



**AgEcon** SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

# **ECONOMICS, ECOLOGY AND THE ENVIRONMENT**

**Working Paper No. 94**

**Tourism as a Contributor to Development in Sri  
Lanka: An Overview and a Case Study**

**by**

**Clem Tisdell and Ranjith Bandara**

**January 2004**



**THE UNIVERSITY OF QUEENSLAND**

ISSN 1327-8231  
**WORKING PAPERS ON  
ECONOMICS, ECOLOGY AND THE ENVIRONMENT**

**Working Paper No. 94**

**Tourism as a Contributor to Development in Sri Lanka: An  
Overview and a Case Study<sup>†</sup>**

**by**

**Clem Tisdell<sup>‡</sup> and Ranjith Bandara<sup>§</sup>**

**January 2004**

© All rights reserved

---

<sup>†</sup> Draft article for N. Narayana (ed) *Economic Development – Issues and Policies* to be published by Serial Publications, New Delhi.

<sup>‡</sup> School of Economics, The University of Queensland, Brisbane QLD 4072, Australia  
Email: [c.tisdell@economics.uq.edu.au](mailto:c.tisdell@economics.uq.edu.au)

<sup>§</sup> Senior Lecturer in Economics on leave from the Department of Economics, University of Colombo, Sri Lanka

WORKING PAPERS IN THE SERIES, *Economics, Ecology and the Environment* are published by the School of Economics, University of Queensland, 4072, Australia, as follow up to the Australian Centre for International Agricultural Research Project 40 of which Professor Clem Tisdell was the Project Leader. Views expressed in these working papers are those of their authors and not necessarily of any of the organisations associated with the Project. They should not be reproduced in whole or in part without the written permission of the Project Leader. It is planned to publish contributions to this series over the next few years.

Research for ACIAR project 40, *Economic impact and rural adjustments to nature conservation (biodiversity) programmes: A case study of Xishuangbanna Dai Autonomous Prefecture, Yunnan, China* was sponsored by the Australian Centre for International Agricultural Research (ACIAR), GPO Box 1571, Canberra, ACT, 2601, Australia.

The research for ACIAR project 40 has led in part, to the research being carried out in this current series.

For more information write to Professor Clem Tisdell, School of Economics, University of Queensland, Brisbane 4072, Australia. Email [c.tisdell@economics.uq.edu.au](mailto:c.tisdell@economics.uq.edu.au)

# **TOURISM AS A CONTRIBUTOR TO DEVELOPMENT IN SRI LANKA: AN OVERVIEW AND A CASE STUDY**

## **Abstract**

General background is provided on the potential of tourism growth to contribute to economic development, paying particular attention to the experience of Sri Lanka. An overview of trends in inbound tourism to Sri Lanka is presented with particular consideration being given to its number of inbound tourist arrivals. Sri Lanka's comparative position in international tourism markets, the composition of its tourist arrivals by area of origin, the extent of foreign earnings by the Sri Lankan tourism industry and variations in the amount of these earnings, and the extent of employment generation by this industry are examined. Regional aspects of the tourism industry in Sri Lanka are given special consideration, and this is followed by a report on the regional economic impact of tourism of Pinnawala Elephant Orphanage. This major tourist attraction near the edge of the Western Highlands of Sri Lanka is shown to make a significant contribution to economic decentralisation. A general discussion follows of tourism development in the Sri Lankan context. The main factors that have hindered tourism growth in Sri Lanka and its decentralisation are considered. Indications are that major impediment posed by civil disturbance and terrorism is at an end in Sri Lanka.

# **TOURISM AS A CONTRIBUTOR TO DEVELOPMENT IN SRI LANKA: AN OVERVIEW AND A CASE STUDY**

## **1. Introduction**

Tourism is one of the fastest growing industries globally, including in the developing world (Tosun, 2001). It has grown faster than world gross domestic product since the 1950s with expenditure on tourist goods and services representing some 8 per cent of total world export receipts and 5 per cent of world GDP (WTO, 2003). Wen and Tisdell (2001) suggest that this is due to rising global incomes, increasing leisure time, a rising world population, fall in real transport costs, reduced travel time and globalisation. Many developing countries have recognised the possible contribution that this industry can make to economic development (Sharpley, 2000) and have included it as an integral part of their development strategies (Balaguer and Jorda, 2002). As a result, over the last two decades, an extensive body of literature on issues surrounding this industry in developing countries has been built up (Lanza and Pigliaru, 1998; Fossati and Panella, 2000; Harrison, 2001; Tisdell, 2001, and Dabour, 2003). Employment generation, foreign exchange earnings and community welfare are aspects of tourism-induced development considered in most of the relevant literature (Andriotis, 2002).

However, the possible contribution of the tourism industry is heavily influenced by international economic and political stability, as well as by terrorist threats and civil unrest in the tourist destination in question (World Travel and Tourism Council, 2003). There is a widespread view among the tourism analysts that international visitors are very concerned about their personal safety and thus this industry can only thrive under peaceful conditions (Hichcock, et al. 1993). Sri Lanka, for example, has been among those affected by war and civil unrest. Tourist arrivals in Sri Lanka declined to their lowest levels in recent decades (see Figure 2) – 182,620 in 1987 – as a result of the ongoing ethnic conflict in the north which started in 1983 and the subsequent youth uprising of 1987/1989 in the south. However, the number of tourist arrivals to Sri Lanka now has escalated with the progress of the ongoing peace dialogue with the Liberation Tigers of Tamil Elam (LTTE) which begun initially in 1994.

According to the Sri Lanka Tourist Board (2003), between 1994 and 2002, with some fluctuation, 380,769 tourists arrived in Sri Lanka on average per annum. Tourist arrivals

reached a high of 436,440 in 1999. More than half these arrivals were from Western Europe. The hotel industry, too, has experienced major developments with the advent of the peace process. Hotel occupancies, which went down to around 30 per cent in the mid-1980s to the early 1990s, are now increasing following encouraging developments in the peace process. This article provides a detailed account of these developments in Sri Lanka's tourism industry and assesses its possible contribution to the economic development of Sri Lanka. First, it presents a general overview of the trends and patterns of inbound tourism to Sri Lanka before focusing on the regional aspects of the tourism industry. This is followed by an analysis of the regional economic impact of tourism based on a case study of the Pinnawala Elephant Orphanage (PEO). In Section 5, a discussion about the future prospects and possible challenges to the Sri Lankan tourism industry and conclusions are presented.

