Table 14.1.

Table 14.1 Specific actions to establish baseline information on biodiversity of the Western Province

Specific Actions	Responsible Institution/s	Technical Support	Time Frame
Update biodiversity database of the province every five years (last update was at 2012 at national level)	BDS/PA	Universities Independent scientists	December, 2017 Rs. 5 million
Inventorizebiodiversity of critical	BDS/PA/SLLRDC/CE	Universities	April 2015-

habitats including the protected area network (not so far assessed)	A/ FD/DWLC	Independent scientists	March 2017 Rs. 20 million
Establish a digital database on biodiversity of the province and, including information on specific ecosystems/habitats, and species of plants and animals and establish a PA biodiversity cell continuous monitoring	BDS/PA	Universities	December, 2015 Rs. 1 million
Prepare a list of biodiversity hotspots in the province (areas with high richness of species - particularly endemics, and high habitat degradation)	BDS; PA	IUCN, Universities	May, 2015
Establish permanent monitoring sites for biodiversity and climate change data	PA	IUCN, Universities, local NGO's	December, 2016 Rs. 5 million
Carry out systematic monitoring of biodiversity in the province at three year intervals	PA	IUCN, Universities, local NGO's	December, 2018 Rs. 5 million
Develop a web base interactive portal for data sharing, to encourage different stakeholders (i.e., school students, University students/researchers, district environmental officers, PA managers etc.)	PA	Universities Independent scientists	December 2015 Rs. 2 million
Conduct risk assessments/impact evaluations related to specific threats such as invasive alien species, and industries etc	BDS/CEA/PA	Universities	December 2015 Rs. 2 million
Prepare Provincial List of Threatened Species	BDS/PA	IUCN, Universities	December, 2015 Rs 2 million

Strategy 2: *In situ* Conservation of Biodiversity of Western Province

Assumption: Conserving plant and animal populations in the wild and safeguarding their habitats is a priority need to save species from local extinctions. There are several protected areas in the Western Province (5-7% of land area), majority of which are concentrated in the Kalutara district.

Issues: (i) Severe pressures related to population expansion and development on existing wild habitats/protected areas (clearance and fragmentation of forests, reclamation of wetlands, pollution etc.); (ii) Inadequate protection for rare and/or threatened species occurring outside protected areas; (iii) Inadequate management of existing protected areas; (iv) Lack of boundaries for reservation areas (protected areas, rivers, tanks etc.); (vi) Introduction and spread of invasive alien species; and (vii) Inadequate mechanisms to address solid waste disposal (dumping sites etc.)

Specific Actions to address issues are given in Table 14.2.

Table 14.2 Specific actions to *in situ* conservation of biodiversity of the Western Province

Specific Actions	Responsible Institution/s	Technical Support	Time Frame
Development activities (i.e., road constructions, industrial zones, agricultural expansion, human settlements, water resource development etc. Which, are implemented in-and-around natural habitats and protected areas should be subjected to an independent, transparent and thorough Environmental Impact Assessment, in accordance with national laws.	PA, UDA	BDS, CEA, Universities	December, 2015
Allocation of funds for implementation of mitigatory options, and conservation actions in specific development projects should be made mandatory (Prepare a statute to initiate this action)	PA	UDA, CEA	Jan 2015 onwards
Demarcate boundaries of PA's and reservation areas, and gazette them	PA, DWLC, FD, CEA, CCD	Department of Survey	July, 2015-December,2016

			5 million
Prepare Management Plans for prioritized protected areas within the province.	PA, DWLC, FD, CEA, CCD	Universities	Jan-December 2015 Rs 5 million
The populations of unique, rare and/or threatened species occurring outside protected areas should be conserved and monitored, through involvement of local communities	PA, DWLC, FD, CEA, CCD	IUCN, Universities, NGO's	Jan-Dec, 2015, Annual monitoring Rs 4 million
Monitor spread in the province, and prepare and action plan to manage them IAS	PA, BDS	Universities, DWLC, FD	Jan-Dec, 20 l5
Restore degraded wild habitats in a scientific manner, through the involvement of local communities (identify factors that degrade existing wild habitats and initiate scientific restoration of prioritized degraded habitats)	PA, BDS	Universities, NGOs	Start from January 2015 – 2018 Rs 10 million
Prepare guidelines for specific development activities, to integrate environmental concerns at the planning stage itself	PA, UDA, CEA	Department of Physical Planning	June, 2015 Rs 0.5 million
Evaluate the environmental impacts, prior to issuing permits to reclaim wetlands (marshes, paddy fields etc)	PA, CEA	Relevant authorities	December 2015
Regulate use of harmful chemicals (agrochemicals and industrial chemicals) at provincial level	PA, CEA	Pesticide Registrar	December, 2015
Implement the solid waste management plan developed by the provincial authority, and monitor the progress of its implementation	PA, Municipal Councils		Annual monitoring Rs 1 million

Strategy 3: *Ex situ* Conservation and Re-introduction of Biodiversity of Western Province

Assumption: Since natural habitats and protected areas have become scarce in the Western Province (especially in Colombo and Gampaha districts), ex-situ conservation programmes need to be popularized, in order to sustain biodiversity.

Issues:Haphazard release of confiscated wild animals in to natural habitats; Lack of a scientific captive breeding /propagation and raring facilities; Haphazard release of ornamental animals and plants into wild habitats by aquaria; Loss of home gardens

Specific Actions to address issues are given in Table 14.3.

Table 14.3 Specific actions to *ex situ* conservation and re-introduction of biodiversity of the Western Province

Specific Actions to address issues:

Specific Actions	Responsible Institution/s	Technical Support	Time Frame
Maintain unique and threatened flora occurring in the Province in two botanical gardens.	PA, DBG	Universities	Jan-December, 2016 Rs. 4 million
Establish medicinal plant gardens at district level (school gardens)	PA, BMARI	DBG, Universities	Jan-December, 2016 Rs. 3 million
Promote biodiversity parks/gardens at school level in each district	PA, DE	Local NGO's	Jan-December, 2016 Rs. 3 million
Establish and maintain avenue plantations in roadsides, using native tree species	PA, RDA, Municipal councils	Universities	Jan 2015-December 2016 Rs. 3 million
Promote home gardens with multi-species vegetation (establish plant nurseries), productivity improvements, nutritional gardens, vertical agriculture etc	PA, DOA, Divi Naguma	Universities, NGO's	Jan, 2015 - Dec, 2016 Rs. 6 million
Release and/or re-introduction of confiscated species should be done with the assistance of scientific expertise, to suitable ecosystems/ habitats	DWLC, DZG	IUCN, Universities	From Jan 2016 onwards Rs. 5 million
Develop captive breeding/	DZG, DBG	NARA,	Jan-Dec, 2010

propagation/ raring facilities in the Zoological Gardens and Botanical Gardens in the Province		NAQDA, Universities	
Develop an inventory of commercial aquaria in the province, and provide operational guidelines to prevent haphazard release/ accidental escape of plants and animals into wild habitats (issue a license and renew it at annual intervals)	PA, District Authority	NARA, NAQDA, Universities	Jan-June, 2015
Promote green architecture in urban landscapes (roof-top gardens and urban organic agriculture)	PA, UDA	Universities, Local NGOs	Every year Rs. 10 million

Strategy 4: Strengthen Institutional Mechanisms, Legislative Frameworks and Law Enforcement

Issues: Although there are several acts that are related to the environment, there is no specific legal framework for environment at the provincial level; the subject of environment has not been handed over to the provincial council, resulting in the lack of legal power to address environmental issues (no provincial environmental ministry at the moment); Existing environmental committees (at DS division levels) are not functioning properly; Existing penalties for offences related to non compliance to environmental conservation are weak and inadequate; Environmental aspects are not adequately integrated into urban and industrial development programmes; Inadequate capacity among relevant government officials to implement legislation against people who continuously violate environment conservation laws; Lack of understanding among the political authority (often leading to conflicts with administration authority); and Inadequate coordination in implementing existing legislation at local authority level

Specific Actions to address issues are given in Table 14.4.

Table 14.4 Specific actions to strengthen institutional mechanisms, legislative frameworks and law enforcement related to conservation of biodiversity of the Western Province

Specific Actions	Responsible Institution/s	Technical Support	Time Frame
Include the subject on environmental conservation into the 13th amendment, so that the provincial council is provided legal	PA		January to June, 2015

authority to address environmental issues in the province			
Establish a provincial focal authority to coordinate biodiversity conservation activities (Biodiversity Cell)	PA	BDS	By June,2015 Rs. 5 million
Strengthen enforcement capability of relevant agencies (e.g. customs, police, fisheries, forestry) through training and capacity-building programmes.	PA	BDS, Universities	Jan-December, 2015 Rs. 3 million
Conduct gap analysis on institutional, policy and legal aspects related to environmental conservation in the province	PA	BDS, Universities	Jan - June, 2015 Rs. 2 million
Establish a Provincial Environmental Authority (Chaired by Chief Secretary, and represented by commissioner of local government, Chief Minister, Secretary of Ministry of Agriculture, Land and Irrigation).	PA	CEA	By December 2015 Rs. 4 million
The current action plan should be converted into a legal statute and enforced (this could be the base for approving development activities etc.)	PA		By June 2016 Rs. 4 million

Strategy 5: Regulation and Management of Species Exploitation for Trade.

Issues: Haphazard expansion of aquaria and pet shops which exploit species from wild habitats for commercial trade (local and export)

Specific Actions to address issues are given in Table 14.5.

Table 14.5 Specific actions to promote regulation and management of species exploitation and trade in the Western Province

Specific Actions	Responsible Institution/s	Technical Support	Time Frame
The aquaria established for exporting of aquatic plants and animals should be made mandatory to register and obtain a license from DWLC, NARAor NAQDA, which is issued	PA	DWLC, NARA, NAQDA	Jan - March, 2016 Rs. 5 million

only if it is clear that the operation is based on captive bred specimens (Establish mechanism and Annual renewal of license).			
Develop best practice guidelines to standardize the operations of aquaria for trade	PA	NARA, NAQDA, Universities	By December, 2015 Rs. 1 million
Develop inspection guidelines for captive breeding facilities and aquaria	PA	NARA, NAQDA, Universities	By December, 2015 Rs. 1 million
Recruit and train inspectors to conduct frequent routine and ad-hoc monitoring of farms, aquaria and other captive collections in pet shops	PA	Universities	Jan - March, 2015 Rs. 2 million

Strategy 6: Capacity Development for Biodiversity Conservation

Issues: Inadequate capacity among government departments to implement environmental conservation activities in the province

Specific Actions to address issues are given in Table 14.6.

Table 14.6 Specific actions to promote capacity development for conservation of biodiversity of the Western Province

Specific Actions	Responsible Institution/s	Technical Support	Time Frame
Conduct training programmes for relevant government agencies in the province, to implement environmental conservation activities, subsequent to a thorough assessment of training and capacity needs	PA, DWLC, FD, CEA	BDS, IUCN, Universities	Jan-March, 2015 Rs. 3 million
Enhance the capacity of regulating and law enforcement agencies such as the Sri Lanka Customs and Police Department, to conserve biodiversity	Sri Lanka Customs and Police Department	BDS, IUCN, Universities	Jan-March, 2015 Rs. 2 million

Strategy 7: Public Awareness and Education Related to Biodiversity of the Western Province

Issues: Inadequate awareness on the status of district level biodiversity

Specific Actions to address issues are given in Table 14.7.

Table 14.7 Specific actions to promote public awareness and education in biodiversity conservation of Western Province

Specific Actions	Responsible Institution/s	Technical Support	Time Frame
Conduct targeted awareness and education programmes for different stakeholders in the districts using the available national level information sources (i.e. the 2012 national red list and the national wetland directory, and other information	PA	NGO's, Universities, IUCN	Jan - December, 2016 Rs. 3 million
Produce local language awareness material, including TV documentaries that highlight the biodiversity and conservation issues in the province	PA	SLRC, Private media	Jan –Dec 2017 Rs. 7 million
Conduct media campaigns through print and electronic media (Establish a provincial environmental journalists group)	PA	SLRC, Lake house, Private media	By Jan, 2016 Rs. 2 million
Identify champions (ambassadors) to promote environmental education and awareness (politicians-national, provincial, local institutions; leading film stars, sports personalities, lawyers, scientists etc.)	PA		By Jan, 2015 Rs. 4 million
Strengthen local NGO's and CBOs to function as joint pressure groups with a better, voice, to convince political authorities identify active environmental NGO's/ CBO's in the province	PA	CEA, Universities	By Jan, 2016 Rs. 4 million
Integrate environmental education into school curriculum, with an emphasis on practical experience	PA	ED	By Jan, 2015 Rs. 3 million
Re-mobilize school environmental committees	PA	CEA	By Jan,

attached to CEA	2015 Rs. 3 million

Strategy 8: Promote Community Participation in Conservation of Biodiversity in Western Province

Assumption: Any effective attempts to conserve endangered species in the wild needs active involvement and commitment by local communities, as demonstrated in past species conservation activities. Both *in situ* and *exsitu* approaches demand extensive support from community based organizations (CBO's), farmers and the general public. Achieving sustainable community participation for conservation of endangered species in the wild is a challenge prospect. Site level conservation programmes should have provision for involvement of local communities, which would enable to inculcate a sense of owner ship of the specific conservation programme. Experience across the world has proven that community participation can be effectively mobilized only if the community has a strong conviction towards conserving such a resource base, and the community's livelihood is essentially linked to the resource base, depending on it for goods and services. Success of such conservation activities would also depend on whether the community members feel that the conservation actions in the short-term will result in some form of tangible benefits.

Issues: Lack of tangible benefits for local communities to conserve biodiversity in the province; Lack of involvement of province communities in environmental conservation programmes in the province; inadequate capacity among local communities to pursue in conservation activities that afford tangible benefits; and Lack of involvement of local communities in conserving natural habitats and protected areas in the province

Specific Actions to address issues are given in Table 14.1.

Table 14.8 Specific actions to promote community participation in biodiversity conservation of the Western Province

Specific Actions	Responsible Institution/s	Technical Support	Time Frame
Identify tangible benefits and ecosystem services related to biodiversity conservation for local communities and implement pilot projects/programmes at district level	PA	NGO's. CBO's Universities	Jan 2015 - December, 2016 Rs. 5 million
Develop capacity among local communities to	PA	Private	Jan - Dec.

engage in enterprises related to sustainable use of biodiversity in the province		Sector, NGOs Universities	20l5 Rs. 4 million
Develop local procedures for biodiversity conservation and community-based enforcement, in consultation with local communities living around natural habitats ad protected areas	PA	FD, DWLC	By Jan, 2016 Rs. 4 million
Mobilize local youth organizations to actively engage in environmental conservation activities, and lobby against harmful activities that affect the environment	PA	NGO's, CBO's, Universities	Jan - Dec. 20l5 Rs. 4 million
Create pressure groups at local level to convince local politicians on the importance of environmental conservation (green political groups)	PA	NGO's, CBO's,	Jan - Dec. 20l5 Rs. 2 million
Establish an environmental awards scheme for individuals among local communities	PA	NGO's, CBO's, DA	From 2015 onwards Rs. 1 million

Strategy 9: Promote Private Sector Involvement in Environmental Conservation Activities

Issues: Lack of incentives for the private sector to invest on biodiversity conservation activities at provincial level

Specific Actions to address issues are given in Table 14.9.

Table 14.9 Specific actions to promote private sector involvement in biodiversity conservation of the Western Province

Specific Actions	Responsible Institution/s	Technical support	Time Frame
Design a mechanism of incentives to encourage the private sector investments towards conservation of and sustainable use of biodiversity in the province	PA	Universities, BDS, Business and Biodiversity Platform	By May, 2015 Rs 2 million
Promote ecotourism projects in pre-determined sites (through hotels	PA	SLTB, Universities	Jan-Dec, 2015 Rs 2 million

and tour operators)	
Annual environmental awards for PA private sector agencies	Continue Rs 2 million

Strategy 10: Promote Provincial/District Cooperation for Biodiversity Conservation

Issues: Inadequate collaboration between provinces to conserve biodiversity

Specific Actions to address issue are given in Table 14.10.

Table 14.10 Specific actions to promote provincial/district cooperation for biodiversity conservation of Western Province

Specific Actions	Responsible Institution/s	Technical support	Time Frame
Establish a collaborative mechanism between relevant provincial government agencies to curb illegal activities that effect environmental conservation in each province	PA, Police	Universities	December 2015 (quarterly meetings) Rs 0.5 million
Establish and maintain a provincial database of illegal hunters, dealers and buyers involved in illegal trade of wild species	PA, Police	DC, FD, DWLC, BDS, CEA	December 2015 Rs.0.5 million
Strengthen the coordination between provincial environmental authorities	CEA	Local NGO's	Jan-December 2015 Rs 0.5 million

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ANNEX

Annex 1 Detailed list of fauna and flora recorded in the three districts of the Western Province.