## **2. Trends and Patterns of Inbound Tourism to Sri Lanka: An Overview**

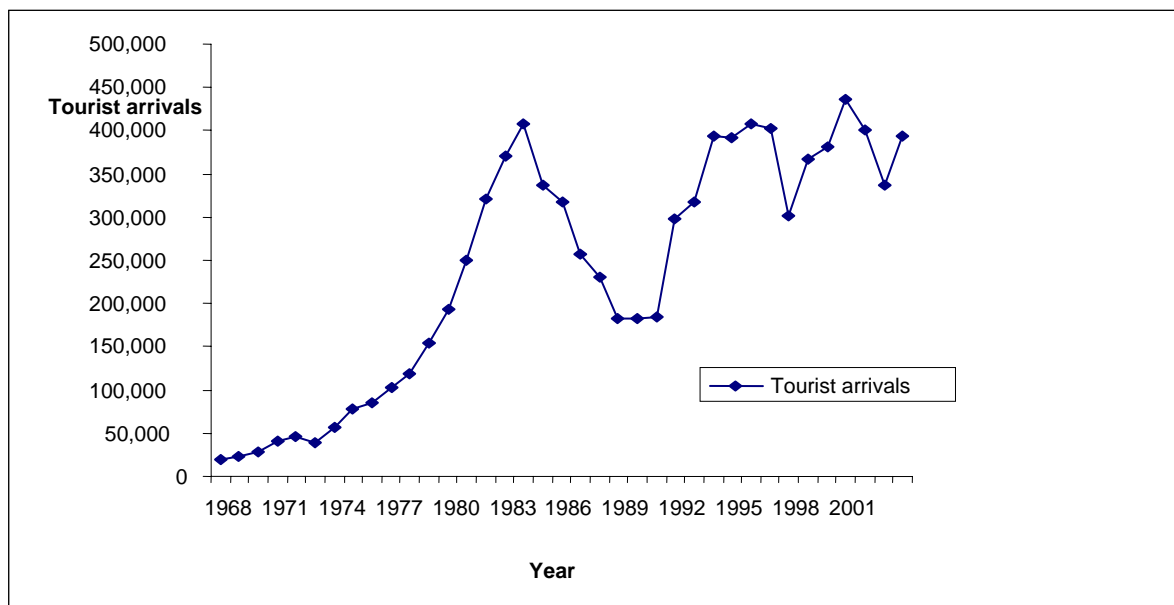
Sri Lanka's economy began to assume its modern form in the 1830s and 1840s, when coffee plantations were established in the Central Highlands by the British (Snodgrass, 1966). When coffee fell victim to a leaf disease in the 1870s, it was quickly replaced by tea, which soon covered more land than had coffee at its height. Coconut plantations also expanded rapidly in the late nineteenth century, followed by rubber, another cash crop introduced in the 1890s. At independence in 1948, these generated over 90 percent of export proceeds (Lakshman and Tisdell, 2001). However, the economy gradually became more diverse after the late 1950s, partly as a result of government policies that encouraged this trend (Karunaratne, 2001). This was because successive administrations tried to reduce the country's dependence on plantation agriculture because of a long-term decline in their value relative to the cost of imports.

Much of the diversification of the economy, especially in the 1960s and the early 1970s, took the form of import substitution. This involved producing for the local market goods that the island could no longer afford to import (Lakshman, 1998). The Sri Lankan economy was further diversified with the introduction of liberalised economic policies in 1977 which promoted a number of non-traditional export sectors such as tourism, textiles, garments, refined oil, and processed agricultural products ((Lakshman and Tisdell, 2000). Of these non-traditional sectors, tourism was recognised as the potential growth sector by the architects of these new economic policies (ADB, 1998). In this section, therefore, the secondary data on the performance of the tourism industry is analysed to assess its possible contribution to development in Sri Lanka.

### *Change in the Number of Foreigners Visiting Sri Lanka*

Foreign tourist arrivals in Sri Lanka expanded rapidly after 1966 with the establishment of Sri Lanka Tourist Board (the primary agency of charge in promotional and organizational responsibilities of the tourist industry in Sri Lanka), but eventually reached a ceiling of under 450,000 inbound tourists per year. The period 1967-76 witnessed an increase of 19 per cent on average per annum in the total overseas visitors to Sri Lanka and this was further increased (by 23 per cent on average per annum) between 1977-1982 with Sri Lanka's introduction of open economic policies.

However, national security issues related to ethnic conflict have caused major fluctuations in tourist arrivals since 1983. This was further exacerbated by the youth uprising of 1987/1989 in the south. The 1982 height of 407,230 foreign visitors arriving in Sri Lanka was matched only in 1994 with 407,511 arrivals and subsequently in 1999 with 436,440 arrivals. As can be seen in Figure 1, the number of tourist arrivals between 1983 and 2002 have proven to be relatively volatile. However, during this period, the average length of tourist stay has been relatively stable at about 10.1 nights.



**Figure 1: Number in Inbound Tourist Arrivals in Sri Lanka 1966-2002**



### ***Sri Lanka's Position in the International Tourism Markets***

According to WTO (2003), the number of international arrivals globally has grown continuously since 1990, (except for a decrease of 0.5 per cent in 2001 as a consequence of terrorist attacks in the US). It reached a height of 702.6 million arrivals globally in 2002, the latest year for which data are available. During this period, the largest proportion of international tourist arrivals were recorded in Europe and the Asia-Pacific region continued its position as the world's third largest international tourist market with a vigorous performance in 2002 of an increase of 10 million tourist arrivals. However, international tourist arrivals in the South Asian sub-region during this period did not show a significant improvement and its global share has fluctuated between 3.2 and 5.9 of the total international tourist arrivals. The situation in Sri Lanka reflects this with its share in the global market fluctuating between 0.065 and 0.055 per cent of the total international tourist arrivals. Furthermore, its share in the South Asian sub-region declined continuously until 2001. A little improvement has been recorded only in 2002 (see Table 1).

**Table 1**

**Sri Lanka's % Share in the Total World/Asia Pacific Region and the South Asia Sub-Region International Tourism Arrivals**

<b>Region/country</b>	<b>1990</b>	<b>1995</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
Africa	3.29	3.63	3.98	4.13	4.14
Americas	20.39	19.76	18.62	17.57	16.35
Asia and the Pacific	12.65	15.55	16.77	17.70	18.68
Europe	61.54	58.55	57.13	57.12	56.90
Middle East	2.12	2.47	3.49	3.44	3.92
Sri Lanka	0.065	0.072	0.06	0.058	0.055
<b>Sri Lanka's % share in the total international tourism arrivals in Asia Pacific region and the south Asia sub-region</b>					
North East Asia	48.53	51.52	54.23	54.17	56.05
South East Asia	37.26	34.11	32.1	33.19	32.14
Oceania	9.01	9.46	8.33	7.84	7.31
South Asia	5.55	4.91	5.29	4.79	4.49
Sri Lanka	0.516	0.47	0.35	0.28	0.29
Sri Lanka's % share in the South Asia	9.34	9.52	6.56	5.86	6.62

Based on WTO (2003)

Table 2 presents the World Travel and Tourism Council's estimates of Sri Lanka's tourism industry competitiveness within the countries in the international tourism market (World Travel and Tourism Council, 2003). These estimates provide eight separate indices. These

relate to price competitiveness, the achievement of human development in terms of tourism activity, the level of infrastructure development, environmental aspects of tourism development, the use of modern technology, human resource development efforts, the extent to which a country is open to international tourism and aspects of its social development. The value of each index ranges from 0 to 100 and indicates the country's level of performance relative to other countries. An index value of 0 represents the lowest achievement and 100 show the highest achievement, for example most environmentally friendly country or most price competitive country.

**Table 2**  
**Sri Lanka's Tourism Industry Competitiveness Within**  
**the Countries in the International Tourism Market**

Index	Index value	Ranking
Price competitiveness	70	31
Human Tourism	15	94
Infrastructure	53	59
Environment	66	25
Technology	15	154
Human Resources	59	70
Openness	55	90
Social	44	115

Note:

a. Index value (less competitive is 0.0; most competitive is 100)

b. Ranking ( Most competitive is number 1; least competitive is number 206)

---

Source: World Travel and Tourism Council, (2003)

### ***Composition of the International Tourist Arrivals in Sri Lanka***

Table 3 provides some information about the composition of international tourist arrivals in Sri Lanka. Sri Lanka relies heavily on Western European markets, specially the United Kingdom and Germany who alternate between first and second place as major source nations for tourist arrivals between 1991- 2001. However, in 2002, India became the largest single source of arrivals in Sri Lanka. During this period, France, Japan, Italy, USA and the Netherlands also become strong source markets. The Sri Lanka Tourist Board Marketing Plan for 2000 listed Russia, Poland, Switzerland, Australia Singapore, and Canada as potential markets (see Sri Lanka Tourist Board, 2000).

**Table 3**  
**Composition of the International Tourist Arrivals in Sri Lanka for 1991**  
**as % of Total Arrivals In Each Year)**

<b>Country of residence</b>	<b>1991</b>	<b>1993</b>	<b>1995</b>	<b>1997</b>	<b>1999</b>	<b>2001</b>	<b>2002</b>
North America	3.63	3.50	3.62	4.36	4.23	4.74	5.05
Latin America	0.03	0.09	0.15	0.14	0.08	0.13	0.14
Western Europe	61.3	64.67	62.28	57.91	63.19	60.57	50.94
France	11.10	8.86	5.32	6.93	7.89	6.22	5.08
Germany	20.02	24.36	19.81	16.33	17.70	17.93	14.03
Italy	7.34	4.64	4.56	3.94	4.54	3.58	3.09
U.K.	9.94	11.27	15.99	17.20	18.54	20.143	17.86
Eastern Europe	1.06	1.077	1.129	1.75	1.42	2.09	2.05
Middle East	0.82	0.74	0.95	1.21	1.10	1.65	1.65
Africa	0.088	0.12	0.18	0.42	0.28	0.28	0.41
Asia	29.13	26.79	29.15	31.01	26.20	26.64	36.39
India	6.89	8.26	11.82	12.84	9.69	10.07	17.79
Japan	6.91	5.20	4.52	3.65	3.74	2.74	3.46
Pakistan	3.32	3.15	2.81	3.12	2.62	2.54	1.72
Australasia	3.85	2.95	2.54	3.19	3.47	3.89	3.36
Australia	3.54	2.79	2.25	2.84	3.03	3.40	2.85

Based on Sri Lanka Tourist Board (2003)

Table 4 provides a more detailed account of the source of foreign visitors to Sri Lanka in 2002 by country of origin giving information on the top 10 source nations. India is the main source followed by the United Kingdom and Germany. However, according to ADB (1998), visitors from India and Maldives are mainly involved in trade, medical treatments, visiting relatives and higher education, although most of them state on their disembarkation card that their purpose of visit is pleasure.

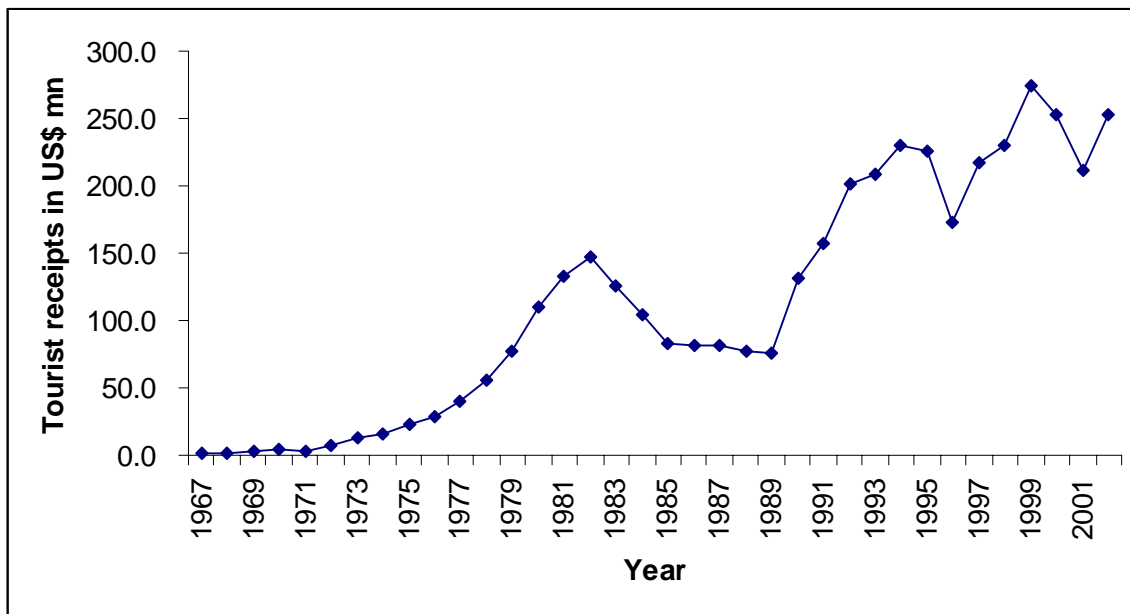
**Table 4**  
**Major Tourist Generating Foreign Countries for Sri Lanka 2002**  
**in Terms of Number of Arrivals in Sri Lanka**

<b>Rank</b>	<b>Country</b>	<b>Arrivals</b>	<b>% change form 2001</b>
1	India	69,960	+106.2
2	UK	67,533	- 0.41
3	Germany	55,170	- 8.7
4	France	19,989	-4.6
5	Japan	13,602	+47.3
6	Italy	12,177	+0.85
7	The Netherlands	11,748	-6.5
8	USA	11,565	+38.1
9	Australia	11,217	-2.1
10	Maldives	9,861	+9.3