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Freshwater Crabs						
Gecarcinucidae	*Ceylonthelphusa kandambyi*	E	EN			1
Gecarcinucidae	*Ceylonthelphusa nata*	E	CR		1	
Gecarcinucidae	*Ceylonthelphusa rugosa*	E	NT		1	1
Gecarcinucidae	*Ceylonthelphusa venusta*	E	CR			1
Gecarcinucidae	*Clinothelphusa kakoota*	E	CR		1	
Gecarcinucidae	*Oziothelphusa ceylonensis*	E	NT	1	1	
Gecarcinucidae	*Oziothelphusa populosa*	E	EN		1	
Gecarcinucidae	*Perbrinckia cracens*	E	CR		1	
Gecarcinucidae	*Perbrinckia scansor*	E	EN			1
Gecarcinucidae	*Spiralothelphusa parvula*	E	EN		1	
Dragonflies						
Aeshnidae	*Anax guttatus*	N	LC	1	1	
Aeshnidae	*Gynacantha dravida*	N	NT		1	
Calopterygidae	*Neurobasis chinensis*	N	VU	1	1	1
Calopterygidae	*Vestails apicalis*	E	VU	1	1	1
Cholorocyphidae	*Libellago adami*	E	VU		1	1
Cholorocyphidae	*Libellago corbeti*	E	CR			1
Coenagrionidae	*Agriocnemis pygmaea*	N	LC	1	1	
Coenagrionidae	*Ceriagrion cerinorubellum*	N	VU	1	1	1
Coenagrionidae	*Ceriagrion coromandelianum*	N	LC	1	1	
Coenagrionidae	*Ischnura aurora*	N	NT		1	
Coenagrionidae	*Ischnura senegalensis*	N	LC	1	1	
Coenagrionidae	*Mortonagrion ceylonicum*	E	EN		1	
Coenagrionidae	*Onychargia atrocyana*	N	VU		1	
Coenagrionidae	*Paracercion malayanum*	N	LC		1	
Coenagrionidae	*Pseudagrion malabaricum*	N	LC	1	1	
Coenagrionidae	*Pseudagrion microcephalum*	N	LC	1	1	
Coenagrionidae	*Pseudagrion rubriceps*	N	LC		1	1
Corduliidae	*Epophthalmia vittata*	N	NT	1	1	

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Corduliidae	*Macromia zeylanica*	E	CR			1
Euphaeidae	*Euphaea splendens*	E	NT	1	1	1
Gomphidae	*Cyclogomphus gynostylus*	E	CR		1	
Gomphidae	*Gomphidia pearsoni*	E	EN			1
Gomphidae	*Ictinogomphus rapax*	E	LC	1	1	
Gomphidae	*Macrogomphus lankanensis*	E	EN		1	
Gomphidae	*Megalogomphus ceylonicus*	E	EN			1
Libellulidae	*Acisoma panorpoides*	N	LC	1	1	
Libellulidae	*Aethriamanta brevipennis*	N	LC	1	1	
Libellulidae	*Brachydiplax sobrina*	N	LC	1	1	
Libellulidae	*Brachythemis contaminata*	N	LC	1	1	
Libellulidae	*Bradinopyga geminata*	N	LC		1	
Libellulidae	*Cratilla lineata*	N	EN			1
Libellulidae	*Crocothemis servilia*	N	LC	1	1	
Libellulidae	*Diplacodes nebulosa*	N	NT		1	
Libellulidae	*Diplacodes trivialis*	N	LC	1	1	1
Libellulidae	*Hydrobasileus croceus*	N	NT	1		
Libellulidae	*Lathrecista asiatica*	N	NT		1	
Libellulidae	*Neurothemis intermedia*	N	NT	1		1
Libellulidae	*Neurothemis tullia*	N	LC	1	1	1
Libellulidae	*Orthetrum chrysis*	N	VU	1		1
Libellulidae	*Orthetrum glaucum*	N	NT	1		1
Libellulidae	*Orthetrum luzonicum*	N	NT	1	1	1
Libellulidae	*Orthetrum pruinosum*	N	NT		1	
Libellulidae	*Orthetrum sabina*	N	LC	1	1	1
Libellulidae	*Pantala flavescens*	N	LC	1	1	1
Libellulidae	*Potamarcha congener*	N	LC		1	
Libellulidae	*Rhodothemis rufa*	N	NT	1	1	
Libellulidae	*Rhyothemis triangularis*	N	VU		1	
Libellulidae	*Rhyothemis variegata*	N	LC	1	1	
Libellulidae	*Tetrathemis yerburii*	E	EN		1	1
Libellulidae	*Tholymis tillarga*	N	LC		1	
Libellulidae	*Tramea limbata*	N	LC		1	
Libellulidae	*Trithemis aurora*	N	LC	1	1	
Libellulidae	*Trithemis festiva*	N	VU		1	1
Libellulidae	*Trithemis pallidinervis*	N	NT		1	