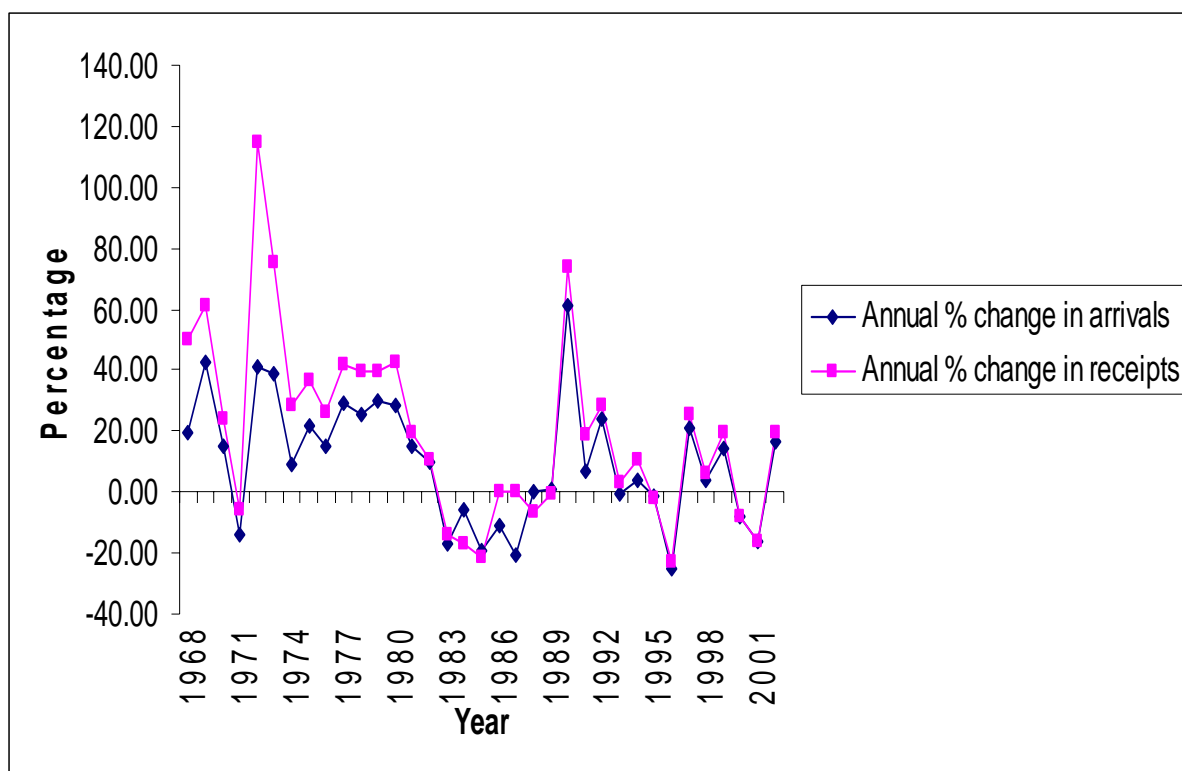
Based on Sri Lanka Tourist Board (2003)

### *Foreign Earnings by the Tourism Industry in Sri Lanka*

Tourism is currently one of Sri Lanka's top five exports with foreign earnings from tourism contributing US\$ 253 million in 2002 (Sri Lanka Tourist Board, 2003). This marks an increase of 20 per cent from 2001 (US\$ 211.1 million) but is still less than the level of revenue earned in 1999. A similar fluctuation could be seen in tourism earnings in Sri Lanka since early 1980s to that in arrivals. For example, between 1980 and 1982 tourism earnings increased by 15 per cent per annum on average and this declined by 17 per cent per annum on average between 1983 and 1985. Then annual tourism earnings increased by 27 per cent per annum average between 1990 and 1994. This subsequently declined by 12.5 per cent per annum on average between 1995 and 1996. In 2002, foreign exchange earnings increased by 28.3 per cent from Rs. 18,863.3 millions in 2001 to Rs. 24, 202.0 million in 2002. Figure 2 presents a historical overview of the fluctuation of tourism earnings in Sri Lanka since 1967. A comparison of the annual percentage growth rate for the number of foreigners visiting Sri Lanka and foreign earnings by the tourism industry in Sri Lanka is presented in Figure 2.



**Figure 2: Foreign Tourism Earnings by Sri Lankan Tourism Industry 1967-2002**



**Figure 3: Annual Percentage Change in Number of Foreigners Visiting Sri Lanka and Foreign Earnings by the Sri Lankan Tourism Industry**

Figure 3 shows the foreign earnings by the Sri Lankan tourism industry are closely associated with the percentage of change in number of foreigners visiting Sri Lanka. Moreover, this amount is also associated with the total tourist nights spent. For example, following the increase in arrivals, the total tourist nights spent increased by 19.4 per cent, from 3,342,233 in 2001 to 3,989,058 in 2002. The overall annual occupancy rate of hotels increased by 1.0 percentage point, from 42.1 per cent in 2001 to 43.1 per cent in 2002.

### ***The Generation of Employment by the Tourist Industry in Sri Lanka***

The view is often held that tourism is, in general, a labour-intensive industry and is capable of providing employment opportunities for a large number of poorly educated or unskilled workers, a characteristic that applies to many rural areas in the developing countries (Frederick, 1993; Tooman, 1997). The situation in Sri Lanka is illustrative. Despite the frequent fluctuations in foreign tourist arrivals in Sri Lanka, the total number of jobs generated by the Sri Lankan tourism industry has continuously increased over the past three decades. At present, this industry provides a total of 93,170 jobs. Of these 38,821 or 41.6 per cent are through direct employment and accounts for about 15 per cent of the total employment

generated by the service sector in Sri Lanka. However, as can be seen in Table 5, the rate of growth has gradually declined except for the period of 1990-1994.

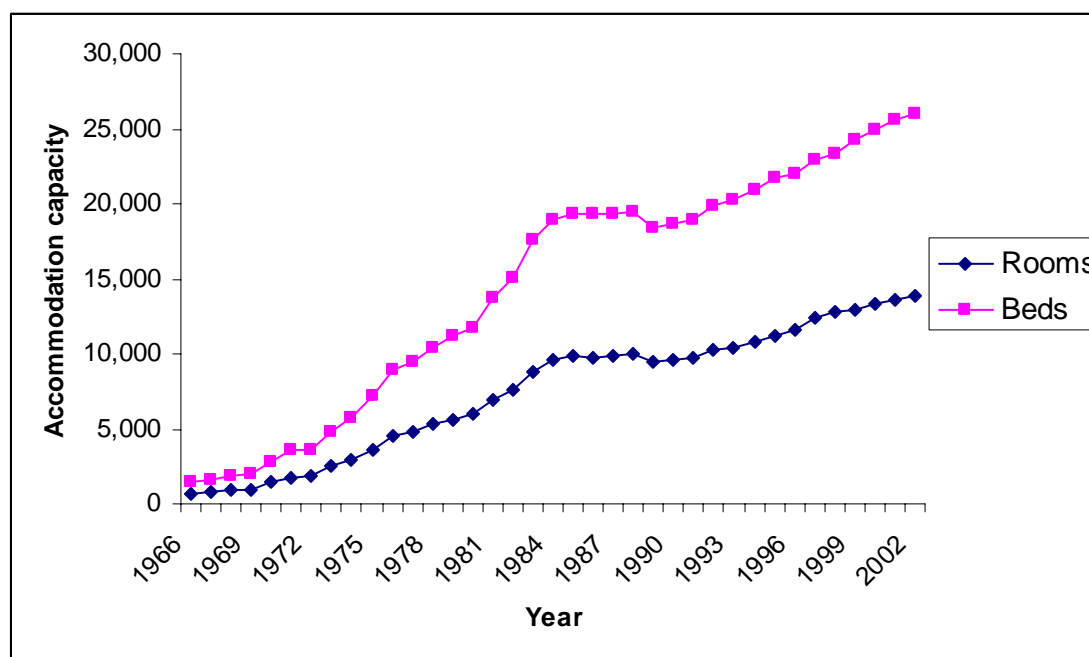
**Table 5**  
**Annual Average Growth of Employment Generated by the**  
**Sri Lankan Tourism Industry for 1970-2002**