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Libellulidae	*Urothemis signata*	N	LC		1	
Libellulidae	*Zygonyx iris*	N	VU	1		1
Libellulidae	*Zyxomma petiolatum*	N	NT		1	
Platycnemididae	*Copera marginipes*	N	LC	1	1	1
Platystictidae	*Drepanosticta anamia*	E	CR		1	
Platystictidae	*Drepanosticta bine*	E	CR		1	1
Platystictidae	*Drepanosticta brincki*	E	CR		1	1
Platystictidae	*Drepanosticta lankanensis*	E	CR			1
Platystictidae	*Drepanosticta mojca*	E	CR		1	
Platystictidae	*Drepanosticta nietneri*	E	CR		1	1
Platystictidae	*Drepanosticta walli*	E	CR		1	
Platystictidae	*Platysticta maculata*	E	EN		1	1
Protoneuridae	*Elattoneura caesia*	E	VU	1		1
Protoneuridae	*Elattoneura centralis*	E	VU	1		1
Protoneuridae	*Elattoneura oculata*	E	EN			1
Protoneuridae	*Prodasineura sita*	E	LC	1	1	
	Butterflies					
Hesperiidae	*Ampittia dioscorides*	N	LC	1	1	1
Hesperiidae	*Badamia exclamationis*	N	LC	1		1
Hesperiidae	*Baoris penicillata*	E	CR	1	1	
Hesperiidae	*Caltoris kumara*	N	VU	1		1
Hesperiidae	*Caprona ransonnettii*	N	LC	1	1	1
Hesperiidae	*Celaenorrhinus spilothyrus*	E	VU			1
Hesperiidae	*Gangara thyrsis*	N	VU			1
Hesperiidae	*Halpe ceylonica*	N	EN			1
Hesperiidae	*Hasora badra*	N	EN			1
Hesperiidae	*Hasora chromus*	N	LC	1		
Hesperiidae	*Hasora taminatus*	N	NT		1	
Hesperiidae	*Iambrix salsala*	N	LC	1	1	1
Hesperiidae	*Matapa aria*	N	VU	1	1	1
Hesperiidae	*Notocrypta curvifascia*	N	VU	1		1
Hesperiidae	*Notocrypta paralysos*	N	VU	1		1
Hesperiidae	*Oriens goloides*	N	NT	1		
Hesperiidae	*Parnara bada*	N	NT		1	1
Hesperiidae	*Pelopidas agna*	N	NT		1	
Hesperiidae	*Pelopidas mathias*	N	NT	1		1
Hesperiidae	*Pelopidas thrax*	N	VU	1		1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Hesperiidae	*Potanthus confuscius*	N	LC	1	1	1
Hesperiidae	*Potanthus pallida*	N	DD			1
Hesperiidae	*Spialia galba*	N	LC	1	1	1
Hesperiidae	*Suastus gremius*	N	LC	1		1
Hesperiidae	*Suastus minuta*	N	EN			1
Hesperiidae	*Tagiades japetus*	N	LC	1	1	1
Hesperiidae	*Tagiades litigiosa*	N	VU			1
Hesperiidae	*Tapena thwaitesi*	N	EN			1
Hesperiidae	*Taractrocera maevius*	N	LC	1	1	1
Hesperiidae	*Telicota bambusae*	N	VU	1	1	
Hesperiidae	*Telicota colon*	N	NT	1	1	
Hesperiidae	*Thoressa decorata*	E	EN		1	1
Hesperiidae	*Udaspes folus*	N	LC	1	1	
Lycaenidae	*Abisara echerius*	N	LC	1		1
Lycaenidae	*Acytolepis puspa*	N	LC	1	1	1
Lycaenidae	*Amblypodia anita*	N	NT			1
Lycaenidae	*Anthene lycaenina*	N	LC	1		1
Lycaenidae	*Arhopala abseus*	N	EN		1	1
Lycaenidae	*Arhopala amantes*	N	LC	1	1	1
Lycaenidae	*Caleta decidia*	N	LC	1		1
Lycaenidae	*Castalius rosimon*	N	LC	1	1	1
Lycaenidae	*Catochrysops panormus*	N	CR			1
Lycaenidae	*Catochrysops strabo*	N	LC		1	
Lycaenidae	*Cheritra freja*	N	VU			1
Lycaenidae	*Chilades lajus*	N	LC	1	1	1
Lycaenidae	*Chilades pandava*	N	LC	1	1	1
Lycaenidae	*Curetis thetis*	N	LC	1		
Lycaenidae	*Discolampa ethion*	N	LC	1	1	1
Lycaenidae	*Everes lacturnus*	N	LC	1	1	1
Lycaenidae	*Freyeria putli*	N	LC		1	
Lycaenidae	*Hypolycaena nilgirica*	N	LC	1	1	1
Lycaenidae	*Iraota timoleon*	N	NT		1	
Lycaenidae	*Jamides alecto*	N	LC	1		1
Lycaenidae	*Jamides bochus*	N	LC	1	1	1
Lycaenidae	*Jamides celeno*	N	LC	1	1	1
Lycaenidae	*Jamides coruscans*	E	VU	1		1
Lycaenidae	*Jamides lacteata*	E	VU	1		1
Lycaenidae	*Lampides boeticus*	N	LC	1	1	
Lycaenidae	*Loxura atymnus*	N	LC	1	1	1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Lycaenidae	*Megisba malaya*	N	LC	1		1
Lycaenidae	*Nacaduba hermus*	N	NT	1		
Lycaenidae	*Nacaduba ollyetti*	E	CR	1		
Lycaenidae	*Nacaduba sinhala*	E	VU			1
Lycaenidae	*Neopithecops zalmora*	N	LC		1	1
Lycaenidae	*Prosotas dubiosa*	N	LC	1		
Lycaenidae	*Prosotas nora*	N	LC	1		1
Lycaenidae	*Rapala lankana*	N	CR			1
Lycaenidae	*Rapala varuna*	N	VU	1	1	
Lycaenidae	*Rathinda amor*	N	LC	1	1	1
Lycaenidae	*Spalgis epeus*	N	LC	1	1	1
Lycaenidae	*Spindasis lohita*	N	VU			1
Lycaenidae	*Spindasis vulcanus*	N	LC		1	
Lycaenidae	*Tajuria cippus*	N	LC	1	1	
Lycaenidae	*Talicada nyseus*	N	LC	1	1	1
Lycaenidae	*Zesius chrysomallus*	N	LC		1	
Lycaenidae	*Zizeeria karsandra*	N	LC	1	1	
Lycaenidae	*Zizina otis*	N	LC	1	1	
Lycaenidae	*Zizula hylax*	N	LC	1	1	
Nymphalidae	*Acraea violae*	N	LC	1	1	1
Nymphalidae	*Ariadne ariadne*	N	LC		1	1
Nymphalidae	*Cethosia nietneri*	N	LC	1	1	1
Nymphalidae	*Charaxes psaphon*	N	NT	1		1
Nymphalidae	*Charaxes solon*	N	NT	1	1	
Nymphalidae	*Cirrochroa thais*	N	LC	1		1
Nymphalidae	*Cupha erymanthis*	N	LC	1	1	1
Nymphalidae	*Danaus chrysippus*	N	LC	1	1	1
Nymphalidae	*Danaus genutia*	N	LC	1	1	1
Nymphalidae	*Discophora lepida*	N	VU		1	1
Nymphalidae	*Doleschallia bisaltide*	N	EN	1		
Nymphalidae	*Dophla evelina*	N	LC			1
Nymphalidae	*Elymnias hypermnestra*	N	LC	1	1	1
Nymphalidae	*Euploea core*	N	LC	1	1	1
Nymphalidae	*Euploea klugii*	N	LC	1	1	1
Nymphalidae	*Euploea phaenareta*	N	EN	1	1	1
Nymphalidae	*Euploea sylvester*	N	NT		1	
Nymphalidae	*Euthalia aconthea*	N	LC	1	1	1
Nymphalidae	*Euthalia lubentina*	N	VU	1		1
Nymphalidae	*Hypolimnas bolina*	N	LC	1	1	1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Nymphalidae	*Hypolimnas misippus*	N	LC	1	1	
Nymphalidae	*Idea iasonia*	E	VU			1
Nymphalidae	*Ideopsis similis*	N	VU	1	1	1
Nymphalidae	*Junonia almana*	N	LC	1	1	1
Nymphalidae	*Junonia atlites*	N	LC	1	1	1
Nymphalidae	*Junonia hierta*	N	CR		1	
Nymphalidae	*Junonia iphita*	N	LC	1	1	1
Nymphalidae	*Junonia lemonias*	N	LC	1	1	1
Nymphalidae	*Kallima philarchus*	E	EN			1
Nymphalidae	*Kaniska canace*	N	LC	1	1	1
Nymphalidae	*Melanitis leda*	N	LC	1	1	1
Nymphalidae	*Melanitis phedima*	N	NT	1		1
Nymphalidae	*Moduza procris*	N	LC	1		1
Nymphalidae	*Mycalesis mineus*	N	LC	1		1
Nymphalidae	*Mycalesis patnia*	N	LC	1		1
Nymphalidae	*Mycalesis perseus*	N	LC	1	1	1
Nymphalidae	*Mycalesis rama*	E	EN	1	1	1
Nymphalidae	*Neptis hylas*	N	LC	1	1	1
Nymphalidae	*Neptis jumbah*	N	LC	1	1	1
Nymphalidae	*Orsotriaena medus*	N	LC	1	1	1
Nymphalidae	*Pantoporia hordonia*	N	NT	1		1
Nymphalidae	*Parantica aglea*	N	LC	1	1	1
Nymphalidae	*Parthenos sylvia*	N	LC	1	1	1
Nymphalidae	*Phalanta phalantha*	N	LC	1	1	1
Nymphalidae	*Polyura athamas*	N	LC		1	1
Nymphalidae	*Tirumala limniace*	N	LC	1	1	
Nymphalidae	*Vanessa cardui*	N	VU		1	
Nymphalidae	*Vindula erota*	N	NT	1		1
Nymphalidae	*Ypthima ceylonica*	N	LC	1	1	1
Papilionidae	*Graphium agamemnon*	N	LC	1	1	1
Papilionidae	*Graphium antiphates*	N	EN			1
Papilionidae	*Graphium doson*	N	LC	1	1	1
Papilionidae	*Graphium sarpedon*	N	LC	1	1	1
Papilionidae	*Pachliopta aristolochiae*	N	LC	1	1	1
Papilionidae	*Pachliopta hector*	N	LC	1	1	1
Papilionidae	*Pachliopta jophon*	E	EN			1
Papilionidae	*Papilio clytia*	N	LC	1	1	1
Papilionidae	*Papilio crino*	N	VU	1	1	1
Papilionidae	*Papilio demoleus*	N	LC	1	1	1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Papilionidae	*Papilio helenus*	N	VU			1
Papilionidae	*Papilio polymnestor*	N	LC	1	1	1
Papilionidae	*Papilio polytes*	N	LC	1	1	1
Papilionidae	*Troides darsius*	E	LC	1	1	1
Pieridae	*Appias albina*	N	LC	1	1	1
Pieridae	*Appias galene*	E	LC	1	1	1
Pieridae	*Appias libythea*	N	LC	1		
Pieridae	*Appias lyncida*	N	LC	1	1	1
Pieridae	*Belenois aurota*	N	LC		1	
Pieridae	*Catopsilia pomona*	N	LC	1	1	1
Pieridae	*Catopsilia pyranthe*	N	LC	1	1	1
Pieridae	*Catopsilia scylla*	N	LC		1	
Pieridae	*Cepora nerissa*	N	LC	1	1	
Pieridae	*Delias eucharis*	N	LC	1	1	1
Pieridae	*Eurema blanda*	N	LC	1	1	1
Pieridae	*Eurema brigitta*	N	LC	1	1	
Pieridae	*Eurema hecabe*	N	LC	1	1	1
Pieridae	*Eurema laeta*	N	VU			1
Pieridae	*Eurema ormistoni*	E	VU			1
Pieridae	*Hebomoia glaucippe*	N	LC	1		1
Pieridae	*Leptosia nina*	N	LC	1	1	1
Pieridae	*Pareronia ceylanica*	N	LC		1	
	Land Snails					
Acavidae	*Acavus haemastoma*	E	EN			1
Acavidae	*Acavus phoenix*	E	NT	1	1	1
Acavidae	*Acavus superbus*	E	VU			1
Acavidae	*Oligospira waltoni*	E	VU		1	1
Achatinidae	*Lissachatina fulica*	I	NE	1	1	1
Ariophantidae	*Cryptozona chenui*	E	VU			1
Ariophantidae	*Euplecta hyphasma*	E	VU			1
Ariophantidae	*Euplecta travancorica*	N	NT			1
Camaenidae	*Beddomea albizonatus*	E	VU			1
Cerastuidae	*Rachis punctatus*	I	NE			1
Cyclophoroide	*Aulopoma helicinum*	E	VU			1
Cyclophoroide	*Cyathopoma album*	E	EN			1
Cyclophoroide	*Cyclophorus menkeanus*	E	VU			1
Cyclophoroide	*Leptopoma semiclausum*	E	EN			1
Cyclophoroide	*Leptopomoides halophilus*	E	DD			1
Cyclophoroide	*Pterocyclus cumingi*	N	NT			1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Cyclophoroide	*Theobaldius cytopoma*	E	EN			1
Cyclophoroide	*Theobaldius layardi*	E	VU			1
Cyclophoroide	*Theobaldius loxostoma*	E	CR			1
Pupinidae	*Tortulosa cumingi*	E	EN			1
Pupinidae	*Tortulosa marginata*	E	EN			1
Veronicellidae	*Laevicaulis alte*	N	LC			1
Veronicellidae	*Semperula maculata*	N	LC		1	1
	Freshwater Fish					
Adrianichthyidae	*Oryzias dancena*	N	DD		1	
Anabantidae	*Anabas testudineus*	N	LC	1	1	1
Anguillidae	*Anguilla bicolor*	N	LC	1	1	1
Aplocheilidae	*Aplocheilus dayi*	E	EN	1	1	1
Aplocheilidae	*Aplocheilus parvus*	N	LC	1	1	1
Aplocheilidae	*Aplocheilus werneri*	E	EN			1
Bagridae	*Mystus ankutta*	E	EN		1	1
Bagridae	*Mystus gulio*	N	LC	1	1	1
Bagridae	*Mystus seengtee*	N	LC		1	1
Bagridae	*Mystus vittatus*	N	LC	1	1	1
Balitoridae	*Acanthocobitis urophthalmus*	E	EN	1	1	1
Balitoridae	*Schistura notostigma*	E	NT		1	1
Belonidae	*Xenentodon cancila*	N	NT	1	1	1
Belontidae	*Belontia signata*	E	NT	1	1	1
Belontidae	*Malpulutta kretseri*	E	CR	1	1	1
Belontidae	*Pseudosphromenus cupanus*	N	LC	1	1	1
Channidae	*Channa ara*	E	EN	1	1	1
Channidae	*Channa gachua*	N	LC	1	1	1
Channidae	*Channa orientalis*	E	VU	1	1	1
Channidae	*Channa punctata*	N	LC		1	1
Channidae	*Channa striata*	N	LC	1	1	1
Cichlidae	*Etroplus maculatus*	N	LC	1	1	1
Cichlidae	*Etroplus suratensis*	N	LC	1	1	1
Claridae	*Clarias brachysoma*	E	NT	1	1	1
Cobitidae	*Lepidocephalichthys thermalis*	N	LC	1	1	1
Cyprinidae	*Amblypharyngodon grandisquamis*	E	EN	1	1	
Cyprinidae	*Amblypharyngodon*	N	LC	1	1	1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
	melettinus					
Cyprinidae	*Dawkinsia singhala*	E	LC	1	1	1
Cyprinidae	*Devario malabaricus*	N	LC	1	1	1
Cyprinidae	*Esomus thermoicos*	E	LC	1	1	1
Cyprinidae	*Garra ceylonensis*	E	VU		1	1
Cyprinidae	*Labeo dussumieri*	N	LC	1	1	1
Cyprinidae	*Laubuca varuna*	E	CR		1	1
Cyprinidae	*Pethia cumingii*	E	EN	1	1	1
Cyprinidae	*Pethia nigrofasciata*	E	EN	1	1	1
Cyprinidae	*Pethia reval*	E	EN	1	1	1
Cyprinidae	*Puntius bimaculatus*	N	LC	1	1	1
Cyprinidae	*Puntius dorsalis*	N	LC			1
Cyprinidae	*Puntius kamalika*	E	EN	1	1	
Cyprinidae	*Puntius kelumi*	E	EN			1
Cyprinidae	*Puntius thermalis*	E	LC	1	1	1
Cyprinidae	*Puntius titteya*	E	EN	1	1	1
Cyprinidae	*Puntius vittatus*	N	LC	1	1	1
Cyprinidae	*Rasbora dandiya*	N	LC	1	1	1
Cyprinidae	*Rasbora microcephalus*	N	LC	1	1	1
Cyprinidae	*Rasbora wilpita*	E	EN		1	
Cyprinidae	*Rasboroides atukorali*	E	VU	1	1	1
Cyprinidae	*Rasboroides nigromaginata*	E	CR			1
Cyprinidae	*Rasboroides vaterifloris*	E	EN		1	1
Cyprinidae	*Systomus pleurotaenia*	E	EN		1	1
Cyprinidae	*Systomus spilurus*	E	DD	1	1	1
Cyprinidae	*Tor khudree*	N	NT		1	1
Eleotridae	*Butis butis*	N	LC	1	1	
Gobiidae	*Awaous melanocephalus*	N	LC	1	1	1
Gobiidae	*Glossogobius giuris*	N	LC	1	1	1
Gobiidae	*Schismatogobius deraniyagalai*	N	EN		1	1
Gobiidae	*Sicyopterus griseus*	N	CR			1
Gobiidae	*Sicyopterus halei*	N	CR			1
Gobiidae	*Sicyopus jonklaasi*	E	EN			1
Gobiidae	*Stenogobius malabaricus*	N	DD			1
Heteropneustidae	*Heteropneustes fossilis*	N	LC	1	1	1
Mastacembelidae	*Mastacembelus armatus*	N	LC	1	1	1
Siluridae	*Ompok bimaculatus*	N	LC	1	1	1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Siluridae	*Wallago attu*	N	EN	1	1	1
Synbranchidae	*Ophisternon bengalense*	N	CR	1	1	
Synbranchidae	*Monopterus desilvai*	E	CR			
	Amphibians					
Bufonidae	*Adenomus kelaartii*	E	VU		1	1
Bufonidae	*Duttaphrynus atukoralei*	E	NT		1	
Bufonidae	*Duttaphrynus melanostictus*	N	LC	1	1	1
Dicroglossidae	*Euphlyctis cyanophlyctis*	N	LC	1	1	1
Dicroglossidae	*Euphlyctis hexadactylus*	N	LC		1	
Dicroglossidae	*Fejervarya cf. syhadrensis*	N	LC	1	1	1
Dicroglossidae	*Fejervarya kirtisinghei*	E	VU		1	
Dicroglossidae	*Hoplobatrachus crassus*	N	LC		1	1
Dicroglossidae	*Nannophrys ceylonensis*	E	EN		1	1
Dicroglossidae	*Sphaerotheca rolandae*	N	LC	1	1	
Icthyophiidae	*Ichthyophis glutinosus*	E	VU			1
Microhylidae	*Kaloula taprobanica*	N	LC	1	1	1
Microhylidae	*Ramanella nagaoi*	E	EN		1	
Microhylidae	*Ramanella variegata*	N	LC	1	1	
Nyctibatrachidae	*Lankanectes corrugatus*	E	VU	1	1	1
Ranidae	*Hylarana aurantiaca*	N	EN		1	1
Ranidae	*Hylarana gracilis*	E	LC	1	1	1
Ranidae	*Hylarana temporalis*	E	NT		1	
Rhacophoridae	*Polypedates cruciger*	E	LC		1	1
Rhacophoridae	*Polypedates maculatus*	N	LC	1	1	
Rhacophoridae	*Pseudophilautus abundus*	E	EN		1	
Rhacophoridae	*Pseudophilautus auratus*	E	EN			1
Rhacophoridae	*Pseudophilautus folicola*	E	VU		1	1
Rhacophoridae	*Pseudophilautus hoipolloi*	E	EN		1	1
Rhacophoridae	*Pseudophilautus popularis*	E	NT	1	1	1
Rhacophoridae	*Pseudophilautus reticulatus*	E	EN			1
Rhacophoridae	*Pseudophilautus sordidus*	E	VU		1	1
Rhacophoridae	*Pseudophilautus stictomerus*	E	EN		1	1
Rhacophoridae	*Pseudophilautus tanu*	E	EN			1
	Reptiles					
Acrochordidae	*Acrochordus granulatus*	N	VU	1	1	1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Agamidae	*Calotes calotes*	N	LC	1	1	1
Agamidae	*Calotes liocephalus*	E	EN			1
Agamidae	*Calotes liolepis*	E	NT			1
Agamidae	*Calotes versicolor*	N	LC	1	1	1
Agamidae	*Ceratophora aspera*	E	EN			1
Agamidae	*Lyriocephalus scutatus*	E	VU			1
Agamidae	*Otocryptis wiegmanni*	E	LC		1	1
Bataguridae	*Melanochelys trijuga*	N	LC	1	1	
Colubridae	*Ahaetulla nasuta*	N	LC	1	1	1
Colubridae	*Ahaetulla pulverulenta*	N	LC			1
Colubridae	*Boiga beddomei*	N	NT			1
Colubridae	*Boiga ceylonensis*	N	LC			1
Colubridae	*Boiga forsteni*	N	NT		1	
Colubridae	*Cercaspis carinata*	E	EN			1
Colubridae	*Chrysopelea ornata*	N	VU			1
Colubridae	*Coeloganthus helena*	N	LC	1	1	1
Colubridae	*Dendrelaphis bifrenalis*	E	NT	1	1	1
Colubridae	*Dendrelaphis caudolineolatus*	N	VU			1
Colubridae	*Dendrelaphis schokari*	E	LC	1	1	1
Colubridae	*Haplocercus ceylonensis*	E	EN			1
Colubridae	*Lycodon aulicus*	N	LC	1	1	1
Colubridae	*Lycodon osmanhilli*	E	LC		1	1
Colubridae	*Lycodon striatus*	N	LC		1	1
Colubridae	*Oligodon arnensis*	N	LC	1	1	1
Colubridae	*Oligodon calamarius*	E	EN			1
Colubridae	*Oligodon sublineatus*	E	LC	1	1	1
Colubridae	*Ptyas mucosa*	N	LC	1	1	1
Colubridae	*Sibynophis subpunctatus*	N	NT	1	1	1
Crocodylidae	*Crocodylus palustris*	N	NT	1		1
Crocodylidae	*Crocodylus porosus*	N	EN	1	1	
Cylindrophidae	*Cylindrophis maculata*	E	NT		1	1
Elapidae	*Bungarus ceylonicus*	N	VU			1
Elapidae	*Naja naja*	N	LC	1	1	1
Gekkonidae	*Cnemaspis molligodai*	E	EN	1		1
Gekkonidae	*Cnemaspis silvula*	E	EN			1
Gekkonidae	*Cyrtodactylus triedra*	E	VU			1
Gekkonidae	*Gehyra mutilata*	N	LC	1	1	1
Gekkonidae	*Hemidactylus depressus*	E	LC			1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Gekkonidae	*Hemidactylus frenatus*	N	LC	1	1	1
Gekkonidae	*Hemidactylus parvimaculatus*	N	LC	1	1	1
Gekkonidae	*Hemiphyllodactylus typus*	N	VU		1	
Gekkonidae	*Lepidodactylus lugubris*	N	VU	1	1	
Homalopsidae	*Cerberus rynchops*	N	LC	1	1	1
Natricidae	*Amphiesma stolatum*	N	LC	1	1	1
Natricidae	*Aspidura brachyorrhos*	E	VU	1		
Natricidae	*Aspidura guentheri*	E	NT			1
Natricidae	*Atretium schistosum*	N	LC	1	1	1
Natricidae	*Balanophis ceylonensis*	E	EN			1
Natricidae	*Xenochrophis asperrimus*	E	LC	1	1	1
Natricidae	*Xenochrophis piscator*	N	LC	1	1	1
Scincidae	*Eutropis carinata*	N	LC	1		
Scincidae	*Eutropis macularia*	N	LC	1		1
Scincidae	*Lankascincus fallax*	E	LC	1	1	1
Scincidae	*Lankascincus gansi*	E	VU			1
Scincidae	*Lygosoma punctatus*	N	LC	1	1	1
Scincidae	*Nessia burtonii*	E	LC	1		1
Scincidae	*Nessia layardi*	E	EN	1	1	1
Trionychidae	*Lissemys ceylonensis*	E	LC	1	1	
Typhlopidae	*Ramphotyphlops braminus*	N	LC		1	1
Varanidae	*Varanus bengalensis*	N	LC	1	1	1
Varanidae	*Varanus salvator*	N	LC	1	1	1
Viperidae	*Daboia russelii*	N	LC	1	1	1
Viperidae	*Hypnale hypnale*	N	LC	1	1	1
Viperidae	*Hypnale zara*	E	VU			1
Viperidae	*Trimeresurus trigonocephalus*	E	LC			1
	Birds					
Phasianidae	*Coturnix chinensis*	N	EN			1
Phasianidae	*Galloperdix bicalcarata*	E	NT		1	1
Phasianidae	*Gallus lafayetii*	E	LC		1	1
Anatidae	*Dendrocygna javanica*	N	LC	1	1	1
Anatidae	*Nettapus coromandelianus*	N	NT	1	1	1
Turnicidae	*Turnix suscitator*	N	LC		1	1
Picidae	*Dendrocopos nanus*	N	LC	1	1	1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Picidae	*Celeus brachyurus*	N	LC	1	1	1
Picidae	*Picus chlorolophus*	N	NT	1	1	1
Picidae	*Dinopium benghalense*	N	LC	1	1	1
Picidae	*Chrysocolaptes lucidus*	N	LC	1	1	1
Picidae	*Chrysocolaptes festivus*	N	VU	1		
Ramphastidae	*Megalaima zeylanica*	N	LC	1	1	1
Ramphastidae	*Megalaima flavifrons*	E	LC	1	1	1
Ramphastidae	*Megalaima rubricapillus*	E	LC	1	1	1
Ramphastidae	*Megalaima haemacephala*	N	LC	1	1	1
Bucerotidae	*Ocyceros gingalensis*	E	LC	1	1	1
Bucerotidae	*Anthracoceros coronatus*	N	LC			1
Trogonidae	*Harpactes fasciatus*	N	NT	1	1	1
Coraciidae	*Coracias benghalensis*	N	LC	1	1	1
Coraciidae	*Eurystomus orientalis*	N	EN			1
Alcedinidae	*Alcedo atthis*	N	LC	1	1	1
Alcedinidae	*Ceyx erithaca*	N	NT	1	1	1
Alcedinidae	*Pelargopsis capensis*	N	LC	1	1	1
Alcedinidae	*Halcyon smyrnensis*	N	LC	1	1	1
Alcedinidae	*Ceryle rudis*	N	LC	1	1	1
Meropidae	*Merops orientalis*	N	LC	1	1	1
Meropidae	*Merops leschenaulti*	N	LC	1	1	1
Meropidae	*Merops philippinus*	M	NE	1	1	1
Cuculidae	*Clamator jacobinus*	N	LC	1	1	
Cuculidae	*Cuculus varius*	N	EN	1		1
Cuculidae	*Cacomantis sonneratii*	N	NT		1	1
Cuculidae	*Surniculus lugubris*	N	NT	1	1	1
Cuculidae	*Eudynamys scolopaceus*	N	LC	1	1	1
Cuculidae	*Phaenicophaeus viridirostris*	N	LC	1		
Cuculidae	*Phaenicophaeus pyrrhocephalus*	E	VU			1
Cuculidae	*Centropus sinensis*	N	LC	1	1	1
Cuculidae	*Centropus chlororhynchus*	E	EN			1
Psittacidae	*Loriculus beryllinus*	E	LC	1	1	1
Psittacidae	*Psittacula eupatria*	N	LC	1	1	1
Psittacidae	*Psittacula krameri*	N	LC	1	1	1
Psittacidae	*Psittacula cyanocephala*	N	NT		1	1
Psittacidae	*Psittacula calthropae*	E	NT	1	1	1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Apodidae	*Collocalia unicolor*	N	LC	1	1	1
Apodidae	*Hirundapus giganteus*	N	NT		1	1
Apodidae	*Cypsiurus balasiensis*	N	LC	1	1	1
Apodidae	*Tachymarptis melba*	N	EN		1	
Apodidae	*Apus affinis*	N	LC	1	1	1
Hemiprocnidae	*Hemiprocne coronata*	N	LC		1	1
Tytonidae	*Tyto alba*	N	NT		1	1
Strigidae	*Otus bakkamoena*	N	LC		1	1
Strigidae	*Otus thilohoffmanni*	E	EN			1
Strigidae	*Bubo nipalensis*	N	NT		1	1
Strigidae	*Ketupa zeylonensis*	N	LC			1
Strigidae	*Strix leptogrammica*	N	NT	1		1
Strigidae	*Glaucidium castanonotum*	E	VU		1	1
Strigidae	*Ninox scutulata*	N	LC	1	1	1
Podargidae	*Batrachostomus moniliger*	N	LC	1	1	1
Caprimulgidae	*Caprimulgus atripennis*	N	LC			1
Columbidae	*Columba livia*	N	LC	1	1	1
Columbidae	*Columba torringtoniae*	E	VU			1
Columbidae	*Stigmatopelia chinensis*	N	LC	1	1	1
Columbidae	*Chalcophaps indica*	N	LC	1	1	1
Columbidae	*Treron bicinctus*	N	LC		1	1
Columbidae	*Treron pompadora*	E	LC	1	1	1
Columbidae	*Ducula aenea*	N	LC	1	1	1
Rallidae	*Gallirallus striatus*	N	VU		1	
Rallidae	*Amaurornis phoenicurus*	N	LC	1	1	1
Rallidae	*Porzana fusca*	N	VU	1	1	1
Rallidae	*Gallicrex cinerea*	N	NT	1	1	1
Rallidae	*Porphyrio porphyrio*	N	LC	1	1	1
Rallidae	*Gallinula chloropus*	N	LC	1	1	1
Scolopacidae	*Actitis hypoleucos*	M	NE	1	1	1
Rostratulidae	*Rostratula benghalensis*	N	VU		1	
Jacanidae	*Hydrophasianus chirurgus*	N	LC	1	1	1
Burhinidae	*Burhinus oedicnemus*	N	LC		1	
Recurvirostridae	*Himantopus himantopus*	N	LC	1	1	1
Charadriidae	*Charadrius dubius*	M	NE	1	1	
Charadriidae	*Charadrius alexandrinus*	M	NE			1
Charadriidae	*Vanellus indicus*	N	LC	1	1	1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Laridae	*Sterna bergii*	N	NT	1	1	
Accipitridae	*Pernis ptilorhyncus*	N	NT	1	1	1
Accipitridae	*Elanus caeruleus*	N	NT		1	1
Accipitridae	*Milvus migrans*	N	LC		1	
Accipitridae	*Haliastur indus*	N	LC	1	1	1
Accipitridae	*Haliaeetus leucogaster*	N	LC	1	1	1
Accipitridae	*Spilornis cheela*	N	LC	1	1	1
Accipitridae	*Accipiter trivirgatus*	N	VU		1	1
Accipitridae	*Accipiter badius*	N	LC	1	1	1
Accipitridae	*Accipiter virgatus*	N	VU			1
Accipitridae	*Ictinaetus malayensis*	N	NT		1	1
Accipitridae	*Hieraaetus kienerii*	N	NT	1		1
Accipitridae	*Spizaetus cirrhatus*	N	LC	1	1	1
Accipitridae	*Spizaetus nipalensis*	N	VU			1
Falconidae	*Falco tinnunculus*	N	EN	1	1	1
Falconidae	*Falco peregrinus*	N	VU		1	1
Podicipedidae	*Tachybaptus ruficollis*	N	LC	1	1	1
Anhingidae	*Anhinga melanogaster*	N	LC		1	
Phalacrocoracidae	*Phalacrocorax niger*	N	LC	1	1	1
Phalacrocoracidae	*Phalacrocorax fuscicollis*	N	LC	1	1	1
Phalacrocoracidae	*Phalacrocorax carbo*	N	NT		1	
Ardeidae	*Egretta garzetta*	N	LC	1	1	1
Ardeidae	*Ardea cinerea*	N	LC	1	1	1
Ardeidae	*Ardea purpurea*	N	LC	1	1	1
Ardeidae	*Casmerodius albus*	N	LC	1	1	1
Ardeidae	*Mesophoyx intermedia*	N	LC	1	1	1
Ardeidae	*Bubulcus ibis*	N	LC	1	1	1
Ardeidae	*Ardeola grayii*	N	LC	1	1	1
Ardeidae	*Butorides striata*	N	LC	1	1	1
Ardeidae	*Nycticorax nycticorax*	N	NT	1	1	1
Ardeidae	*Ixobrychus sinensis*	N	NT	1	1	1
Ardeidae	*Ixobrychus cinnamomeus*	N	NT	1	1	1
Ardeidae	*Ixobrychus flavicollis*	N	LC	1	1	1
Threskiornithidae	*Threskiornis melanocephalus*	N	LC	1	1	1
Threskiornithidae	*Platalea leucorodia*	N	LC		1	1
Pelecanidae	*Pelecanus philippensis*	N	LC	1	1	1
Ciconiidae	*Mycteria leucocephala*	N	LC	1	1	1
Ciconiidae	*Anastomus oscitans*	N	LC	1	1	1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Ciconiidae	*Ciconia episcopus*	N	NT			1
Chloropseidae	*Chloropsis jerdoni*	N	LC	1	1	1
Chloropseidae	*Chloropsis aurifrons*	N	LC	1	1	1
Laniidae	*Lanius cristatus*	M	LC		1	
Corvidae	*Urocissa ornata*	E	VU			1
Corvidae	*Corvus splendens*	N	LC	1	1	1
Corvidae	*Corvus levaillantii*	N	LC	1	1	1
Artamidae	*Artamus fuscus*	N	LC	1	1	1
Oriolidae	*Oriolus xanthornus*	N	LC	1	1	1
Campephagidae	*Coracina macei*	N	LC		1	1
Campephagidae	*Coracina melanoptera*	N	LC	1	1	1
Campephagidae	*Pericrocotus cinnamomeus*	N	LC	1	1	1
Campephagidae	*Pericrocotus flammeus*	N	LC	1	1	1
Campephagidae	*Hemipus picatus*	N	LC	1	1	1
Rhipiduridae	*Rhipidura aureola*	N	LC		1	1
Dicruridae	*Dicrurus caerulescens*	N	LC	1	1	1
Dicruridae	*Dicrurus paradiseus*	N	NT	1		1
Monarchiidae	*Hypothymis azurea*	N	LC	1	1	1
Monarchiidae	*Terpsiphone paradisi*	N	LC	1	1	1
Aegithinidae	*Aegithina tiphia*	N	LC	1	1	1
Campephagidae	*Tephrodornis pondicerianus*	E	LC	1	1	1
Turdidae	*Zoothera spiloptera*	E	VU		1	1
Muscicapidae	*Muscicapa mutti*	M	NE		1	
Muscicapidae	*Cyornis tickelliae*	N	LC	1	1	1
Muscicapidae	*Copsychus saularis*	N	LC	1	1	1
Muscicapidae	*Copsychus malabaricus*	N	LC	1	1	1
Muscicapidae	*Saxicoloides fulicatus*	N	LC	1	1	1
Sturnidae	*Acridotheres tristis*	N	LC	1	1	1
Sturnidae	*Gracula ptilogenys*	E	VU			1
Sturnidae	*Gracula religiosa*	N	LC	1	1	1
Sittidae	*Sitta frontalis*	N	LC	1	1	1
Paridae	*Parus major*	N	LC	1	1	1
Hirundinidae	*Hirundo rustica*	M	NE	1	1	1
Hirundinidae	*Hirundo domicola*	N	VU		1	
Hirundinidae	*Hirundo daurica*	E	LC	1	1	1
Pycnonotidae	*Pycnonotus melanicterus*	E	LC	1	1	1
Pycnonotidae	*Pycnonotus cafer*	N	LC	1	1	1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Pycnonotidae	*Pycnonotus luteolus*	N	LC	1	1	1
Pycnonotidae	*Iole indica*	N	LC	1	1	1
Pycnonotidae	*Hypsipetes leucocephalus*	N	LC	1	1	1
Cisticolidae	*Cisticola juncidis*	N	LC	1	1	1
Cisticolidae	*Prinia hodgsonii*	N	LC	1	1	
Cisticolidae	*Prinia sylvatica*	N	LC	1	1	1
Cisticolidae	*Prinia inornata*	N	LC	1	1	1
Zosteropidae	*Zosterops palpebrosus*	N	LC	1	1	1
Sylviidae	*Acrocephalus stentoreus*	N	NT	1	1	1
Sylviidae	*Orthotomus sutorius*	N	LC	1	1	1
Timaliidae	*Garrulax cinereifrons*	E	EN			1
Timaliidae	*Pellorneum fuscocapillus*	E	LC	1	1	1
Timaliidae	*Pomatorhinus melanurus*	E	LC			1
Timaliidae	*Dumetia hyperythra*	N	LC	1	1	1
Timaliidae	*Rhopocichla atriceps*	N	LC	1	1	1
Timaliidae	*Chrysomma sinense*	N	LC	1	1	1
Timaliidae	*Turdoides rufescens*	E	VU			1
Timaliidae	*Turdoides affinis*	N	LC	1	1	1
Alaudidae	*Alauda gulgula*	N	LC			1
Dicaeidae	*Dicaeum agile*	N	NT	1	1	1
Dicaeidae	*Dicaeum vincens*	E	VU	1	1	1
Dicaeidae	*Dicaeum erythrorhynchos*	N	LC	1	1	1
Nectariniidae	*Nectarinia zeylonica*	N	LC	1	1	1
Nectariniidae	*Nectarinia asiatica*	N	LC	1	1	1
Nectariniidae	*Nectarinia lotenia*	N	LC	1	1	1
Passeridae	*Passer domesticus*	N	LC	1	1	1
Motacillidae	*Anthus rufulus*	N	LC	1	1	1
Apodidae	*Apus affinis*	N	LC		1	1
Ploceidae	*Ploceus manyar*	N	NT			1
Ploceidae	*Ploceus philippinus*	N	LC		1	
Estrildidae	*Lonchura striata*	N	LC	1	1	1
Estrildidae	*Lonchura kelaarti*	N	VU		1	1
Estrildidae	*Lonchura punctulata*	N	LC		1	1
Estrildidae	*Lonchura malacca*	N	LC		1	1
	Mammals					
Canidae	*Canis aureus*	N	LC	1	1	1
Cercopithecidae	*Macaca sinica*	E	LC	1	1	1
Cercopithecidae	*Semnopithecus vetulus*	E	EN	1	1	1
Cervidae	*Rusa unicolor*	N	NT			1

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Emballonuridae	*Taphozous longimanus*	N	EN			1
Emballonuridae	*Taphozous melanopogon*	N	VU		1	1
Felidae	*Felis chaus*	N	NT	1		
Felidae	*Panthera pardus*	N	EN		1	1
Felidae	*Prionailurus rubiginosus*	N	EN	1		
Felidae	*Prionailurus viverrinus*	N	EN	1	1	1
Herpestidae	*Herpestes brachyurus*	N	LC		1	1
Herpestidae	*Herpestes smithii*	N	LC	1		1
Herpestidae	*Herpestes vitticollis*	N	VU			1
Hipposideridae	*Hipposideros ater*	N	LC			1
Hipposideridae	*Hipposideros lankadiva*	N	VU	1	1	
Hipposideridae	*Hipposideros speoris*	N	LC		1	1
Hystricidae	*Hystrix indica*	N	LC	1	1	1
Leporidae	*Lepus nigricollis*	N	LC	1	1	1
Lorisidae	*Loris tardigradus*	E	VU	1	1	1
Manidae	*Manis crassicaudata*	N	NT		1	1
Megadermatidae	*Megaderma lyra*	N	VU			1
Megadermatidae	*Megaderma spasma*	N	VU	1	1	1
Molossidae	*Chaerephon plicatus*	N	CR			1
Muridae	*Bandicota bengalensis*	N	LC	1	1	1
Muridae	*Bandicota indica*	N	LC			1
Muridae	*Mus booduga*	N	LC	1		1
Muridae	*Mus mayori*	E	EN			1
Muridae	*Mus musculus*	N	LC	1	1	
Muridae	*Rattus rattus*	N	LC	1	1	1
Muridae	*Tatera indica*	N	LC		1	
Muridae	*Vandeleuria oleracea*	N	VU			1
Pteropodidae	*Cynopterus sphinx*	N	LC	1	1	1
Pteropodidae	*Rousettus leschenaulti*	N	LC	1	1	1
Rhinolophidae	*Rhinolophus beddomei*	N	VU	1		1
Rhinolophidae	*Rhinolophus rouxii*	N	LC	1		1
Sciuridae	*Funambulus layardi*	E	VU			1
Sciuridae	*Funambulus palmarum*	N	LC	1	1	1
Sciuridae	*Ratufa macroura*	N	LC		1	1
Soricidae	*Suncus murinus*	N	LC	1	1	1
Suidae	*Sus scrofa*	N	LC			1
Tragulidae	*Moschiola kathygre*	E	VU	1		1
Vespertillionidae	*Kerivoula picta*	N	NT		1	
Vespertillionidae	*Pipistrellus tenuis*	N	LC		1	1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
	Paradoxurus					
Viverridae	*hermaphoditus*	N	LC	1	1	1
Viverridae	*Viverricula indica*	N	LC	1	1	1
	Flowering Plants					
Acanthaceae	*Acanthus ilicifolius*	N	LC	1		
Acanthaceae	*Andrographis echioides*	N	LC			1
Acanthaceae	*Asystasia gangetica*	N	LC		1	
Acanthaceae	*Asystasia variabilis*	N	LC		1	
Acanthaceae	*Barleria involucrata*	N	VU			1
Acanthaceae	*Barleria prionitis*	N	LC			1
Acanthaceae	*Barleria vestita*	E	EN			1
	Crossandra					
Acanthaceae	*infundibuliformis*	N	LC	1		
	Dipteracanthus					
Acanthaceae	*prostratus*	N	LC			1
Acanthaceae	*Ecbolium ligustrinum*	N	LC			1
Acanthaceae	*Elytraria acaulis*	N	LC	1		
	Gymnostachyum					
Acanthaceae	*paniculatum*	E	VU			1
Acanthaceae	*Hygrophila balsamica*	N	LC			1
Acanthaceae	*Hygrophila ringens*	N	LC			1
Acanthaceae	*Justicia adhathoda*	N	LC	1		
Acanthaceae	*Justicia betonica*	N	LC	1		
Acanthaceae	*Justicia ceylanica*	E	VU			1
Acanthaceae	*Justicia hookeriana*	E	NT			1
Acanthaceae	*Justicia procumbens*	N	LC			1
Acanthaceae	*Phaulopsis imbricata*	N	CR		1	
	Pseuderanthemum					
Acanthaceae	*angustifolium*	N	CR		1	
	Ptyssiglottis					
Acanthaceae	*sanguinolenta*	E	CRp		1	
Acanthaceae	*Rhinacanthus flavovirens*	N	VU	1		
Acanthaceae	*Rhinacanthus nasutus*	N	LC		1	
	Rhinacanthus					
Acanthaceae	*polonnaruwensis*	N	LC		1	
Acanthaceae	*Rungia longifolia*	N	VU			1
	Stenosiphonium					
Acanthaceae	*cordifolium*	N	LC		1	
Acanthaceae	*Strobilanthes adenophora*	N	VU		1	

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Acanthaceae	*Strobilanthes lupulina*	N	LC			1
Acanthaceae	*Strobilanthes rhytisperma*	E	CR			1
Acanthaceae	*Thunbergia fragrans*	N	LC		1	
Acoraceae	*Acorus calamus*	PI	NE		1	
Aizoaceae	*Trianthema portulacastrum*	N	LC		1	
Alangiaceae	*Alangium salviifolium*	N	NT		1	
Amaranthaceae	*Achyranthes aspera*	N	LC	1		
Amaranthaceae	*Aerva lanata*	N	LC		1	
Amaranthaceae	*Alternanthera sessilis*	N	LC	1		
Amaranthaceae	*Amaranthus spinosus*	N	LC	1		
Amaranthaceae	*Amaranthus viridis*	N	LC	1		
Amaranthaceae	*Cyathula prostrata*	N	Vu		1	
Amaranthaceae	*Digera muricata*	N	NT	1		
Amaryllidaceae	*Crinum asiaticum*	N	LC			1
Amaryllidaceae	*Crinum defixum*	N	LC		1	
Amaryllidaceae	*Crinum latifolium*	N	VU		1	
Anacardiaceae	*Campnosperma zeylanicum*	E	LC			1
Anacardiaceae	*Lannea coromandelica*	N	LC			1
Anacardiaceae	*Mangifera zeylanica*	E	LC			1
Anacardiaceae	*Nothopegia beddomei*	N	LC			1
Anacardiaceae	*Semecarpus acuminata*	E	VU			1
Anacardiaceae	*Semecarpus coriacea*	E	VU		1	
Anacardiaceae	*Semecarpus gardneri*	E	LC			1
Anacardiaceae	*Semecarpus marginata*	E	NT			1
Anacardiaceae	*Semecarpus moonii*	E	VU			1
Anacardiaceae	*Semecarpus nigro-viridis*	E	LC			1
Anacardiaceae	*Semecarpus obovata*	E	EN			1
Anacardiaceae	*Semecarpus parvifolia*	E	LC			1
Anacardiaceae	*Semecarpus pubescens*	E	VU			1
Anacardiaceae	*Semecarpus subpeltata*	E	VU			1
Anacardiaceae	*Semecarpus walkeri*	E	LC			1
Anacardiaceae	*Spondias pinnata*	N	VU		1	
Ancistrocladaceae	*Ancistrocladus hamatus*	E	EN			1
Annonaceae	*Alphonsea hortensis*	E	CR		1	
Annonaceae	*Artabotrys zeylanicus*	N	LC			1
Annonaceae	*Cyathocalyx zeylanica*	N	LC			1
Annonaceae	*Desmos elegans*	E	VU			1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Annonaceae	*Desmos zeylanica*	E	NT			1
Annonaceae	*Enicosanthum acuminata*	E	LC			1
Annonaceae	*Goniothalamus gardneri*	E	VU	1		
Annonaceae	*Goniothalamus hookeri*	E	VU			1
Annonaceae	*Goniothalamus salicina*	E	VU			1
Annonaceae	*Goniothalamus thomsonii*	E	VU			1
Annonaceae	*Goniothalamus thwaitesii*	N	VU			1
Annonaceae	*Miliusa indica*	N	VU			1
Annonaceae	*Miliusa zeylanica*	E	VU			1
Annonaceae	*Phoenicanthus obliqua*	E	VU			1
Annonaceae	*Polyalthia cerasoides*	N	VU			1
Annonaceae	*Polyalthia coffeoides*	N	VU			1
Annonaceae	*Polyalthia korinti*	N	VU			1
Annonaceae	*Polyalthia longifolia*	N	VU		1	
Annonaceae	*Polyalthia moonii*	E	VU			1
Annonaceae	*Polyalthia persicaefolia*	E	VU		1	
Annonaceae	*Polyalthia suberosa*	N	VU		1	
Annonaceae	*Sageraea thwaitesii*	E	VU			1
Annonaceae	*Uvaria narum*	N	VU			1
Annonaceae	*Uvaria semecarpifolia*	E	VU			1
Annonaceae	*Uvaria sphenocarpa*	E	VU			1
Annonaceae	*Uvaria zeylanica*	N	VU		1	
Annonaceae	*Xylopia championii*	E	VU			1
Annonaceae	*Xylopia parvifolia*	N	VU		1	
Apiaceae	*Centella asiatica*	N	LC	1		
Apocynaceae	*Aganosma cymosum*	N	LC			1
Apocynaceae	*Alstonia scholaris*	N	LC		1	
Apocynaceae	*Anodendron manubriatum*	N	VU			1
Apocynaceae	*Cerbera odollam*	N	LC			1
Apocynaceae	*Chonemorpha fragrans*	N	VU			1
Apocynaceae	*Cleghornia acuminata*	E	VU			1
Apocynaceae	*Holarrhena mitis*	E	VU		1	
Apocynaceae	*Hunteria zeylanica*	N	NT		1	
Apocynaceae	*Ichnocarpus frutescens*	N	LC		1	
Apocynaceae	*Ochrosia oppositifolia*	N	EN			1
Apocynaceae	*Pagiantha dichotoma*	N	LC			1
Apocynaceae	*Parsonsia laevigata*	N	LC			1
Apocynaceae	*Petchia ceylanica*	E	NT			1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Apocynaceae	*Rauvolfia serpentina*	N	EN	1		
Apocynaceae	*Walidda antidysenterica*	E	LC	1		
Apocynaceae	*Willughbeia cirrhifera*	E	VU			1
Apocynaceae	*Wrightia tomentosa*	N	NT	1		
Aponogetonaceae	*Aponogeton crispus*	N	VU		1	
Aponogetonaceae	*Aponogeton rigidifolius*	E	EN			1
Aquifoliaceae	*Ilex walkeri*	N	LC			1
Aquifoliaceae	*Ilex zeylanica*	N	NT			1
Araceae	*Alocasia fornicata*	N	CR		1	
Araceae	*Arisaema tortuosum*	N	EN			1
Araceae	*Colocasia esculenta*	N	LC		1	
Araceae	*Cryptocoryne alba*	E	CR			1
Araceae	*Cryptocoryne beckettii*	E	VU			1
Araceae	*Cryptocoryne bogneri*	E	CR			1
Araceae	*Cryptocoryne thwaitesii*	E	EN			1
Araceae	*Lagenandra bogneri*	E	EN			1
Araceae	*Lagenandra koenigii*	E	EN			1
Araceae	*Lagenandra ovata*	N	LC	1		
Araceae	*Lagenandra praetermissa*	E	LC			1
Araceae	*Lagenandra thwaitesii*	E	EN			1
Araceae	*Lasia spinosa*	N	LC	1		
Araceae	*Pothos hookeri*	E	VU			1
Araceae	*Pothos parvispadix*	E	EN			1
Araceae	*Pothos remotiflorus*	E	VU			1
Araceae	*Pothos scandens*	N	LC			1
Araceae	*Rhaphidophora pertusa*	N	EN			1
Araceae	*Theriophonum minutum*	N	LC		1	
Araceae	*Typhonium flagelliforme*	N	CR		1	
Araceae	*Typhonium roxburghii*	N	NT		1	
Araceae	*Typhonium trilobatum*	N	LC		1	
Araliaceae	*Schefflera emarginata*	E	VU			1
Araliaceae	*Schefflera steltata*	N	LC			1
Arecaceae	*Areca catechu*	N	VU	1	1	1
Arecaceae	*Areca concinna*	E	VU			1
Arecaceae	*Calamus delicatulus*	E	VU			1
Arecaceae	*Calamus digitatus*	E	VU			1
Arecaceae	*Calamus ovoideus*	E	VU			1
Arecaceae	*Calamus pachystemonus*	E	VU			1
Arecaceae	*Calamus pseudotenuis*	N	VU			1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Arecaceae	*Calamus radiatus*	E	VU			1
Arecaceae	*Calamus rivalis*	E	VU			1
Arecaceae	*Calamus rotang*	N	VU			1
Arecaceae	*Calamus thwaitesii*	N	VU			1
Arecaceae	*Calamus zeylanicus*	E	VU			1
Arecaceae	*Caryota urens*	N	VU			1
Arecaceae	*Cocos nucifera*	N	VU		1	
Arecaceae	*Loxococcus rupicola*	E	VU			1
Arecaceae	*Nypa fruticans*	N	VU			1
Arecaceae	*Oncosperma fasciculatum*	E	VU			1
Arecaceae	*Phoenix pusilla*	N	VU			1
Aristolochiaceae	*Aristolochia Indica*	N	LC		1	
Aristolochiaceae	*Thottea siliquosa*	N	LC			1
Asclepiadaceae	*Calotropis gigantea*	N	LC	1		
Asclepiadaceae	*Ceropegia candelabrum*	N	LC		1	
Asclepiadaceae	*Gymnema pergularioides*	E	VU			1
Asclepiadaceae	*Gymnema rotundatum*	E	EN			1
Asclepiadaceae	*Gymnema sylvestre*	N	VU	1		
Asclepiadaceae	*Hoya ovalifolia*	N	VU			1
Asclepiadaceae	*Sarcostemma brunonianum*	N	NT		1	
Asclepiadaceae	*Tylophora indica*	N	LC		1	
Asclepiadaceae	*Tylophora tenuissima*	N	LC			1
Asclepiadaceae	*Wattakaka volubilis*	N	LC			1
Asparagaceae	*Asparagus falcatus*	N	LC		1	
Asparagaceae	*Asparagus racemosus*	N	LC		1	
Asteraceae	*Bidens biternata*	N	LC			1
Asteraceae	*Blumea lacera*	N	LC		1	
Asteraceae	*Eclipta prostrata*	N	LC	1		
Asteraceae	*Elephantopus scaber*	N	LC	1		
Asteraceae	*Emilia baldwinii*	E	NT		1	
Asteraceae	*Emilia exserta*	E	LC		1	
Asteraceae	*Emilia sonchifolia*	N	LC	1		
Asteraceae	*Emilia zeylanica*	E	LC	1		
Asteraceae	*Epaltes divaricata*	N	LC			1
Asteraceae	*Launaea sarmentosa*	N	LC		1	1
Asteraceae	*Mikania cordata*	N	NE			1
Asteraceae	*Psiadia ceylanica*	N	LC	1		
Asteraceae	*Sphaeranthus africanus*	N	LC		1	

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Asteraceae	*Sphaeranthus indicus*	N	LC	1		
Asteraceae	*Spilanthes calva*	N	LC	1		
Asteraceae	*Spilanthes paniculata*	N	LC		1	
Asteraceae	*Vernonia arborea*	N	VU			1
Asteraceae	*Vernonia cinerea*	N	LC			1
Asteraceae	*Wedelia chinensis*	N	LC			1
Avicenniaceae	*Avicennia marina*	N	LC		1	
Avicenniaceae	*Avicennia officinalis*	N	NT	1		
Balsaminaceae	*Hydrocera triflora*	N	VU	1		
Balsaminaceae	*Impatiens ciliifolia*	E	VU			1
Balsaminaceae	*Impatiens flaccida*	N	VU			1
Balsaminaceae	*Impatiens janthina*	E	VU			1
Balsaminaceae	*Impatiens repens*	E	VU			1
Balsaminaceae	*Impatiens thwaitesii*	E	VU		1	
Basellacea	*Basella alba*	N	EN	1		
Begoniaceae	*Begonia malabarica*	N	NT			1
Begoniaceae	*Begonia tenera*	E	CR			1
Bignoniaceae	*Dolichandrone spathacea*	N	VU			1
Bignoniaceae	*Oroxylum indicum*	N	LC			1
Bignoniaceae	*Stereospermum colais*	N	LC			1
Bombacaceae	*Bombax ceiba*	N	LC			1
Bombacaceae	*Ceiba pentandra var pentandra*	N	LC	1		
Bombacaceae	*Cullenia ceylanica*	E	LC			1
Bombacaceae	*Cullenia rosayroana*	E	LC			1
Boraginaceae	*Heliotropium indicum*	N	LC	1		
Boraginaceae	*Heliotropium scabrum*	N	LC		1	
Burmanniaceae	*Burmannia championii*	N	VU			1
Burmanniaceae	*Burmannia coelestis*	N	VU			1
Burmanniaceae	*Burmannia disticha*	N	VU		1	
Burmanniaceae	*Burmannia pusilla*	N	VU		1	
Burseraceae	*Canarium zeylanicum*	E	VU			1
Burseraceae	*Commiphora berryi*	N	LC		1	
Cactaceae	*Rhipsalis baccifera*	N	VU		1	
Campanulaceae	*Lobelia zeylanica*	N	LC			1
Cannaraceae	*Connarus championii*	E	LC			1
Cannaraceae	*Connarus monocarpus*	N	LC		1	
Cannaraceae	*Ellipanthus unifoliatus*	E	LC			1
Cannaraceae	*Rourea minor*	N	LC		1	