Period	Annual average growth of direct employment generated	Annual average growth of indirect employment generated	Annual average growth of total employment generated
1970-1974	14.89	14.74	16.32
1975-1979	14.47	15.42	17.33
1980-1984	3.59	3.45	6.94
1985-1989	2.24	2.24	4.62
1990-1994	7.06	7.06	9.51
1995-1999	1.74	1.74	4.15
2000-2002	2.00	2.00	2.00
Annual average growth for 1970-2002	6.79	6.89	6.84

Based on Sri Lanka Tourist Board (2003)

### ***The Expansion of Tourism Accommodation Facilities in Sri Lanka***

Figure 4 demonstrates the overall growth of accommodation facilities in the tourism sector in Sri Lanka. According to ADB (1998), until the early 1980s the Hotel Corporation, (a semi-privatised formerly state owned body) owned and controlled 76 per cent of tourism accommodation in the country. During this period (between mid-1960s and early 1980s) the expansion in the tourism accommodation facilities resulted largely from state investments. However, with the introduction of liberalised economic policies in 1977, significant amounts of national and international investments were made in the construction of tourism accommodation, particularly in Colombo and the Southwest coast. As a result, at present most accommodation for tourists in Sri Lanka is in the private sector and it controls a large part of the inbound tourist market (Sri Lanka, Tourist Board, 2003).



**Figure 4: The Growth of Tourism Accommodation in Sri Lanka 1966-2002**

Table 6 provides a detailed account of the growth of the accommodation capacity in relation to graded and supplementary establishments between 1993 and 2002. As shown in this table, during this period, despite political uncertainty and on-going ethnic conflict, accommodation facilities (i.e. number of units) in graded establishments increased by 5.7 per cent and by 5.5 per cent in the supplementary establishments on average per annum. This provides strong evidence that private investors are confident about the future of the tourism industry in Sri Lanka.

**Table 6**

**Accommodation Capacity in Graded and Supplementary Establishments 1993-2002**

Description	1993	1995	1997	1999	2001	2002
Graded establishments						
(a). No. of Units	129	138	158	173	211	222
(b). No. of Rooms	10,365	11,255	12,370	12,918	13,626	13,818
(c). No. of Beds	20,242	21,680	22,944	24,216	25,134	25,968
Supplementary establishments						
(a). No. of Units	140	208	227	230	199	230
(b). No. of Rooms	1,562	2,494	2,635	2,700	2,011	2,500
(c). No. of Beds	3,182	4,563	4,574	4,671	3,479	4,250

Based on Sri Lanka Tourist Board (2003)

### 3. Regional Aspects of Tourism Industry in Sri Lanka

Unquestionably Sri Lanka's diverse combination of tourism attractions, including fine beaches, world class historical sites, wildlife resources, hospitable people, tropical climate and its relatively compact area ensure it is a destination well suited for tourism/recreation activities at the local/regional level. However, at present, the greatest concentration of the tourism facilities, particularly the accommodation establishments, is in the Southwest followed by the Colombo and Colombo District. The distribution of graded accommodation establishments in relation to major resort regions in Sri Lanka is presented in Table 7.

**Table 7**  
**Regional Distribution of the Graded Accommodation Establishments**  
**and Rooms in Tourism Sector in Sri Lanka - 2002**

<b>Resort Region</b>	<b>Units</b>	<b>% of total</b>	<b>Rooms</b>	<b>% of total</b>
Colombo City	21	9.46	2,599	18.81
Greater Colombo	44	19.82	2,415	17.48
1.North of Colombo	32	14.41	1,945	14.08
11.South of Colombo	12	5.41	470	3.40
South Coast	91	40.99	5,504	39.83
1.Upto Galle	60	27.03	4,072	29.47
11.Beyond Galle	31	13.96	1,432	10.36
East Coast	4	1.80	165	1.19
High Country	17	7.66	669	4.84
Ancient Cities	45	20.27	2,466	17.85
1.Kandy Area	21	9.46	1,172	8.48
11.Anuradhapura	7	3.15	220	1.59
111.Polonaruwa/Giritale	10	4.50	337	2.44
1V.Habarana	7	3.15	737	5.33
Northern Region	-	-	-	-
<b>Total</b>	<b>222</b>	<b>100.0</b>	<b>13,818</b>	<b>1.00</b>

Based on Sri Lanka Tourist Board (2003)

From Table 7, it can be seen that 70.3 per cent of the accommodation establishments and 76.1 per cent of the rooms are located in three resort regions. This concentration may have a significant negative impact on the tourism development at the regional level, particularly on nature and wildlife-based tourism. According to ADB (1998) nature and wildlife-based tourism has a good potential with Sri Lanka having 13 per cent of land in protected areas. It



has the world-renowned Yala National Park and icon species such as the elephant and sea turtle.

Currently, wildlife tourism products are not widely promoted by the Sri Lanka Tourist Board and international tour operators as a “must see” part of Sri Lanka’s product mix, although the potential is widely acknowledged (Wickremasinghe and Santhiapillai, 2000). However, analysis of secondary data on the visitors to five selected national parks reveals that there is great potential to develop nature/ wildlife-based tourism at the local/regional level. The next section presents an analysis of the economic contribution that tourism could make to regional economic development using the Pinnawala Elephant Orphanage as a case study.

There are several reasons why foreign tourism industry in Sri Lanka has not yet spread significantly outside the Colombo and Southwest coast resort regions and is unable to utilise its local and regional tourism potentials. First, as in many developing countries, the tourism industry in Sri Lanka is handled by a small number of mainstream hotel owners who are also tour operators and they are in turn part of larger groups and trading houses. Consequently, the supplementary tourism establishments outside the mainstream operators, particularly at the regional level, do not get enough business to run them profitably. This hinders investment in the local and regional tourism business. Secondly, for long-haul, extra regional tourists, reports of instability in any destination can be extremely damaging in terms of influencing a decision to travel outside the Colombo and South coast resort regions, such as visiting Anuradhapura in the ancient city resort region. Media reports in the tourists’ home country can be overstated in the desire to attract readers. This can be particularly discouraging to prospective tourists, particularly non-package tourists who do not have first-hand information and experience of tourism attractions outside the main tourist regions of Sri Lanka. Finally, a further reason for the concentration of tourism in the Colombo and Southern coastal regions is that Colombo is the only port of entry to Sri Lanka by air. Foreign tourists have a limited time budget and do not, therefore, tend to travel a great distance from their port of entry.