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Capparaceae	*Capparis zeylanica*	N	LC	1		
Capparaceae	*Cleome aspara*	N	VU		1	
Capparaceae	*Cleome chelidonii*	N	LC		1	
Capparaceae	*Cleome viscosa*	N	LC		1	
Capparaceae	*Craveta aldestonii*	N	LC	1		
Caryophyllaceae	*Polycarpaea corymbosa*	N	LC		1	
Celastraceae	*Bhesa ceylanica*	E	NT	1		
Celastraceae	*Bhesa nitidissima*	E	VU		1	
Celastraceae	*Cassine balae*	E	LC		1	
Celastraceae	*Cassine glauca*	E	VU		1	
Celastraceae	*Euonymus revolutus*	E	EN			1
Celastraceae	*Euonymus thwaitesii*	E	LC			1
Celastraceae	*Euonymus walkeri*	E	LC			1
Celastraceae	*Glyptopetalum zeylanicum*	N	LC			1
Celastraceae	*Kokoona zeylanica*	E	LC			1
Celastraceae	*Maytenus emarginata*	N	LC	1		
Celastraceae	*Microtropis wallichiana*	N	NT			1
Celastraceae	*Pleurostylia opposita*	N	NT			1
Ceratophyllaceae	*Ceratophyllum demersum*	N	LC			1
Chloranthaceae	*Sarcandra chloranthoides*	N	EN			1
Clusiaceae	*Calophyllum acidus*	N	LC			1
Clusiaceae	*Calophyllum bracteatum*	E	VU			1
Clusiaceae	*Calophyllum calaba*	E	VU			1
Clusiaceae	*Calophyllum cordato-oblongum*	E	VU			1
Clusiaceae	*calophyllum inophyllum*	N	VU			1
Clusiaceae	*Calophyllum moonii*	E	VU			1
Clusiaceae	*Calophyllum thwaitesii*	E	VU			1
Clusiaceae	*Calophyllum tomentosum*	E	VU		1	
Clusiaceae	*Calophyllum trapezifolium*	E	NT		1	
Clusiaceae	*Calophyllum walkeri*	E	LC		1	
Clusiaceae	*Garcinia echinocarpa*	N	EN			1
Clusiaceae	*Garcinia hermonii*	E	EN			1
Clusiaceae	*Garcinia morella*	N	LC			1
Clusiaceae	*Garcinia quaesita*	E	CR			1
Clusiaceae	*Garcinia terpnophylla*	E	LC			1
Clusiaceae	*Garcinia thwaitessii*	E	LC			1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Clusiaceae	*Mesua ferrea*	N	LC			1
Clusiaceae	*Mesua stylosa*	E	LC			1
Clusiaceae	*Mesua thwaitesii*	E	LC			1
Colchicaceae	*Gloriosa superba*	N	EN		1	
Commelinaceae	*Commelina diffusa*	N	LC	1		
Commelinaceae	*Cyanotis axillaris*	N	LC	1		
Commelinaceae	*Cyanotis cristata*	N	VU		1	
Commelinaceae	*Murdannia gigantea*	N	NT			1
Commelinaceae	*Murdannia nudiflora*	N	LC		1	
Commelinaceae	*Murdannia vaginata*	N	EN		1	
Commelinaceae	*Pollia secundiflora*	N	LC			1
Convolvulaceae	*Argyreia populifolia*	E	LC			1
Convolvulaceae	*Argyreia splendens*	N	CRp		1	
Convolvulaceae	*Argyreia thwaitesii*	E	LC		1	
Convolvulaceae	*Bonamia semidigyna*	N	VU		1	
Convolvulaceae	*Cuscuta chinensis*	N	LC		1	
Convolvulaceae	*Erycibe paniculata*	N	LC			1
Convolvulaceae	*Evolvulus alsinoides*	N	LC		1	
Convolvulaceae	*Hewittia sublobata*	N	LC		1	
Convolvulaceae	*Ipomoea aquatica*	N	LC	1		
Convolvulaceae	*Ipomoea asarifolia*	N	NE	1		
Convolvulaceae	*Ipomoea campanulata*	N	EN			1
Convolvulaceae	*Ipomoea deccana*	N	DD			1
Convolvulaceae	*Ipomoea littoralis*	N	NT			1
Convolvulaceae	*Ipomoea obscura*	N	LC			1
Convolvulaceae	*Ipomoea pes-caprae*	N	LC		1	
Convolvulaceae	*Ipomoea sepiaria*	N	LC		1	
Convolvulaceae	*Merremia hederacea*	N	LC			1
Convolvulaceae	*Merremia tridentata*	N	LC		1	
Convolvulaceae	*Merremia umbellata*	N	LC			1
Convolvulaceae	*Operculina turpethum*	N	LC		1	
Cornaceae	*Mastixia macrophylla*	N	VU			1
Cornaceae	*Mastixia tetrandra*	N	LC			1
Cucurbitaceae	*Coccinia grandis*	N	LC		1	
Cucurbitaceae	*Ctenolepis garcinii*	N	VU	1		
Cucurbitaceae	*Diplocyclos palmatus*	N	LC	1		
Cucurbitaceae	*Momordica dioica*	N	LC	1		
Cucurbitaceae	*Mukia maderaspatana*	N	NT			1
Cucurbitaceae	*Solena amplexicaulis*	N	LC	1		

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Cucurbitaceae	*Trichosanthes cucumerina*	N	LC			1
Cucurbitaceae	*Zanonia indica*	N	VU			1
Cucurbitaceae	*Zehneria thwaitesii*	N	VU		1	
Cyperaceae	*Actinoscirpus grossus*	N	LC	1		
Cyperaceae	*Bulbostylis barbata*	N	LC		1	
Cyperaceae	*Bulbostylis puberula*	N	LC		1	
Cyperaceae	*Carex indica*	N	VU		1	
Cyperaceae	*Cyperus arenarius*	N	LC		1	
Cyperaceae	*Cyperus brevifolius*	N	LC	1		
Cyperaceae	*Cyperus bulbosus*	N	LC	1		
Cyperaceae	*Cyperus compressus*	N	LC		1	
Cyperaceae	*Cyperus corymbosus*	N	NT		1	
Cyperaceae	*Cyperus cuspidatus*	N	LC	1		
Cyperaceae	*Cyperus cyperinus*	N	LC		1	
Cyperaceae	*Cyperus difformis*	N	LC	1		
Cyperaceae	*Cyperus digitatus*	N	LC		1	
Cyperaceae	*Cyperus dubius*	N	LC		1	
Cyperaceae	*Cyperus exaltatus*	N	LC	1		
Cyperaceae	*Cyperus haspan*	N	LC			1
Cyperaceae	*Cyperus iria*	N	LC			1
Cyperaceae	*Cyperus javanicus*	N	LC			1
Cyperaceae	*Cyperus kyllingia*	N	LC		1	
Cyperaceae	*Cyperus melanospermus*	N	LC	1		
Cyperaceae	*Cyperus pangorei*	N	LC	1		
Cyperaceae	*Cyperus pilosus*	N	LC			1
Cyperaceae	*Cyperus platyphyllus*	N	NT	1		
Cyperaceae	*Cyperus platystylis*	N	NT		1	
Cyperaceae	*Cyperus procerus*	N	LC		1	
Cyperaceae	*Cyperus pulcherrimus*	N	NT	1		
Cyperaceae	*Cyperus pygmaeus*	N	LC		1	
Cyperaceae	*Cyperus rotundus*	N	LC	1		
Cyperaceae	*Cyperus stoloniferus*	N	LC	1		
Cyperaceae	*Cyperus tenuispica*	N	LC	1		
Cyperaceae	*Cyperus triceps*	N	LC		1	
Cyperaceae	*Cyperus umbellatus*	N	VU			1
Cyperaceae	*Diplacrum caricinum*	N	NT			1
Cyperaceae	*Eleocharis actangula*	N	LC			1
Cyperaceae	*Eleocharis confervoides*	N	CRp		1	
Cyperaceae	*Eleocharis dulcis*	N	LC			1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Cyperaceae	*Eleocharis geniculata*	N	LC	1		
Cyperaceae	*Eleocharis lankana*	E	CR	1		
Cyperaceae	*Eleocharis ochrostachys*	N	EN		1	
Cyperaceae	*Eleocharis retroflexa*	N	VU	1		
Cyperaceae	*Eleocharis spiralis*	N	LC			1
Cyperaceae	*Fimbristylis acuminata*	N	LC			1
Cyperaceae	*Fimbristylis aestivalis*	N	EN		1	
Cyperaceae	*Fimbristylis argentea*	N	LC		1	
Cyperaceae	*Fimbristylis cinnamometorum*	N	LC			1
Cyperaceae	*Fimbristylis cymosa*	N	LC		1	
Cyperaceae	*Fimbristylis dichotoma*	N	LC		1	
Cyperaceae	*Fimbristylis dipsacea*	N	CRp			1
Cyperaceae	*Fimbristylis falcata*	N	LC			1
Cyperaceae	*Fimbristylis ferruginea*	N	LC			1
Cyperaceae	*Fimbristylis fusca*	N	EN			1
Cyperaceae	*Fimbristylis insignis*	N	VU		1	
Cyperaceae	*Fimbristylis leptoclada*	N	CRp		1	
Cyperaceae	*Fimbristylis miliacea*	N	LC			1
Cyperaceae	*Fimbristylis nutans*	N	VU		1	
Cyperaceae	*Fimbristylis ovata*	N	LC		1	
Cyperaceae	*Fimbristylis polytrichoides*	N	LC	1		
Cyperaceae	*Fimbristylis schoenoides*	N	LC		1	
Cyperaceae	*Fimbristylis tetragona*	N	LC			1
Cyperaceae	*Fimbristylis thouarsii*	N	EN		1	
Cyperaceae	*Fimbristylis umbellaris*	N	LC			1
Cyperaceae	*Fuirena capitata*	N	LC		1	
Cyperaceae	*Fuirena ciliaris*	N	LC			1
Cyperaceae	*Fuirena umbellata*	N	LC	1		
Cyperaceae	*Hypolytrum nemorum*	N	VU		1	
Cyperaceae	*Hypolytrum scirpoides*	N	EN			1
Cyperaceae	*Isolepis fluitans*	N	EN			1
Cyperaceae	*Lepironia articulata*	N	VU		1	
Cyperaceae	*Lipocarpha chinensis*	N	LC			1
Cyperaceae	*Mapania immersa*	E	CR			1
Cyperaceae	*Mapania Zeylanica*	N	EN			1
Cyperaceae	*Pycreus polystachyos*	N	LC		1	
Cyperaceae	*Pycreus flavidus*	N	LC		1	
Cyperaceae	*Pycreus sanguinolentus*	N	NT	1		

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Cyperaceae	*Remirea maritima*	N	VU		1	
Cyperaceae	*Rhynchospora chinensis*	N	CRp			1
Cyperaceae	*Rhynchospora corymbosa*	N	LC			1
Cyperaceae	*Rhynchospora gracillima*	N	CRp			1
Cyperaceae	*Rhynchospora rubra*	N	NT		1	
Cyperaceae	*Rhynchospora triflora*	N	CRp			1
Cyperaceae	*Rikliella squarrosa*	N	LC		1	
Cyperaceae	*Schoenoplectus juncoides*	N	LC			1
Cyperaceae	*Schoenoplectus littoralis*	N	LC		1	
Cyperaceae	*Schoenoplectus supinus*	N	LC		1	
Cyperaceae	*Scirpodendron ghaeri*	N	CRp		1	
Cyperaceae	*Scleria levis*	N	VU		1	
Cyperaceae	*Scleria lithosperma*	N	LC		1	
Cyperaceae	*Scleria mikawana*	N	VU			1
Cyperaceae	*Scleria neesii*	N	EN			1
Cyperaceae	*Scleria pilosa*	E	CRp			1
Cyperaceae	*Scleria poaeformis*	N	LC		1	
Cyperaceae	*Scleria rugosa*	N	NT			1
Cyperaceae	*Scleria sumatrensis*	N	NT			1
Cyperaceae	*Scleria terrestris*	N	LC			1
Cyperaceae	*Tricostularia undulata*	N	CRp			1
Dichapetalaceae	*Dichapetalum gelonioides*	N	LC			1
Dichapetalaceae	*Dichapetalum zeylanicum*	E	NT	1		
Dilleniaceae	*Acrotrema dissectum*	E	CR			1
Dilleniaceae	*Acrotrema lanceolatum*	E	EN			1
Dilleniaceae	*Acrotrema uniflorum*	E	VU			1
Dilleniaceae	*Acrotrema walkeri*	E	VU			1
Dilleniaceae	*Dillenia retusa*	N	LC		1	
Dilleniaceae	*Dillenia suffruticosa*	I	NE			1
Dilleniaceae	*Dillenia triquetra*	N	LC		1	
Dilleniaceae	*Schumacheria alnifolia*	E	EN			1
Dilleniaceae	*Schumacheria angustifolia*	E	EN			1
Dilleniaceae	*Schumacheria castaneifolia*	E	LC		1	
Dilleniaceae	*Tetracera akara*	N	VU		1	
Dilleniaceae	*Tetracera sarmentosa*	N	LC		1	
Dioscoreacea	*Dioscorea bulbifera*	N	LC	1		
Dioscoreacea	*Dioscorea oppositifolia*	N	NT	1		

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Dioscoreacea	*Dioscorea pentaphylla*	N	LC	1		
Dioscoreacea	*Dioscorea tomentosa*	N	LC	1		
Dipterocarpaceae	*Balanocarpus brevipetiolaris*	E	EN			1
Dipterocarpaceae	*Dipterocarpus glandulosus*	E	EN	1		
Dipterocarpaceae	*Dipterocarpus hispidus*	E	VU			1
Dipterocarpaceae	*Dipterocarpus insignis*	E	EN			1
Dipterocarpaceae	*Dipterocarpus zeylanicus*	E	NT			1
Dipterocarpaceae	*Doona affinis*	E	VU			1
Dipterocarpaceae	*Doona congestifolora*	E	VU			1
Dipterocarpaceae	*Doona macrophylla*	E	VU			1
Dipterocarpaceae	*Doona nervosa*	E	VU			1
Dipterocarpaceae	*Doona oblonga*	E	VU			1
Dipterocarpaceae	*Doona ovalifolia*	E	EW	1		
Dipterocarpaceae	*Doona trapezifolia*	E	VU			1
Dipterocarpaceae	*Doona venulosa*	E	VU			1
Dipterocarpaceae	*Hopea discolor*	E	EN			1
Dipterocarpaceae	*Hopea jucunda*	E	VU			1
Dipterocarpaceae	*Hopea modesta*	E	EN			1
Dipterocarpaceae	*Shorea dyeri*	E	VU			1
Dipterocarpaceae	*Shorea lissophylla*	E	VU			1
Dipterocarpaceae	*Shorea oblongifolia*	E	VU			1
Dipterocarpaceae	*Shorea pallescens*	E	EN		1	
Dipterocarpaceae	*Shorea stipularis*	E	VU			1
Dipterocarpaceae	*Stemonoporus canaliculatus*	E	EN			1
Dipterocarpaceae	*Stemonoporus kanneliyensis*	E	EN			1
Dipterocarpaceae	*Stemonoporus lancifolius*	E	EN			1
Dipterocarpaceae	*Stemonoporus marginalis*	E	CR			1
Dipterocarpaceae	*Stemonoporus moonii*	E	CR			1
Dipterocarpaceae	*Stemonoporus reticulatus*	E	EN			1
Dipterocarpaceae	*Stemonoporus wightii*	E	EN		1	
Dipterocarpaceae	*Sunaptea scabriuscula*	E	EN			1
Dipterocarpaceae	*Vateria copallifera*	E	VU			1
Dipterocarpaceae	*Vatica affinis*	E	EN			1
Dipterocarpaceae	*Vatica obscura*	E	VU			1
Dipterocarpaceae	*Vatica paludosa*	E	EN			1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Dracaenaceae	*Dracaena thwaitesii*	N	NT			1
Droseraceae	*Drosera burmannii*	N	VU			1
Droseraceae	*Drosera indica*	N	VU			1
Ebenaceae	*Diospyos nummulariifolia*	E	LC		1	
Ebenaceae	*Diospyros acuminata*	E	VU			1
Ebenaceae	*Diospyros albiflora*	E	EN			1
Ebenaceae	*Diospyros atrata*	E	EN			1
Ebenaceae	*Diospyros attenuata*	E	EN			1
Ebenaceae	*Diospyros chaetocarpa*	E	EN			1
Ebenaceae	*Diospyros ebenoides*	E	EN			1
Ebenaceae	*Diospyros ebenum*	N	EN			1
Ebenaceae	*Diospyros hirsuta*	E	VU	1		
Ebenaceae	*Diospyros insignis*	N	VU		1	
Ebenaceae	*Diospyros malabarica*	N	LC		1	
Ebenaceae	*Diospyros moonii*	E	EN			1
Ebenaceae	*Diospyros oblongifolia*	E	VU			1
Ebenaceae	*Diospyros oppositifolia*	E	EN			1
Ebenaceae	*Diospyros ovalifolia*	N	LC			1
Ebenaceae	*Diospyros quaesita*	E	EN			1
Ebenaceae	*Diospyros racemosa*	N	VU	1		
Ebenaceae	*Diospyros rheophytica*	E	EN			1
Ebenaceae	*Diospyros sylvatica*	N	VU			1
Ebenaceae	*Diospyros thwaitesii*	E	VU			1
Ebenaceae	*Diospyros walkeri*	N	VU	1		
Ebenaceae	*Maba buxifolia*	N	LC			1
Elaeocarpaceae	*Elaeocarpus amoenus*	E	VU			1
Elaeocarpaceae	*Elaeocarpus hedyosmus*	E	EN			1
Elaeocarpaceae	*Elaeocarpus serratus*	N	LC		1	
Elaeocarpaceae	*Elaeocarpus subvillosus*	E	NT			1
Eriocaulaceae	*Eriocaulon atratum*	E	VU		1	
Eriocaulaceae	*Eriocaulon brownianum*	N	VU		1	
Eriocaulaceae	*Eriocaulon cinereum*	N	LC	1		
Eriocaulaceae	*Eriocaulon fergusonii*	E	CRp		1	
Eriocaulaceae	*Eriocaulon fluviatile*	N	CR			1
Eriocaulaceae	*Eriocaulon psammophilum*	E	EN			1
Eriocaulaceae	*Eriocaulon quinquangulare*	N	LC		1	
Eriocaulaceae	*Eriocaulon setaceum*	N	LC			1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Eriocaulaceae	*Eriocaulon sexangulare*	N	LC	1		
Eriocaulaceae	*Eriocaulon truncatum*	N	LC	1		
Eriocaulaceae	*Eriocaulon walkeri*	E	VU			1
Eriocaulaceae	*Eriocaulon willdenovianum*	N	NT		1	
Erythroxylaceae	*Erythroxylum moonii*	N	LC			1
Erythroxylaceae	*Erythroxylum obtusifolium*	N	LC			1
Erythroxylaceae	*Erythroxylum zeylanicum*	E	LC	1		
Euphobiaceae	*Macaranga digyna*	E	LC			1
Euphobiaceae	*Mallotus repandus*	N	LC			1
Euphobiaceae	*Mallotus resinosus*	E	LC			1
Euphobiaceae	*Mallotus rhamnifolius*	N	LC			1
Euphobiaceae	*Margaritaria cyanospermus*	E	VU			1
Euphorbiaceae	*Acalypha indica*	N	LC		1	
Euphorbiaceae	*Acalypha lanceolata*	N	LC		1	
Euphorbiaceae	*Actephila excelsa*	N	LC			1
Euphorbiaceae	*Agrostistachys coriacea*	E	LC			1
Euphorbiaceae	*Agrostistachys hookeri*	E	LC			1
Euphorbiaceae	*Agrostistachys indica*	N	LC			1
Euphorbiaceae	*Agrostistachys intramarginalis*	E	LC			1
Euphorbiaceae	*Antidesma alexiteria*	N	LC		1	
Euphorbiaceae	*Antidesma bunius*	N	LC			1
Euphorbiaceae	*Antidesma ghaesembilla*	N	LC		1	
Euphorbiaceae	*Antidesma pyrifolium*	E	LC			1
Euphorbiaceae	*Antidesma thwaitesianum*	N	VU			1
Euphorbiaceae	*Antidesma walkeri*	E	LC			1
Euphorbiaceae	*Aporusa cardiosperma*	N	LC			1
Euphorbiaceae	*Aporusa lanceolata*	E	LC			1
Euphorbiaceae	*Aporusa lindleyana*	N	LC			1
Euphorbiaceae	*Blachia umbellata*	N	LC			1
Euphorbiaceae	*Breynia retusa*	N	LC			1
Euphorbiaceae	*Breynia vitis-idaea*	N	LC			1
Euphorbiaceae	*Bridelia moonii*	E	LC			1
Euphorbiaceae	*Bridelia retusa*	N	LC		1	
Euphorbiaceae	*Chaetocarpus*	N	LC			1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
	castanocarpus					
Euphorbiaceae	*Chaetocarpus coriaceus*	E	LC			1
Euphorbiaceae	*Chaetocarpus ferrugineus*	E	VU			1
Euphorbiaceae	*Chaetocarpus pubescens*	E	VU			1
Euphorbiaceae	*Cleistanthus acuminatus*	E	EN		1	
Euphorbiaceae	*Cleistanthus collinus*	N	NE		1	
Euphorbiaceae	*Cleistanthus ferrugineus*	E	LC			1
Euphorbiaceae	*Cleistanthus pallidus*	E	LC			1
Euphorbiaceae	*Cleistanthus patulus*	N	LC			1
Euphorbiaceae	*Cleistanthus robustus*	E	VU			1
Euphorbiaceae	*Croton aromaticus*	N	LC	1		
Euphorbiaceae	*Croton laccifer*	N	LC			1
Euphorbiaceae	*Croton moonii*	E	EN			1
Euphorbiaceae	*Croton tiglium*	N	NE		1	
Euphorbiaceae	*Dimorphocalyx glabellus*	N	LC			1
Euphorbiaceae	*Drypetes lanceolata*	E	EN			1
Euphorbiaceae	*Drypetes sepiaria*	N	LC		1	
Euphorbiaceae	*Euphorbia antiquorum*	N	LC			1
Euphorbiaceae	*Euphorbia hirta*	N	LC		1	
Euphorbiaceae	*Euphorbia indica*	N	LC	1		
Euphorbiaceae	*Euphorbia thymifolia*	N	LC		1	
Euphorbiaceae	*Excoecaria agallocha*	N	LC	1		
Euphorbiaceae	*Fahrenheitia minor*	E	LC			1
Euphorbiaceae	*Fahrenheitia zeylanica*	N	LC			1
Euphorbiaceae	*Flueggea leucopyrus*	N	LC		1	
Euphorbiaceae	*Glochidion acutifolium*	E	NT			1
Euphorbiaceae	*Glochidion coriaceum*	E	LC			1
Euphorbiaceae	*Glochidion mooni*	E	LC			1
Euphorbiaceae	*Glochidion nemorale*	E	LC			1
Euphorbiaceae	*Glochidion stellatum*	E	LC			1
Euphorbiaceae	*Glochidion zeylanicum*	N	LC		1	
Euphorbiaceae	*Macaranga indica*	N	LC		1	
Euphorbiaceae	*Macaranga peltata*	E	LC			1
Euphorbiaceae	*Mallotus fuscescens*	E	LC		1	
Euphorbiaceae	*Mallotus philippensis*	N	LC			1
Euphorbiaceae	*Mallotus tetracoccus*	N	LC		1	
Euphorbiaceae	*Margaritaria indicus*	N	VU			1
Euphorbiaceae	*Micrococca mercurialis*	N	LC	1		
Euphorbiaceae	*Phyllanthus amarus*	N	LC		1	

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Euphorbiaceae	*Phyllanthus debilis*	N	LC		1	
Euphorbiaceae	*Phyllanthus myrtifolius*	E	NT		1	
Euphorbiaceae	*Phyllanthus reticulatus*	N	LC		1	
Euphorbiaceae	*Phyllanthus simplex*	N	LC		1	
Euphorbiaceae	*Phyllanthus urinaria*	N	LC	1		
Euphorbiaceae	*Ptychopyxis thwaitesii*	E	VU			1
Euphorbiaceae	*Putranjiva zeylanica*	E	NT			1
Euphorbiaceae	*Sapium indicum*	N	VU			1
Euphorbiaceae	*Sapium insigne*	N	LC			1
Euphorbiaceae	*Sauropus androgynus*	N	LC		1	
Euphorbiaceae	*Sauropus bacciformis*	N	LC	1		
Euphorbiaceae	*Sebastiania chamaelea*	N	LC		1	
Euphorbiaceae	*Suregada lanceolata*	N	LC			1
Euphorbiaceae	*Suregada angustifolia*	N	LC			1
Euphorbiaceae	*Synadenium grantii*	—	NE		1	
Euphorbiaceae	*Tragia involucrata*	N	LC	1		
Euphorbiaceae	*Trigonostemon diplopetalus*	E	CRp			1
Fabaceae	*Abarema bigemina*	E	LC			1
Fabaceae	*Abrus precatorius*	N	LC	1		
Fabaceae	*Acacia caesia*	N	LC			1
Fabaceae	*Adenanthera bicolor*	E	NT			1
Fabaceae	*Adenanthera pavonina*	N	LC			1
Fabaceae	*Aeschynomene aspera*	N	LC	1		
Fabaceae	*Aeschynomene indica*	N	LC	1		
Fabaceae	*Albizia chinensis*	N	VU			1
Fabaceae	*Albizia lebbeck*	N	NT			1
Fabaceae	*Alysicarpus longifolius*	N	DD		1	
Fabaceae	*Alysicarpus monilifer*	N	DD		1	
Fabaceae	*Alysicarpus rugosus*	N	DD		1	
Fabaceae	*Alysicarpus scariosus*	N	DD		1	
Fabaceae	*Alysicarpus vaginalis*	N	LC		1	
Fabaceae	*Aphyllodium biarticulatum*	N	LC		1	
Fabaceae	*Bauhinia racemosa*	N	LC		1	
Fabaceae	*Butea monosperma*	N	VU		1	
Fabaceae	*Caesalpinia bonduc*	N	LC			1
Fabaceae	*Caesalpinia crista*	N	VU	1		
Fabaceae	*Caesalpinia hymenocarpa*	N	NT			1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Fabaceae	*Canavalia cathartica*	N	LC		1	
Fabaceae	*Canavalia rosea*	N	LC		1	
Fabaceae	*Canavalia virosa*	N	LC	1		
Fabaceae	*Cassia absus*	N	LC	1		
Fabaceae	*Cassia auriculata*	N	LC	1		
Fabaceae	*Cassia hirsuta*	N	LC		1	
Fabaceae	*Cassia kleinii*	N	LC			1
Fabaceae	*Cassia occidentalis*	N	LC	1		
Fabaceae	*Cassia siamea*	N	LC			1
Fabaceae	*Cassia sophera*	N	LC	1		
Fabaceae	*Cassia tora*	N	LC	1		
Fabaceae	*Clitoria ternatea*	N	LC		1	
Fabaceae	*Crotalaria laburnifolia*	N	LC		1	
Fabaceae	*Crotalaria lunulata*	N	LC			1
Fabaceae	*Crotalaria nana*	N	LC	1		
Fabaceae	*Crotalaria pallida*	N	LC		1	
Fabaceae	*Crotalaria retusa*	N	LC			1
Fabaceae	*Crotalaria verrucosa*	N	LC		1	
Fabaceae	*Crudia zeylanica*	E	EX			1
Fabaceae	*Cynometra zeylanica*	E	NT			1
Fabaceae	*Dalbergia candenatensis*	N	EN	1		
Fabaceae	*Dalbergia pseudo-sissoo*	N	LC			1
Fabaceae	*Delonix regia*	N	ne	1		
Fabaceae	*Derris canarensis*	N	LC			1
Fabaceae	*Derris parviflora*	E	LC		1	
Fabaceae	*Derris scandens*	N	LC		1	
Fabaceae	*Derris trifoliata*	N	LC			1
Fabaceae	*Desmodium heterocarpon*	N	LC	1		
Fabaceae	*Desmodium heterophyllum*	N	LC			1
Fabaceae	*Dialium ovoideum*	N	VU		1	
Fabaceae	*Dioclea javanica*	N	CRp		1	
Fabaceae	*Eleiotis monophyllos*	N	CR		1	
Fabaceae	*Entada pusaetha*	N	LC			1
Fabaceae	*Entada zeylanica*	N	VU			1
Fabaceae	*Erythrina fusca*	N	NT	1		
Fabaceae	*Flemingia macrophylla*	N	CRp		1	
Fabaceae	*Flemingia strobilifera*	N	LC	1		
Fabaceae	*Gliricidia sepium*	N	ne		1	

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Fabaceae	*Humboldtia laurifolia*	N	LC			1
Fabaceae	*Indigofera aspalathoides*	N	NT		1	
Fabaceae	*Indigofera galegoides*	N	NT		1	
Fabaceae	*Indigofera glabra*	N	LC		1	
Fabaceae	*Indigofera linnaei*	N	LC			1
Fabaceae	*Indigofera nummulariifolia*	N	LC		1	
Fabaceae	*Indigofera parviflora*	N	DD		1	
Fabaceae	*Indigofera tinctoria*	N	LC			1
Fabaceae	*Lablab purpureus*	N	LC		1	
Fabaceae	*Macrotyloma axillare*	N	CR		1	
Fabaceae	*Macrotyloma uniflorum*	N	VU		1	
Fabaceae	*Mucuna pruriens*	N	LC		1	
Fabaceae	*Mundulea sericea*	N	NT			1
Fabaceae	*Painteria nitida*	E	NT	1		
Fabaceae	*Peltophorum pterocarpum*	N	NE		1	
Fabaceae	*Pericopsis mooniana*	N	VU		1	
Fabaceae	*Phyllodium pulchellum*	N	NT	1		
Fabaceae	*Pongamia pinnata*	N	LC			1
Fabaceae	*Pterocarpus marsupium*	N	VU		1	
Fabaceae	*Pycnospora lutescens*	N	VU		1	
Fabaceae	*Rhynchosia cana*	N	NT			1
Fabaceae	*Rhynchosia minima*	N	LC		1	
Fabaceae	*Rhynchosia nummularia*	N	EN		1	
Fabaceae	*Rhynchosia viscosa*	N	CR		1	
Fabaceae	*Rothia indica*	N	LC	1		
Fabaceae	*Saraca asoca*	N	VU		1	
Fabaceae	*Smithia conferta*	N	VU			1
Fabaceae	*Tadehagi triquetrum*	N	LC	1		
Fabaceae	*Tephrosia purpurea*	N	LC		1	
Fabaceae	*Tephrosia senticosa*	N	NT	1		
Fabaceae	*Tephrosia tinctoria*	N	LC			1
Fabaceae	*Tephrosia villosa*	N	LC		1	
Fabaceae	*Vigna marina*	N	VU		1	
Fabaceae	*Vigna trilobata*	N	LC		1	
Fabaceae	*Zornia diphylla*	N	NT		1	
Fabaceae	*Zornia walkeri*	E	NT		1	
Flacourtiaceae	*Casearia zeylanica*	N	LC			1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Flacourtiaceae	*Chlorocarpa pentaschista*	E	VU			1
Flacourtiaceae	*Flacourtia indica*	N	LC		1	
Flacourtiaceae	*Homalium ceylanicum*	N	LC			1
Flacourtiaceae	*Hydnocarpus octandra*	E	LC			1
Flacourtiaceae	*Hydnocarpus venenata*	E	LC		1	
Flacourtiaceae	*Scolopia acuminata*	N	LC			1
Flacourtiaceae	*Scolopia pusilla*	E	LC		1	
Flacourtiaceae	*Trichadenia zeylanica*	E	LC			1
Flagellariaceae	*Flagellaria indica*	N	LC			1
Gentianaceae	*Canscora decussata*	N	VU		1	
Gentianaceae	*Exacum axillare*	E	EN			1
Gentianaceae	*Exacum sessile*	N	EN			1
Gentianaceae	*Exacum trinervium*	E	NT			1
Gentianaceae	*Hoppea fastigiata*	N	VU		1	
Gesneriaceae	*Championia reticulata*	E	VU			1
Gesneriaceae	*Chirita angusta*	E	VU			1
Gesneriaceae	*Chirita walkeri*	E	VU			1
Gesneriaceae	*Chirita zeylanica*	E	VU			1
Gesneriaceae	*Epithema carnosum*	N	VU		1	
Gesneriaceae	*Rhynchoglossum notonianum*	N	NT			1
Gesneriaceae	*Rhynchotechum permolle*	N	VU			1
Goodeniaceae	*Scaevola taccada*	N	LC		1	
Hippocrateaceae	*Loeseneriella arnottiana*	N	EN			1
Hippocrateaceae	*Loeseneriella macrantha*	N	EN			1
Hippocrateaceae	*Salacia chinensis*	N	NT			1
Hippocrateaceae	*Salacia reticulata*	N	EN			1
Hydrocharitaceae	*Blyxa auberti*	N	VU			1
Hydrocharitaceae	*Blyxa octandra*	N	VU			1
Hydrocharitaceae	*Halophila beccarii*	N	VU	1		
Hydrocharitaceae	*Halophila decipiens*	N	VU	1		
Hydrocharitaceae	*Halophila ovalis*	N	VU	1		
Hydrocharitaceae	*Hydrilla verticillata*	N	VU			1
Hydrophyllaceae	*Hydrolea zeylanica*	N	NT	1		
Hypoxidaceae	*Curculigo orchioides*	N	LC	1		
Hypoxidaceae	*Molineria trichocarpa*	N	VU		1	
Icacinaceae	*Gomphandra tetranda*	N	NT			1
Icacinaceae	*Nothapodytes nimmoniana*	N	NT			1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Icacinaceae	*Stemonurus apicalis*	E	NT			1
Lamiaceae	*Anisomeles indica*	N	LC		1	
Lamiaceae	*Leucas biflora*	N	LC	1		
Lamiaceae	*Leucas zeylanica*	N	LC		1	
Lamiaceae	*Ocimum gratissimum*	N	LC	1		
Lamiaceae	*Ocimum tenuiflorum*	N	LC	1		
Lamiaceae	*Platostoma menthoides*	N	LC	1		
Lamiaceae	*Plectranthus kanneliyensis*	E	LC			1
Lamiaceae	*Pogostemon auricularius*	N	LC			1
Lamiaceae	*Pogostemon heyneanus*	N	LC			1
Lauraceae	*Actinodaphne candolleana*	E	NT			1
Lauraceae	*Actinodaphne elegans*	E	LC			1
Lauraceae	*Alseodaphne semecarpifolia*	N	VU			1
Lauraceae	*Beilschmiedia zeylanica*	E	NT			1
Lauraceae	*Cassytha capillaries*	N	CRp			1
Lauraceae	*Cassytha filiformis*	N	LC		1	
Lauraceae	*Cinnamomum capparu-coronde*	E	VU			1
Lauraceae	*Cinnamomum dubium*	E	VU			1
Lauraceae	*Cinnamomum sinharajaense*	E	VU			1
Lauraceae	*Cinnamomum verum*	N	VU			1
Lauraceae	*Cryptocarya wightiana*	N	NT		1	
Lauraceae	*Litsea gardneri*	E	VU			1
Lauraceae	*Litsea glaberrima*	E	NT			1
Lauraceae	*Litsea glutinosa*	N	LC		1	
Lauraceae	*Litsea iteodaphne*	E	VU			1
Lauraceae	*Litsea longifolia*	E	LC			1
Lauraceae	*Litsea nemoralis*	E	EN			1
Lauraceae	*Neolitsea cassia*	N	LC			1
Lauraceae	*Persea macrantha*	N	VU		1	
Lecythidaceae	*Barringtonia acutangula*	N	LC			1
Lecythidaceae	*Barringtonia asiatica*	N	LC		1	
Lecythidaceae	*Barringtonia racemosa*	N	LC			1
Lecythidaceae	*Careya arborea*	N	LC		1	
Leeaceae	*Leea indica*	N	LC			1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Lemnaceae	*Lemna gibba*	N	VU		1	
Lemnaceae	*Lemna perpusilla*	N	VU		1	
Lemnaceae	*Wolffia arrhiza*	N	VU		1	
Lentibulariaceae	*Utricularia aurea*	N	LC		1	
Lentibulariaceae	*Utricularia bifida*	N	NT		1	
Lentibulariaceae	*Utricularia caerulea*	N	LC		1	
Lentibulariaceae	*Utricularia gibba*	N	EN		1	
Lentibulariaceae	*Utricularia polygaloides*	N	LC		1	
Lentibulariaceae	*Utricularia reticulata*	N	LC		1	
Lentibulariaceae	*Utricularia striatula*	N	VU	1		
Linaceae	*Hugonia ferruginea*	N	VU			1
Linaceae	*Hugonia mystax*	N	LC			1
Loganiacea	*Fagraea ceilanica*	N	NT			1
Loganiacea	*Strychnos benthamii*	E	NT			1
Loganiacea	*Strychnos minor*	N	LC	1		
Loganiacea	*Strychnos tetragona*	E	VU			1
Loganiacea	*Strychnos wallichiana*	N	VU			1
Loranthaceae	*Dendrophthoe falcata*	N	LC			1
Loranthaceae	*Dendrophthoe lonchiphyllus*	E	CR	1		
Loranthaceae	*Dendrophthoe neelgherrensis*	N	LC		1	
Loranthaceae	*Macrosolen capitellatus*	N	NT			1
Loranthaceae	*Tolypanthus gardneri*	E	VU			1
Lythraceae	*Lagerstroemia speciosa*	N	NT			1
Lythraceae	*Lawsonia inermis*	N	LC		1	
Lythraceae	*Nesaea lanceolata*	N	EN			1
Lythraceae	*Rotala densiflora*	N	LC			1
Lythraceae	*Rotala indica*	N	DD			1
Lythraceae	*Rotala rosea*	N	LC	1		
Lythraceae	*Rotala verticillaris*	N	NT			1
Malpighiaceae	*Hiptage benghalensis*	N	LC			1
Malvaceae	*Abelmoschus angulosus*	N	VU		1	
Malvaceae	*Abelmoschus moschatus*	N	VU			1
Malvaceae	*Abutilon crispum*	N	VU		1	
Malvaceae	*Abutilon indicum*	N	VU	1		
Malvaceae	*Hibiscus furcatus*	N	VU			1
Malvaceae	*Hibiscus micranthus*	N	VU		1	
Malvaceae	*Hibiscus surattensis*	N	VU		1	