#### **4. A Case Study of Regional Economic Impact – Pinnawala Elephant Orphanage**

There has been little study of regional impact of the economic contribution of the tourism to local economic development in Sri Lanka (Tisdell and Bandara, 2003a). The analyses presented in this section are a step forward in filling this gap. They are based on the results from a survey of a sample of 120 shopkeepers/vendors (this covers a little over two-thirds of

the current population of businesses) in the vicinity of the Pinnawala Elephant Orphanage (PEO). This survey was undertaken to assess the fundamental characteristics of the businesses in this area, their dependency on the PEO, the nature of their backward economic linkages, and their ability to generate employment. We also canvassed opinions of these businessmen about possible improvements to the Orphanage environment and facilities.

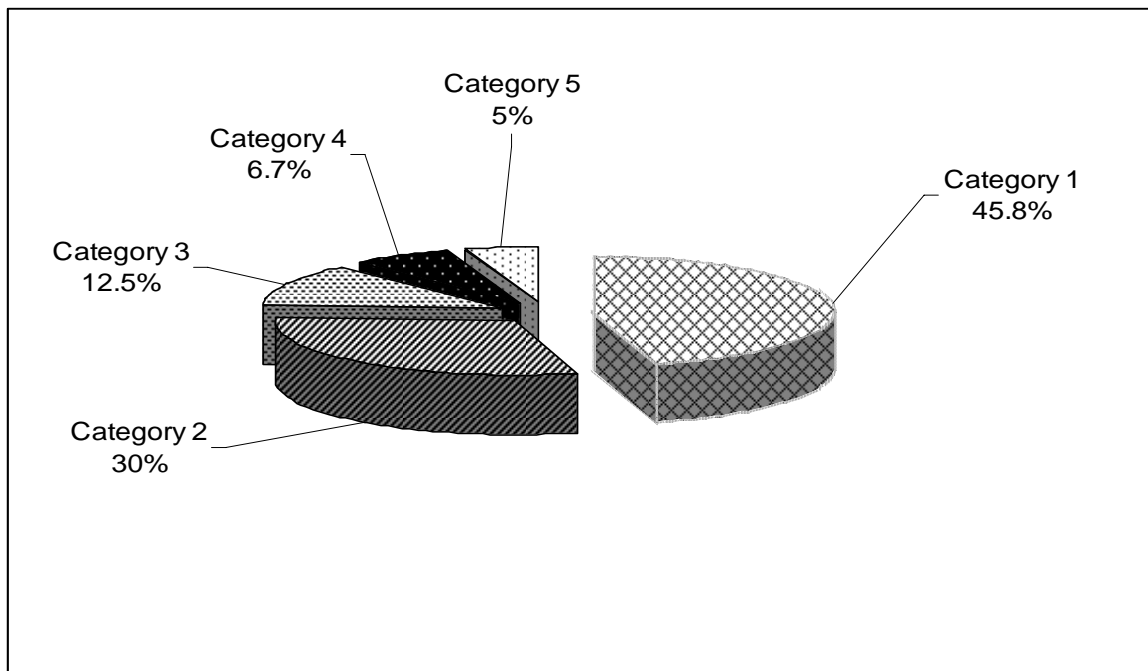
The PEO is a unique captive elephant-based recreation facility that was initially established in 1975 by the Department of Wildlife Conservation. It covers an area of nine hectares of a former coconut plantation in the Kegalle District, some 90km northeast of Colombo. At present the PEO is managed by the Department of National Zoological Gardens (DNZG). The initial objective of establishing the PEO included provision of a refuge to care for the elephants that were injured, orphaned, abandoned or separated from their families/herds in the wild. Although the orphanage started with five such animals, at present the PEO provides shelter for 69 captive elephants. With the increase in elephant population inside the orphanage, the PEO has become a major outdoor attraction for both local and foreign visitors. At present, over 35,000 visitors (both local and foreign) visit the PEO per month on average. Tisdell and Bandara (2003) discuss visitors' reactions to the PEO.

In this study, we found that 184 businesses operate within a 10km radius of the PEO; they include fruit and vegetable stalls, furniture and hardware stores, gift and toyshops, hotels and guesthouses, gem and jewellery shops, grocery and variety shops, auto repairs, spice gardens and plant nurseries, snack bars (cafés), restaurant and mobile vendors. Selection of establishments for the sample from each of these business categories was determined by the relative frequency of the population of businesses in this area so as to provide a stratified sample. A questionnaire was designed with both structured and open ended questions to guide the interviews with the respondents in the sample. Interviews were conducted both in Sinhala and English.

### ***The Nature of the Businesses Established in the PEO Area***

The economic role of the PEO is clearly significant. Most businesses in the locality came into existence because of the presence of the PEO and depend heavily on its ability to attract tourists. In our interviews, we asked those in charge of businesses surveyed: Has your business been operating for several years? Respondents' responses were recorded as 'yes' or 'no'. Our analysis of the responses to this question reveals that about 90 per cent of the businesses have

been operating for several years. Informal discussion with vendors reveals most of the guest houses, gift shops and large restaurants particularly in the close vicinity of the Orphanage, started during the last five years. Moreover, we also noticed that a number of buildings are under construction particularly along the Colombo-Kandy main road junction to the PEO. Thus these constructions would further increase the number of business ventures in the Pinnawala area. Nonetheless, altogether this information provides some indication that there has been a steady expansion of business activities in the Pinnawala area since the presence of the Elephant Orphanage.



**Note:**

- Category 1 = businesses with less than 3 persons employed
- Category 2 = 3-5 persons
- Category 3 = 6-10 persons
- Category 4 = 11-15 persons
- Category 5 = more than 16 persons.

**Figure 5: The Distribution of Businesses in the Sample by Number of Persons Employed**

We found that the majority of businesses in the sample are owned by individuals. These businesses consist mostly of fruit and vegetable stalls, snack bars, furniture and hardware stores, and grocery and variety shops. Probably most of these businesses require relatively low investment compared to the other businesses in the sample such as gift shops, restaurants

and jewellery shops, and are quite labour intensive compared with other type of businesses in the neighbourhood of PEO. We also find that most of the businesses owned by individuals correlate with the businesses that employ fewer than three persons. On the other hand, other ownership structures (i.e. family owned or corporate financed) correlate with businesses such as gift shops, restaurants and guest houses that employ more than 10 persons. Figure 5 presents the distribution of the businesses in the sample in relation to their relative size measured in terms of the number of persons employed. It can be seen that over a 75 per cent businesses employ fewer than 5 people.

***The Dependency of the Businesses in the Sample on the PEO***

The respondents were presented with the following open-ended question: What percentage of your business depends, in your view, on the presence of the PEO? This indicated their perceptions of the dependency of their business on the PEO. Table 8 presents the respondents’ responses to this question.

**Table 8**  
**Distribution of the Businesses in the Sample in Relation to Their**  
**Economic Dependency on the Presence of the PEO (N = 120)**

Business category	Degree of dependency/ Number of business				Mean dependency ratio
	Less than 25%	26-50%	51-75%	More than 76%	
Mobile vendor	-	-	-	2	100.0
Gem and jewellery	-	-	-	5	100.0
Gift and toy	-	-	2	24	96.11
Snack bar(café)	-	3	3	14	93.35
Spice and plant nursery	-	-	2	3	91.23
Restaurant	2	5	4	7	72.75
Hotels and guesthouse	1	4	1	2	65.60
Fruit and vegetable	1	6	7	5	63.13
Grocery and variety	4	3	1	-	54.0
Auto repair	-	2	-	-	47.5
Furniture and hardware	2	3	-	-	35.4
Total	10	28	20	62	79.6
	(8.3)	(23.3)	(16.7)	(51.7)	

Note: Values in parentheses are the percentages of total number of businesses in the sample

As shown in Table 8, the dependency of the individual businesses in the sample on the PEO varies according to the activities they are involved in or the category of their business. All types of businesses in the sample, except those involved in furniture and hardware selling and motor repairers, depend for more than half their business on the PEO. Businesses such as gift and toy shops, spice gardens and plant nurseries, snack bars, mobile vendors, and jewellery shops depend heavily on the PEO. It accounts for more than 90 per cent of their businesses. Overall the estimated mean economic dependency ratio on the PEO for all the businesses in the sample is about 80 per cent. In the Pinnawala area, the Orphanage is the only significant tourist attraction and hence most businesses in this area have to be depend on the arrivals of its visitors. High economic dependency ratios of local businesses on the PEO are indicative both of the wider economic impact of the PEO and the sensitivity of local business to the fortunes of the PEO. Businesses with a high economic dependency ratio on the PEO have a major stake in its operations because of the symbiotic relationship present. Vice versa, the PEO's fortunes may also be impacted on by operation of supporting businesses.

#### ***Use of Locally/Regionally Produced or Supplied Products and Materials by the Businesses in the Sample***

Recognising the significance of use of the locally/regionally supplied products and materials by the businesses in the sample, the respondents were asked three interconnected questions. First, they were asked to list the main items sold in their businesses. Then, they were asked: Are any of these items produced and supplied locally or regionally (from up to 40 km away from the PEO)? Responses were recorded as 'yes' or 'no'. The respondents who responded positively were presented with a third question. They were asked to list these items and the percentage of the total supply obtained in relation to the main town or area from which they were supplied. The respondents' responses to the second question (i.e. Are any of these items produced and supplied locally or regionally?) reveals 93.3 per cent businesses in the sample use locally/regionally produced or supplied products and materials. This was 100 per cent for most business categories. Exceptions included establishments involved in selling hardware and furniture, gifts and toys, and jewellery.

We examined this claim, further by analysing information gathered from the third question (i.e. Please indicate the percentage of the total supply obtained this list of items in relation to the main town or area from which they were supplied?). In this process, first we regrouped the list of items provided by the respondents at each business category level, for example, items

found in the 'grocery and variety shop category' such as rice, lentils, and other local grain varieties were categorised as 'grain products'. Similarly, every single product found in the lists of items given by respondents in respective business categories was regrouped along with the percentages supplied. These values were used to estimate the mean percentage of items produced/supplied by areas/towns within 40km of the PEO at the individual business category level. Subsequently, by presenting another question, the respondents were asked: Are there any other items (in addition to the above list) supplied mainly from outside of the Colombo District? The respondents who responded positively to this question were asked to list those items with the percentage of total supply, and the main town or area from which they were supplied. A similar procedure to that outlined above was used to analyse the information gathered from this question.

The results reveal that except for business categories such as hardware and furniture, hotels and guest houses, and gem and jewellery outlets, all other businesses in the sample use products and materials either locally/regionally produced or supplied, or those supplied from outside the Colombo District. However, the relative importance of the use of products and materials supplied by the local/regional sources is much higher than from other regions outside Colombo district. Business linkages appear to be mostly concentrated on the local region extending in approximately a 40km radius from the PEO. This situation was further examined by analysing the use of locally/regionally produced/supplied products and materials by the businesses in the sample in relation to their relative size. Our analysis found that except for the some businesses with 3-10 persons employed, all the business in the sample, regardless of the number of persons employed, seem to depend heavily on local and regional sources around the PEO. The exceptions exist again because this category include businesses such as hardware, and furniture, gem, and jewellery shops which obtain supplies from outside the Colombo District.

### ***The Generation of Employment by the Businesses in the Sample***

Two open-ended questions were used to gather information about the generation of employment by the businesses surveyed. One question was designed to estimate total number of job generated in the business surveyed in the PEO area (i.e. How many persons normally work in your business in a typical week?); the other was to determine the gender distribution of these employments (i.e. What percentage of those working in your business are females?).

Most businesses in our sample were quite small and employed two persons or less in the sample. However, the 120 businesses in the sample provide 641 full-time employment opportunities, of which about 60 per cent are generated by two business categories, the gift shops and restaurants. Moreover, these categories provide relatively higher average number of jobs per establishment compared to other types, such as fruit and vegetable, grocery and variety shops, and snack bars. Another important finding was a very low number of females are employed. Some businesses in the sample do not have any female employees at all. From a study of tourism in India and India's economic development, Roy and Tisdell (1998) describe this situation as quite common in the tourism sector in many developing countries. However, our analysis of the total employment in relation to size of the businesses surveyed found that the job opportunities generated for females increase with the size of the establishment.

It must be noted that not all employment in business establishment in the PEO area can be attributed to the PEO. Therefore, we made an estimate using a linearity assumption. As an approximation, we assumed that employment in enterprise attributable to the presence of the PEO would be in proportion to the proportion of its business due to the PEO. We therefore multiplied the total employment for each enterprise by this proportion and added those values to estimate total employment due to the presence of PEO. The results are reported in Table 9. This table indicates that 524 full-time jobs were generated by the presence of PEO in our sample of businesses in this study. The largest concentration of employment is in the restaurants and gift and toy outlets.

**Table 9**

**The Distribution of Total/Average Employment by Gender Due to the PEO (N = 120)**

Business category	Total jobs generated		Male jobs generated		Female jobs generated	
	Total	Avg.	Total	Avg.	Total	Avg.
Restaurant	187 (35.7)	10.4	162 (37.9)	9.0	25 (25.8)	1.4
Gift and toy	144 (29.9)	5.3	105 (24.6)	3.9	39 (40.2)	1.4
Spice and plant nursery	51 (9.8)	10.2	40 (9.4)	8.0	11 (11.3)	1.1
Hotels and guesthouse	39 (7.5)	4.9	30 (7.0)	3.8	9 (9.2)	1.1
Snack bar(Café)	35 (6.8)	1.8	28 (6.6)	1.4	7 (7.2)	0.4
Fruit and vegetable	24 (4.7)	1.3	23 (5.4)	1.2	1 (1.0)	0.1
Gem and jewellery	22 (4.2)	4.4	20 (4.7)	3.9	2 (2.1)	0.5
Furniture and hardware	7 (1.3)	1.4	6 (1.4)	1.2	1 (1.0)	0.2
Mobile vendor	3 (0.6)	1.5	3 (0.7)	1.5	0 (0.0)	0.0
Grocery and variety	11 (2.4)	1.2	9 (2.1)	1.0	2 (2.1)	0.2
Auto repair	0.9 (0.18)	0.4	0.9 (0.2)	0.4	0 (0.0)	0.0
Total	524 (100)	3.9	427 (81.5)	3.4	97 (18.5)	0.5