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Malvaceae	*Hibiscus tiliaceus*	N	VU			1
Malvaceae	*Julostylis angustifolia*	N	VU		1	
Malvaceae	*Malvastrum coromandelianum*	N	VU		1	
Malvaceae	*Pavonia zeylanica*	N	VU		1	
Malvaceae	*Sida acuta*	N	VU		1	
Malvaceae	*Sida alnifolia*	N	VU		1	
Malvaceae	*Sida cordifolia*	N	VU			1
Malvaceae	*Sida rhombifolia*	N	VU		1	
Malvaceae	*Sida spinosa*	N	VU			1
Malvaceae	*Thespesia populnea*	N	VU		1	
Malvaceae	*Urena lobata*	N	VU		1	
Malvaceae	*Urena sinuata*	N	VU		1	
Malvaceae	*Wissadula periplocifolia*	N	VU		1	
Melastomataceae	*Axinandra zeylanica*	E	VU			1
Melastomataceae	*Lijndenia capitellata*	E	VU	1		
Melastomataceae	*Medinilla cuneata*	E	EN			1
Melastomataceae	*Melastoma malabathricum*	N	LC		1	
Melastomataceae	*Osbeckia aspera*	N	NT		1	
Melastomataceae	*Osbeckia moonii*	E	CR		1	
Melastomataceae	*Osbeckia octandra*	E	LC		1	
Melastomataceae	*Sonerila guneratnei*	E	EN			1
Melastomataceae	*Sonerila hookeriana*	E	EN			1
Melastomataceae	*Sonerila pedunculosa*	E	EN			1
Melastomataceae	*Sonerila rhombifolia*	E	EN			1
Melastomataceae	*Sonerila silvatica*	E	EN			1
Meliaceae	*Aglaia apiocarpa*	N	LC			1
Meliaceae	*Aphanamixis polystachya*	N	VU			1
Meliaceae	*Azadirachta indica*	N	ne		1	
Meliaceae	*Chukrasia tabularis*	N	NT			1
Meliaceae	*Dysoxylum ficiforme*	N	NT			1
Meliaceae	*Dysoxylum championii*	E	VU			1
Meliaceae	*Dysoxylum excelsum*	N	VU			1
Meliaceae	*Melia azedarach*	—	NE		1	
Meliaceae	*Soymida febrifuga*	I	VU			1
Meliaceae	*Xylocarpus granatum*	N	EN		1	
Memecylaceae	*Memecylon capitellatum*	E	LC		1	
Memecylaceae	*Memecylon clarkeanum*	E	NT			1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Memecylaceae	*Memecylon discolor*	E	VU			1
Memecylaceae	*Memecylon giganteum*	E	EN			1
Memecylaceae	*Memecylon grande*	N	EN			1
Memecylaceae	*Memecylon hookeri*	N	VU		1	
Memecylaceae	*Memecylon macrophyllum*	E	EN			1
Memecylaceae	*Memecylon parvifolium*	E	VU			1
Memecylaceae	*Memecylon petiolatum*	E	NT			1
Memecylaceae	*Memecylon procerum*	E	VU			1
Memecylaceae	*Memecylon rivulare*	E	NT			1
Memecylaceae	*Memecylon rostratum*	E	NT			1
Memecylaceae	*Memecylon royenii*	E	LC			1
Memecylaceae	*Memecylon Sylvaticum*	E	NT			1
Memecylaceae	*Memecylon umbellatum*	N	LC		1	
Memecylaceae	*Memecylon varians*	E	VU			1
Menispermaceae	*Anamirta cocculus*	N	LC			1
Menispermaceae	*Cissampelos pareira*	N	LC			1
Menispermaceae	*Coscinium fenestratum*	N	LC			1
Menispermaceae	*Cyclea peltata*	N	EN			1
Menispermaceae	*Tinospora cordifolia*	N	VU		1	
Menispermaceae	*Tinospora crispa*	N	VU	1		
Menispermaceae	*Tinospora sinensis*	N	DD		1	
Molluginaceae	*Glinus oppositifolia*	N	LC	1		
Molluginaceae	*Mollugo cerviana*	N	LC		1	
Molluginaceae	*Mollugo disticha*	N	LC		1	
Molluginaceae	*Mollugo nudicaulis*	N	VU		1	
Molluginaceae	*Mollugo pentaphylla*	N	LC	1		
Monimiaceae	*Hortonia angustifolia*	E	NT		1	
Monimiaceae	*Hortonia floribunda*	E	EN		1	
Moraceae	*Artocarpus gomezianus*	N	LC			1
Moraceae	*Artocarpus nobilis*	E	LC			1
Moraceae	*Ficus arnottiana*	N	LC			1
Moraceae	*Ficus benghalensis*	N	LC		1	
Moraceae	*Ficus callosa*	N	LC			1
Moraceae	*Ficus caulocarpa*	N	LC			1
Moraceae	*Ficus costata*	N	NT			1
Moraceae	*Ficus diversiformis*	E	LC			1
Moraceae	*Ficus exasperata*	N	LC			1
Moraceae	*Ficus fergusoni*	E	LC			1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Moraceae	*Ficus hispida*	N	LC			1
Moraceae	*Ficus laevis*	N	LC			1
Moraceae	*Ficus microcarpa*	N	LC			1
Moraceae	*Ficus nervosa*	N	LC			1
Moraceae	*Ficus tinctoria ssp. parasitica*	N	LC			1
Moraceae	*Ficus trimenii*	N	VU			1
Moraceae	*Ficus tsjahela*	N	LC		1	
Moraceae	*Ficus virens*	N	LC			1
Myristicaceae	*Horsfieldia irya*	N	LC			1
Myristicaceae	*Horsfieldia iryaghedhi*	E	VU		1	
Myristicaceae	*Myristica ceylanica*	N	VU			1
Myristicaceae	*Myristica dactyloides*	N	LC			1
Myrsinaceae	*Aegiceras corniculata*	N	LC	1		
Myrsinaceae	*Ardisia elliptica*	N	LC			1
Myrsinaceae	*Ardisia gardneri*	E	LC			1
Myrsinaceae	*Ardisia missionis*	N	LC			1
Myrsinaceae	*Ardisia moonii*	E	LC			1
Myrsinaceae	*Embelia ribes*	N	LC			1
Myrsinaceae	*Maesa indica*	N	LC			1
Myrsinaceae	*Myrsine ceylanica*	E	NT			1
Myrsinaceae	*Myrsine robusta*	E	LC			1
Myrtaceae	*Cleistocalyx operculatus*	E	LC			1
Myrtaceae	*Eugenia fulva*	E	CRp			1
Myrtaceae	*Eugenia insignis*	E	CR		1	
Myrtaceae	*Eugenia rivulorum*	E	VU			1
Myrtaceae	*Eugenia rufo-fulva*	E	EN		1	
Myrtaceae	*Eugenia thwaitesii*	N	LC			1
Myrtaceae	*Eugenia xanthocarpa*	N	EW		1	
Myrtaceae	*Syzygium alubo*	E	NT			1
Myrtaceae	*Syzygium caryophyllatum*	N	LC			1
Myrtaceae	*Syzygium cordifolium*	E	VU			1
Myrtaceae	*Syzygium cumini*	N	LC		1	
Myrtaceae	*Syzygium cylindricum*	E	LC			1
Myrtaceae	*Syzygium firmum*	E	LC			1
Myrtaceae	*Syzygium gardneri*	N	LC			1
Myrtaceae	*Syzygium jambos*	N	NE			1
Myrtaceae	*Syzygium micranthum*	E	LC			1
Myrtaceae	*Syzygium neesianum*	E	LC			1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Myrtaceae	*Syzygium spissum*	E	VU			1
Myrtaceae	*Syzygium turbinatum*	E	VU			1
Myrtaceae	*Syzygium wightianum*	E	LC			1
Myrtaceae	*Syzygium zeylanicum var zeylanicum*	N	LC			1
Nelumbonaceae	*Nelumbo nucifera*	N	LC		1	
Nepenthaceae	*Nepenthes distillatoria*	E	VU		1	
Nyctaginaceae	*Boerhavia diffusa*	N	LC		1	
Nyctaginaceae	*Boerhavia erecta*	N	LC		1	
Nyctaginaceae	*Pisonia grandis*	N	LC		1	
Nyctaginaceae	*Pisonia grandis*	N	NT		1	
Nymphaeaceae	*Nymphaea nouchali*	N	VU			1
Nymphaeaceae	*Nymphaea pubescens*	N	LC	1		
Ochnaceae	*Gomphia serrata*	N	LC		1	
Ochnaceae	*Ochna Jabotapita*	E	LC		1	
Ochnaceae	*Ochna obtusata*	N	LC		1	
Olacaceae	*Olax imbricata*	N	NT			1
Olacaceae	*Olax zeylanica*	N	LC		1	
Olacaceae	*Strombosia ceylanica*	N	VU	1		
Olacaceae	*Strombosia nana*	E	NT			1
Oleaceae	*Chionanthus albidiflora*	E	VU			1
Oleaceae	*Chionanthus zeylanica*	N	LC			1
Oleaceae	*Jasminum flexile*	N	LC		1	
Onagraceae	*Ludwigia adscendens*	N	LC		1	
Onagraceae	*Ludwigia hyssopifolia*	N	LC			1
Onagraceae	*Ludwigia octovalvis*	N	LC		1	
Onagraceae	*Ludwigia perennis*	N	LC			1
Onagraceae	*Ludwigia prostrata*	N	DD			1
Opiliaceae	*Cansjera rheedii*	N	LC		1	
Orchidaceae	*Acampe ochracea*	N	VU			1
Orchidaceae	*Acampe praemorsa*	N	LC	1		
Orchidaceae	*Acampe rigida*	N	VU			1
Orchidaceae	*Acanthephippium bicolor*	N	EN			1
Orchidaceae	*Agrostophyllum zeylanicum*	E	VU			1
Orchidaceae	*Angraecum zeylanicum*	N	NT			1
Orchidaceae	*Anoectochilus regalis*	E	EN			1
Orchidaceae	*Aphyllorchis montana*	N	VU		1	
Orchidaceae	*Bulbophyllum elegans*	N	VU			1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Orchidaceae	*Cheirostylis parvifolia*	N	VU			1
Orchidaceae	*Chiloschista fasciata*	N	VU			1
Orchidaceae	*Chrysoglossum ornatum*	N	VU			1
Orchidaceae	*Cleisostoma tenuifolium*	N	NT			1
Orchidaceae	*Cottonia peduncularis*	N				1
Orchidaceae	*Crepidium purpureum*	N	NT			1
Orchidaceae	*Cymbidium bicolor*	N	LC			1
Orchidaceae	*Cymbidium ensifolium*	N	VU			1
Orchidaceae	*Dendrobium maccarthiae*	E	EN			1
Orchidaceae	*Dendrobium aphyllum*	N	LC			1
Orchidaceae	*Dendrobium crumenatum*	N	NE	1		
Orchidaceae	*Diploprora championi*	N	NT			1
Orchidaceae	*Eria lindleyi*	E	NT		1	
Orchidaceae	*Eria muscicola*	N	LC		1	
Orchidaceae	*Eria thwaitesii*	E	EN			1
Orchidaceae	*Eulophia sanguinea*	N	EN		1	
Orchidaceae	*Eulophia epidendraea*	N	LC			1
Orchidaceae	*Gastrochilus acaulis*	N	NT			1
Orchidaceae	*Geodorum densiflorum*	N	VU	1		
Orchidaceae	*Goodyera procera*	N	VU			1
Orchidaceae	*Habenaria crinifera*	N	VU			1
Orchidaceae	*Habenaria viridiflora*	N	NT			1
Orchidaceae	*Kingidium deliciosum*	N	EN			1
Orchidaceae	*Liparis nervosa*	N	VU	1		
Orchidaceae	*Liparis odorata*	—	CR	1		
Orchidaceae	*Luisia birchea*	N	VU			1
Orchidaceae	*Lusia teretifolia*	N	LC		1	
Orchidaceae	*Malaxis discolor*	E	VU			1
Orchidaceae	*Malaxis purpurea*	N	EN			1
Orchidaceae	*Malaxis versicolor*	N	LC			1
Orchidaceae	*Oberonia thwaitesii*	N	NT		1	
Orchidaceae	*Oberonia weragamaensis*	E	EN			1
Orchidaceae	*Phaius luridus*	N	EN			1
Orchidaceae	*Phalaenopsis deliciosa*	N	VU			1
Orchidaceae	*Podochilus saxatilis*	E	NT			1
Orchidaceae	*Polystachya concreta*	N	LC			1
Orchidaceae	*Pomatocalpa decipiens*	N	NE		1	
Orchidaceae	*Pomatocalpa maculosum*	N	NT			1
Orchidaceae	*Sirhookera lanceolata*	N	NT			1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Orchidaceae	*Spathoglottis picata*	—	NE			1
Orchidaceae	*Taeniophyllum alwisii*	N	VU			1
Orchidaceae	*Taeniophyllum gilimalense*	E	EN			1
Orchidaceae	*Thrixspermum pulchellum*	N	LC		1	
Orchidaceae	*Vanda tessellata*	N	VU			1
Orchidaceae	*Vanda testacea*	N	LC		1	
Orchidaceae	*Vanilla moonii*	E	EN			1
Orchidaceae	*Zeuxine regia*	E	EN			1
Orchidaceae	*Zeuxine reginasilvae*	E	EN			1
Oxalidaceae	*Biophytum intermedium*	N	EN		1	
Oxalidaceae	*Biophytum nudum*	N	VU	1		
Oxalidaceae	*Biophytum reinwardtii*	N	LC	1		
Pandanaceae	*Freycinetia pycnophylla*	E	VU		1	
Pandanaceae	*Freycinetia walkeri*	E	NT			1
Pandanaceae	*Pandanus ceylanicus*	E	VU			1
Pandanaceae	*Pandanus Kaida*	N	LC	1		
Pandanaceae	*Pandanus odoratissimus*	N	LC		1	
Pandanaceae	*Pandanus thwaitesii*	N	NT	1		
Passifloraceae	*Adenia hondala*	N	LC			1
Passifloraceae	*Adenia wightiana*	N	VU			1
Pedaliaceae	*Pedalium murex*	N	LC		1	
Pedaliaceae	*Sesamum radiatum*	N	LC		1	
Periplocaceae	*Hemidesmus indicus*	N	LC	1		
Piperaceae	*Piper sylvestre*	N	LC		1	
Piperaceae	*Piper trineuron*	E	LC			1
Plumbaginaceae	*Plumbago zeylanica*	N	LC		1	
Poaceae	*Acroceras munroanum*	N	DD			1
Poaceae	*Aeluropus lagopoides*	N	LC		1	
Poaceae	*Alloteropsis cimicina*	N	LC			1
Poaceae	*Aristida setacea*	N	LC		1	
Poaceae	*Arundinella leptochloa*	N	EN	1		
Poaceae	*Axonopus fissifolius*	N	NE	1		
Poaceae	*Bambusa vulgaris*	N	NE		1	
Poaceae	*Bothriochloa pertusa*	N	LC		1	
Poaceae	*Brachiaria distachya*	N	LC		1	
Poaceae	*Brachiaria paspaloides*	N	DD		1	
Poaceae	*Brachiaria remota*	N	LC	1		
Poaceae	*Brachiaria reptans*	N	LC			1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Poaceae	*Brachiaria subquadripara*	N	LC		1	
Poaceae	*Centotheca lappacea*	N	NT	1		
Poaceae	*Chionachne koenigii*	N	LC			1
Poaceae	*Chrysopogon aciculatus*	N	LC			1
Poaceae	*Coix gigantea*	N	NT	1		
Poaceae	*Coix lacryma-jobi*	N	VU	1		
Poaceae	*Cymbopogn nardus*	N	LC	1		
Poaceae	*Cynodon dactylon*	N	LC	1		
Poaceae	*Cyrtococcum deccanense*	N	VU		1	
Poaceae	*Cyrtococcum trigonum*	N	LC		1	
Poaceae	*Dactyloctenium aegyptium*	N	LC	1		
Poaceae	*Digitaria adscendens*	—	DD		1	
Poaceae	*Digitaria bicornis*	N	LC		1	
Poaceae	*Digitaria ciliaris*	N	LC			1
Poaceae	*Digitaria griffithii*	N	DD		1	
Poaceae	*Digitaria tomentosa*	N	VU		1	
Poaceae	*Dimeria gracilis*	N	EN			1
Poaceae	*Dimeria lehmannii*	N	VU			1
Poaceae	*Echinochloa colona*	N	LC			1
Poaceae	*Echinochloa crusgalli*	N	LC	1		
Poaceae	*Echinochloa stagnina*	N	LC	1		
Poaceae	*Eleusine indica*	N	LC	1		
Poaceae	*Elytrophorus spicatus*	N	DD		1	
Poaceae	*Eragrostis riparia*	N	LC	1		
Poaceae	*Eragrostis unioloides*	N	LC			1
Poaceae	*Eragrostis viscosa*	N	LC		1	
Poaceae	*Eragrostis amabilis*	N	LC		1	
Poaceae	*Eragrostis atrovirens*	N	LC	1		
Poaceae	*Eragrostis gangetica*	N	LC			1
Poaceae	*Eragrostis japonica*	N	LC	1		
Poaceae	*Eragrostis pilosa*	N	LC	1		
Poaceae	*Eremochloa zeylanica*	E	VU		1	
Poaceae	*Eriachne triseta*	N	DD		1	
Poaceae	*Eriochloa procera*	N	LC		1	
Poaceae	*Garnotia fergusonii*	N	NT		1	
Poaceae	*Garnotia panicoides*	E	CRp			1
Poaceae	*Garnotia scoparia*	E	NT		1	
Poaceae	*Heteropogon contortus*	N	LC		1	

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Poaceae	*Heteropogon triticeus*	N	VU		1	
Poaceae	*Hymenachne amplexicaulis*	N	LC		1	
Poaceae	*Imperata cylindrica*	N	LC	1		
Poaceae	*Isachne globosa*	N	LC			1
Poaceae	*Ischaemum barbatum*	N	LC		1	
Poaceae	*Ischaemum ciliare*	N	LC			1
Poaceae	*Ischaemum dalzellii*	N	DD		1	
Poaceae	*Ischaemum muticum*	N	LC		1	
Poaceae	*Ischaemum rugosum*	N	LC	1		
Poaceae	*Ischaemum timorense*	N	LC	1		
Poaceae	*Leersia hexandra*	N	LC		1	
Poaceae	*Leptaspis urceolata*	N	NT			1
Poaceae	*Leptochloa chinensis*	N	LC	1		
Poaceae	*Leptochloa fusca*	N	LC		1	
Poaceae	*Leptochloa panicea*	N	LC		1	
Poaceae	*Leptochloa uniflora*	N	LC		1	
Poaceae	*Lepturus repens*	N	NT		1	
Poaceae	*Lophatherum gracile*	N	LC			1
Poaceae	*Mnesithea laevis*	N	LC		1	
Poaceae	*Ochlandra stridula*	E	LC			1
Poaceae	*Oplismenus compositus*	N	LC		1	
Poaceae	*Oryza perennis*		CR	1		
Poaceae	*Oryza sativa*	N	LC		1	
Poaceae	*Panicum brevifolium*	N	LC			1
Poaceae	*Panicum luzonense*	N	CRp			1
Poaceae	*Panicum notatum*	N	LC	1		
Poaceae	*Panicum paludosum*	N	LC		1	
Poaceae	*Panicum repens*	N	LC		1	
Poaceae	*Panicum tricholadum*	N	NE	1		
Poaceae	*Paspalidium flavidum*	N	LC		1	
Poaceae	*Paspalidium geminatum*	N	LC		1	
Poaceae	*Paspalum distichum*	N	LC	1		
Poaceae	*Paspalum longifolium*	N	LC		1	
Poaceae	*Paspalum scrobiculatum*	N	LC			1
Poaceae	*Paspalum vaginatum*	N	LC		1	
Poaceae	*Perotis indica*	N	LC	1		
Poaceae	*Pharagmites karka*	N	LC		1	
Poaceae	*Pogonatherum crinitum*	N	LC		1	

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Poaceae	*Pseudoraphis spinescens*	N	LC		1	
Poaceae	*Pseudoxytenanthera monadelpha*	N	VU	1		
Poaceae	*Rottboellia cochinchinensis*	N	LC		1	
Poaceae	*Saccharum arundinaceum*	N	CRp		1	
Poaceae	*Saccharum spontaneum*	N	LC			1
Poaceae	*Sacciolepis curvata*	N	LC	1		
Poaceae	*Sacciolepis indica*	N	LC		1	
Poaceae	*Sacciolepis interrupta*	N	LC		1	
Poaceae	*Sacciolepis myosuroides*	N	NT		1	
Poaceae	*Setaria barbata*	N	NE		1	
Poaceae	*Setaria palmifolia*	N	LC	1		
Poaceae	*Setaria parviflora*	N	LC	1		
Poaceae	*Setaria pumila*	N	LC		1	
Poaceae	*Sphaerocaryum malaccense*	N	VU		1	
Poaceae	*Spinifex littoreus*	N	LC		1	
Poaceae	*Sporobolus diander*	N	LC	1		
Poaceae	*Sporobolus fertilis*	N	LC		1	
Poaceae	*Stenotaphrum dimidiatum*	N	LC		1	
Poaceae	*Streptogyna crinita*	N	VU		1	
Poaceae	*Thuarea involuta*	N	DD		1	
Poaceae	*Urochloa setigera*	N	LC	1		
Poaceae	*Vetiveria zizanioides*	N	LC		1	
Poaceae	*Zenkeria obtusiflora*	E	VU		1	
Poaceae	*Zoysia matrella*	N	LC		1	
Polygalaceae	*Polygala chinensis*	N	LC		1	
Polygalaceae	*Polygala glaucoides*	E	EN		1	
Polygalaceae	*Polygala glomerata*	N	VU		1	
Polygalaceae	*Polygala javana*	N	LC			1
Polygalaceae	*Polygala macrolophos*	E	EN			1
Polygalaceae	*Polygala telephioides*	N	LC		1	
Polygalaceae	*Polygala triflora*	N	NT		1	
Polygalaceae	*Salomonia ciliata*	N	VU		1	
Polygalaceae	*Xanthophyllum zeylanicum*	E	LC		1	
Polygonaceae	*Persicaria attenuata*	N	LC		1	

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Polygonaceae	*Persicaria barbata*	N	LC		1	
Polygonaceae	*Persicaria glabra*	N	LC		1	
Polygonaceae	*Persicaria hydropiper*	N	DD		1	
Polygonaceae	*Persicaria nepalensis*	N	DD		1	
Polygonaceae	*Persicaria praetermissa*	N	CR		1	
Polygonaceae	*Persicaria strigosa*	N	LC		1	
Pontederiaceae	*Monochoria hastata*	N	NT		1	
Pontederiaceae	*Monochoria vaginalis*	N	LC			1
Portulacaceae	*Portulaca oleracea*	N	LC		1	
Portulacaceae	*Portulaca suffruticosa*	N	LC		1	
Portulacaceae	*Portulaca tuberosa*	N	LC		1	
Potamogetonaceae	*Potamogeton pectinatus*	N	LC			1
Potamogetonaceae	*Ruppia maritima*	N	LC	1		
Ranunculaceae	*Naravelia zeylanica*	N	NT		1	
Rhamnaceae	*Gouania microcarpa*	N	NT		1	
Rhamnaceae	*Scutia myrtina*	N	LC		1	
Rhamnaceae	*Ventilago gamblei*	N	LC			1
Rhamnaceae	*Ziziphus mauritiana var mauritiana*	N	LC	1		
Rhamnaceae	*Ziziphus napeca*	E	LC			1
Rhamnaceae	*Ziziphus oenoplia*	N	LC		1	
Rhamnaceae	*Ziziphus rugosa*	N	VU		1	
Rhizophoraceae	*Bruguiera cylindrica*	N	EN	1		
Rhizophoraceae	*Bruguiera gymnorhiza*	N	VU	1		
Rhizophoraceae	*Bruguiera sexangula*	N	VU		1	
Rhizophoraceae	*Carallia brachiata*	N	NT		1	
Rhizophoraceae	*Carallia calycina*	E	EN			1
Rhizophoraceae	*Cassipourea ceylanica*	N	LC			1
Rhizophoraceae	*Ceriops tagal*	N	NT	1		
Rhizophoraceae	*Rhizophora apiculata*	N	NT			1
Rhizophoraceae	*Rhizophora mucronata*	N	LC	1		
Rosaceae	*Prunus walkeri*	E	LC			1
Rubiaceae	*Acranthera ceylanica*	E	LC			1
Rubiaceae	*Aidia gardneri*	E	VU		1	
Rubiaceae	*Anthocephalus chinensis*	N	NT			1
Rubiaceae	*Byrsophyllum ellipticum*	E	VU			1
Rubiaceae	*Canthium coromandelicum*	N	LC		1	
Rubiaceae	*Canthium rheedii*	N	NT			1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Rubiaceae	*Chassalia curviflora*	N	LC	1		
Rubiaceae	*Dentella repens*	N	LC		1	
Rubiaceae	*Dichilanthe zeylanica*	E	VU			1
Rubiaceae	*Discospermum sphaerocarpum*	N	LC		1	
Rubiaceae	*Exallage auricularia*	N	VU	1		
Rubiaceae	*Fergusonia tetracocca*	N	CRp		1	
Rubiaceae	*Gaertnera rosea*	E	LC			1
Rubiaceae	*Gaertnera vaginans*	N	LC			1
Rubiaceae	*Gaertnera walkeri*	E	NT			1
Rubiaceae	*Gardenia crameri*	E	VU			1
Rubiaceae	*Geophila repens var asiatica*	N	VU			1
Rubiaceae	*Guettarda speciosa*	N	VU			1
Rubiaceae	*Hedyotis cyanantha*	N	NT		1	
Rubiaceae	*Hedyotis fruticosa*	N	LC			1
Rubiaceae	*Hedyotis nodulosa*	E	VU			1
Rubiaceae	*Hedyotis srilankensis*	E	EN			1
Rubiaceae	*Hedyotis thwaitesii*	E	VU			1
Rubiaceae	*Hydrophylax maritima*	N	LC	1		
Rubiaceae	*Ixora coccinea*	N	LC			1
Rubiaceae	*Ixora jucunda*	E	LC			1
Rubiaceae	*Ixora pavetta*	N	LC		1	
Rubiaceae	*Ixora thwaitesii*	N	LC			1
Rubiaceae	*Knoxia zeylanica*	E	NT			1
Rubiaceae	*Lasianthus moonii*	E	LC			1
Rubiaceae	*Lasianthus obliquus*	E	LC			1
Rubiaceae	*Lasianthus oliganthus*	E	LC			1
Rubiaceae	*Lasianthus strigosus*	E	LC			1
Rubiaceae	*Mitragyna parvifolia var parvifolia*	N	LC		1	
Rubiaceae	*Mitragyna tubulosa*	N	EN		1	
Rubiaceae	*Morinda citrifolia*	N	LC		1	
Rubiaceae	*Morinda umbellata*	N	LC	1		
Rubiaceae	*Mussaenda frondosa*	N	LC		1	
Rubiaceae	*Nargedia macrocarpa*	E	LC			1
Rubiaceae	*Nauclea orientalis*	N	LC		1	
Rubiaceae	*Neanotis richardiana*	N	CR			1
Rubiaceae	*Neurocalyx championii*	E	VU			1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Rubiaceae	*Neurocalyx gardneri*	E	EN			1
Rubiaceae	*Neurocalyx zeylanicus*	E	VU			1
Rubiaceae	*Oldenlandia biflora*	N	LC		1	
Rubiaceae	*Oldenlandia brachypoda*	N	LC	1		
Rubiaceae	*Oldenlandia corymbosa*	N	LC		1	
Rubiaceae	*Oldenlandia diffusa*	N	LC	1		
Rubiaceae	*Oldenlandia herbacea*	N	LC		1	
Rubiaceae	*Oldenlandia pumila*	N	DD		1	
Rubiaceae	*Oldenlandia stricta*	N	NT		1	
Rubiaceae	*Oldenlandia trinervia*	N	NT		1	
Rubiaceae	*Oldenlandia umbellata*	N	LC		1	
Rubiaceae	*Ophiorrhiza mungos*	N	LC			1
Rubiaceae	*Ophiorrhiza pectinata*	E	LC			1
Rubiaceae	*Ophiorrhiza radicans*	E	VU			1
Rubiaceae	*Ophiorrhiza rugosa var. angustifolia*	E	LC			1
Rubiaceae	*Pavetta agrostiphylla*	E	EN			1
Rubiaceae	*Pavetta blanda*	N	LC			1
Rubiaceae	*Pavetta indica*	N	LC	1		
Rubiaceae	*Pavetta zeylanica*	E	NT			1
Rubiaceae	*Prismatomeris albidiflora*	E	VU		1	
Rubiaceae	*Prismatomeris tetrandra*	N	VU		1	
Rubiaceae	*Psilanthus travancorensis*	N	VU			1
Rubiaceae	*Psychotria dubia*	E	NT			1
Rubiaceae	*Psychotria gardneri*	E	NT			1
Rubiaceae	*Psychotria nigra*	N	LC			1
Rubiaceae	*Psychotria sarmentosa*	N	NT		1	
Rubiaceae	*Psychotria stenophylla*	E	VU			1
Rubiaceae	*Psychotria waasii*	E	NT			1
Rubiaceae	*Psydrax dicoccos*	N	LC			1
Rubiaceae	*Saprosma foetens subsp. ceylanicum*	E	LC			1
Rubiaceae	*Spermacoce articularis*	N	LC		1	
Rubiaceae	*Spermacoce hispida*	N	LC	1		
Rubiaceae	*Spermacoce prostrata*	N	EN			1
Rubiaceae	*Spermacoce ramanii*	N	DD	1		
Rubiaceae	*Tarenna asiatica*	N	LC	1		
Rubiaceae	*Tarenna flava*	N	LC			1
Rubiaceae	*Timonius flavescens*	N	LC			1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Rubiaceae	*Uncaria elliptica*	N	LC			1
Rubiaceae	*Urophyllum ellipticum*	E	LC			1
Rubiaceae	*Wendlandia bicuspidata*	E	LC			1
Rutaceae	*Acronychia pedunculata*	N	LC		1	
Rutaceae	*Atalantia ceylanica*	N	LC		1	
Rutaceae	*Clausena dentata*	N	LC			1
Rutaceae	*Clausena indica*	N	LC			1
Rutaceae	*Glycosmis angustifolia*	N	LC		1	
Rutaceae	*Glycosmis mauritiana*	N	LC			1
Rutaceae	*Glycosmis pentaphylla*	N	LC		1	
Rutaceae	*Luvunga angustifolia*	E	LC			1
Rutaceae	*Melicope lunu-ankenda*	N	LC			1
Rutaceae	*Micromelum minutum*	E	LC			1
Rutaceae	*Murraya koenigii*	N	LC	1		
Rutaceae	*Murraya paniculata*	N	LC	1		
Sabiaceae	*Meliosma simplicifolia*	N	VU			1
Sapindaceae	*Allophylus zeylanicus*	E	LC			1
Sapindaceae	*Cardiospermum halicacabum*	N	LC		1	
Sapindaceae	*Filicium decipiens*	N	LC			1
Sapindaceae	*Lepisanthes erecta*	N	VU			1
Sapindaceae	*Lepisanthes simplocifolia*	E	EN			1
Sapindaceae	*Lepisanthes tetraphylla*	N	LC	1		
Sapindaceae	*Pometia pinnata*	N	LC			1
Sapotaceae	*Chrysophyllum roxburghii*	N	NT			1
Sapotaceae	*Isonandra lanceolata*	N	VU		1	
Sapotaceae	*Isonandra zeylanica*	E	VU			1
Sapotaceae	*Madhuca fulva*	E	VU			1
Sapotaceae	*Madhuca microphylla*	E	EN		1	
Sapotaceae	*Madhuca moonii*	E	EN			1
Sapotaceae	*Madhuca neriifolia*	N	VU			1
Sapotaceae	*Mimusops elengi*	N	NT			1
Sapotaceae	*Palaquium canaliculatum*	E	VU			1
Sapotaceae	*Palaquium grande*	E	VU			1
Sapotaceae	*Palaquium hinmolpedda*	E	VU			1
Sapotaceae	*Palaquium laevifolium*	E	EN			1
Sapotaceae	*Palaquium petiolare*	E	VU		1	
Sapotaceae	*Palaquium rubuginosum*	E	VU			1
Sapotaceae	*Palaquium thwaitesii*	E	VU			1

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Sapotaceae	*Palaquium zeylanicum*	E	CR			1
Scrophulariaceae	*Adenosma camphoratum*	E	NT			1
Scrophulariaceae	*Adenosma indianum*	N	LC		1	
Scrophulariaceae	*Artanema longifolium*	N	LC			1
Scrophulariaceae	*Bacopa monnieri*	N	DD			1
Scrophulariaceae	*Bacopa monnieri*	N	LC	1		
Scrophulariaceae	*Centranthera indica*	N	LC		1	
Scrophulariaceae	*Centranthera tranquebarica*	N	NT		1	
Scrophulariaceae	*Dopatrium lobelioides*	N	LC		1	
Scrophulariaceae	*Limnophila aquatica*	N	LC			1
Scrophulariaceae	*Limnophila aromatica*	N	LC			1
Scrophulariaceae	*Limnophila chinensis*	N	CRp			1
Scrophulariaceae	*Limnophila heterophylla*	N	NT	1		
Scrophulariaceae	*Limnophila repens*	N	LC			1
Scrophulariaceae	*Limnophila sessiliflora*	N	LC	1		
Scrophulariaceae	*Lindernia anagallis*	N	LC			1
Scrophulariaceae	*Lindernia angustifolia*	N	NT		1	
Scrophulariaceae	*Lindernia antipoda*	N	LC			1
Scrophulariaceae	*Lindernia crustacea*	N	LC			1
Scrophulariaceae	*Lindernia hyssopioides*	N	LC			1
Scrophulariaceae	*Lindernia nummularifolia*	N	VU			1
Scrophulariaceae	*Lindernia pusilla*	N	LC	1		
Scrophulariaceae	*Lindernia rotundifolia*	N	LC			1
Scrophulariaceae	*Lindernia tenuifolia*	N	NT			1
Scrophulariaceae	*Microcarpaea minima*	N	LC			1
Scrophulariaceae	*Striga angustifolia*	N	NT		1	
Scrophulariaceae	*Torenia travancorica*	N	NT		1	
Simaroubaceae	*Quassia indica*	N	VU			1
Smilacaceae	*Smilax perfoliata*	N	LC			1
Smilacaceae	*Smilax zeylanica*	N	LC	1		
Solanaceae	*Datura metel*	N	NE	1		
Solanaceae	*Physalis micrantha*	N	DD		1	
Solanaceae	*Solanum trilobatum*	N	LC	1		
Solanaceae	*Solanum violaceum*	N	LC		1	
Sonneratiaceae	*Sonneratia caseolaris*	N	LC		1	
Sterculiacea	*Helicteres isora*	N	NT		1	
Sterculiacea	*Heritiera littoralis*	N	NT			1
Sterculiacea	*Melochia corchorifolia*	N	LC		1	

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Sterculiacea	*Sterculia balanghas*	N	LC		1	
Sterculiacea	*Waltheria indica*	N	LC	1		
Sterculiaceae	*Pterospermum suberifolium*	N	LC			1
Sterculiaceae	*Pterygota thwaitesii*	E	VU	1		
Sterculiaceae	*Sterculia zeylanica*	E	EN			1
Stylidiaceae	*Stylidium uliginosum*	N	CRp		1	
Symplocaceae	*Symplocos bractealis*	E	EN	1		
Symplocaceae	*Symplocos cochinchinensis*	N	VU			1
Symplocaceae	*Symplocos cordifolia*	E	EN	1		
Symplocaceae	*Symplocos coronata*	E	EN			1
Symplocaceae	*Symplocos cuneata*	E	EN			1
Symplocaceae	*Symplocos diversifolia*	E	CR			1
Symplocaceae	*Symplocos macrophylla*	N	CR			1
Symplocaceae	*Symplocos pendula*	N	EN			1
Symplocaceae	*Symplocos pulchra*	N	EN			1
Theaceae	*Eurya acuminata*	N	NT			1
Thymelaeaceae	*Gyrinops walla*	N	LC	`	1	
Tiliaceae	*Corchorus fascicularis*	N	EN		1	
Tiliaceae	*Grewia carpinifolia*	N	LC			1
Tiliaceae	*Grewia orientalis*	N	LC	1		
Tiliaceae	*Microcos paniculata*	N	LC		1	
Tiliaceae	*Triumfetta pilosa*	N	LC			1
Trichopodaceae	*Trichopus zeylanicus*	N	VU		1	
Triuridaceae	*Hyalisma janthina*	N	EN			1
Typhaceae	*Typha angustifolia*	N	LC			1
Ulmaceae	*Gironniera parvifolia*	N	LC			1
Ulmaceae	*Trema orientalis*	N	LC			1
Verbenaceae	*Callicarpa tomentosa*	N	LC	1		
Verbenaceae	*Clerodendrum inerme*	N	LC			1
Verbenaceae	*Clerodendrum infortunatum*	N	LC		1	
Verbenaceae	*Glossocarya scandens*	E	NT		1	
Verbenaceae	*Phyla nodiflora*	N	LC		1	
Verbenaceae	*Premna obtusifolia*	N	LC			1
Verbenaceae	*Stachytarpheta indica*	N	NE			1
Verbenaceae	*Stachytarpheta urticaefolia*	N	NE	1		

Family	Scientific Name	TS	NCS	Gampaha	Colombo	Kalutara
Verbenaceae	*Vitex altissima*	N	NT			1
Violaceae	*Hybanthus enneaspermus*	N	LC			1
Viscaseae	*Ginalloa spathulifolia*	E	EN		1	
Viscaseae	*Notothixos floccosus*	E	EN			1
Viscaseae	*Viscum capitellatum*	N	NT		1	
Vitaceae	*Ampelocissus indica*	N	NT			1
Vitaceae	*Cayratia reticulata*	E	LC			1
Vitaceae	*Cayratia trifolia*	N	LC			1
Vitaceae	*Cissus heyneana*	N	LC			1
Vitaceae	*Cissus lonchiphylla*	E	NT			1
Vitaceae	*Cissus quadrangularis*	N	LC		1	
Vitaceae	*Cissus trilobata*	N	LC			1
Vitaceae	*Cissus vitiginea*	N	LC			1
Vitaceae	*Tetrastigma nilagiricum*	N	LC			1
Xyridaceae	*Xyris complanata*	N	VU			1
Xyridaceae	*Xyris indica*	N	NT			1
Xyridaceae	*Xyris pauciflora*	N	LC	1		
Zingiberaceae	*Amomum nemorale*	E	CRp			1
Zingiberaceae	*Amomum benthamianum*	E	CRp			1
Zingiberaceae	*Amomum fulviceps*	E	VU			1
Zingiberaceae	*Amomum graminifolium*	E	EN			1
Zingiberaceae	*Amomum masticatorium*	E	EN			1
Zingiberaceae	*Amomum trichostachyum*	E	EN			1
Zingiberaceae	*Costus speciosus*	N	LC		1	
Zingiberaceae	*Cyphostigma pulchellum*	E	NT			1
Zingiberaceae	*Elettaria cardamomum*	N	VU		1	
Zingiberaceae	*Hedychium coronarium*	N	NE		1	
Zingiberaceae	*Zingiber cylindricum*	E	VU		1	
Zygophyllaceae	*Tribulus terrestris*	N	LC	1		

Note: TS=Taxonomic status; NCS=National Conservation Ststus; E=Endemic; N=Native; CR=Critically endangered; EW=Extinct wild; PE=Possibly extinct; DD=Data deficient.