Note: Values in parentheses are percentage of total number of employment generated

Nonetheless, these estimates of the total employment due to the PEO would be higher if we took into account the entire population of businesses in this area and other direct and indirect employment opportunities that are linked with the activities of the PEO. For example, the Orphanage itself provides employment for 65 persons and if we add to these workers and people who work for the contract suppliers of fodder for the elephants this number would increase by at least by another 25 per cent. We estimate that about 10 times as many jobs are created in retail businesses in the neighbourhood of the PEO as within the PEO itself due to presence of the PEO. When all retail businesses in neighbourhood are taken into account around 700 such jobs are likely to be created by the presence of the PEO. Therefore, we estimate that the presence of the PEO creates about ten-times the amount of employment in retail businesses in and around the PEO compared to numbers employed directly by the PEO.

### ***Improving the PEO: Analysis of Shopkeepers'/Vendors' Perceptions***

The respondents were presented with two questions to elicit their opinions/suggestions for improving the facilities of the PEO: the first was: Do you have any suggestions for improving the PEO? The respondents who answered this question positively were presented the second question were then asked to specify their suggestions. Interestingly, analysis of responses received for the close ended question reveals that 90 per cent of respondents at the aggregate sample level were willing to give suggestions for improving the PEO. This indicates the enthusiasm that the business community has for improving the Orphanage environment and facilities.

Our analysis of respondents' suggestions reveals that the most frequent suggestion was to widen roads in the vicinity of the PEO. The need for better regulation of traffic and for a public car park were also frequently raised. Therefore, vendors in the area see traffic congestion as a major problem. It is likely to become more serious as the number of visitors to the PEO increase and could eventually become a constraint on the tourist numbers visiting the area. The second most frequent suggestion was that the PEO should expand its elephant-based activities inside the park, for example, by having dancing elephants and races involving elephants, and an associated frequent suggestion was to stage public entertainment activities, such as carnivals, fairs and exhibitions at the orphanage including elephants. Presumably, the vendors thought that this would increase the number of visitors to the area and thereby bring them more business.



The third most frequently made suggestion was to introduce a regular garbage collection system. Apparently, there are problems with garbage collection. The fourth most frequent suggestion was that the local authority be allowed an active role in the management of the PEO. Presumably, responding vendors believe that this would result in better management and development of the PEO from their point of view. There were also many suggestions that more state-owned land be allocated to expand the size of the PEO and commercial activities in the area.

It might be observed some of the environmental problems in the surroundings of the PEO will worsen if the establishment of a relatively open zoological gardens in this area proceeds as planned. For example, traffic congestion is liable to become an even bigger problem, unless countermeasures are adopted. Further development in the area could result in the loss of its semi-rural character unless it is carefully planned – the area may become relatively urbanized and congested which could detract from its appeal to some visitors. It is also possible that greater use of elephants for dancing, racing and performing at this site would destroy the impression that some visitors have that it is a peaceful refuge for elephants that have faced misfortune in the wild.

Appropriate visitor surveys should be completed before embarking on such a programme. In our survey of visitors to the PEO, we did not find that such a suggestion was raised. Most visitors it seems want more information about the conservation role of the PEO and aspects of elephant conservation and ecology (see Tisdell and Bandara, 2003b). There could therefore be conflict between those having strong wildlife conservation values and those proposing a greater role for performing elephants at the OEP. Particularly, some Western visitors could be ‘put-off’ by circus- like elephant performance at the PEO because there has been considerable opposition in Western countries to the use of performing wild animals, such as elephants and lions in circuses. This has resulted in many cases in bans on the use of such animals, or their voluntary withdrawal by circus proprietors.

#### *Regional Economic Impact of the PEO in Context*

The PEO is a relatively footloose tourism undertaking. Its location on the perimeter of the Western Highland of Sri Lanka adds to employment and income in a region that is outside the area of greatest concentration of the tourism in Sri Lanka. The greatest concentration of the tourism in Sri Lanka occurs in the Colombo/Colombo District and the Southwest of the

country. The location of the PEO near Kegalle makes for decentralisation of economic activity in Sri Lanka. It creates considerable employment in the Pinnawala area and its secondary employment impacts are primarily outside the regions where Sri Lanka's tourism is most focused and away from the Colombo area where economic activity is most concentrated. Thus the facility appears to be relatively effective in promoting economic decentralisation in Sri Lanka. The case study illustrates that location of wildlife-based tourism facilities can be used effectively in developing countries to promote decentralisation and regional development. Although tourism at PEO does not fit the definition of ecotourism, it nevertheless is a related form of wildlife-based tourism. Ecotourism and nature-based tourism have been shown to be an effective mechanism for regional development in China, particularly Yunnan province (Wen and Tisdell, 2001).

## **5. Discussion and Concluding Remarks**

Sri Lanka's tourism industry in the past two decades has experienced testing times. The industry has clearly shown resilience in the face of numerous challenges. Today, Sri Lankan tourism has made a strong comeback. The most encouraging happening is the new peace scenario. The peace initiatives launched by the government in late 2001 and the announcement of the peace agreement have ended the uncertainties that prevailed in the past. This has boosted the confidence of the industry and created new options for developing the industry and attracting more visitors. The Northern and Eastern beaches and other exotic attractions, once closed for tourism purposes, will soon become available again. With this option, Sri Lanka will once again become an all-year-around destination and will have the ability to address seasonality gaps. New investment opportunities are being explored to develop this region in a systematic and planned manner (Central Bank of Sri Lanka, 2002).

According to the Sri Lanka Tourist Board (2003), the total number of tourists arrival in Sri Lanka for the year 2002 was 393,171, a more than 16.7 per cent increase when compared to the tourists arrival in 2001. A total of 37,782 tourists arrived in Sri Lanka in October 2003, which shows an increase of 27.1 per cent compared to the corresponding month in 2002. During the same month, tourist arrivals from Western Europe rose 14.62 per cent compared to the same month in 2002. Tourist arrivals from East Asia and South Asia recorded increases of 74.4 per cent and 76.2 per cent respectively when compared to the figures of July 2002. Arrivals from India showed an increase of 116.2 per cent during the same month. Arrivals from Japan, too, increased by 94.3 per cent in the same month in comparison to the year 2001.

In the year 2001, gross earnings from tourism were US\$-211.1 million and in 2002 it went up to US\$-253 US\$ million.

No doubt tourism has a great potential in Sri Lanka and is one of the fastest growing sectors internationally. However, the tourism industry in Sri Lanka had been beset with many problems. The number of flights and the range of airlines serving the country, especially from western countries, needs to be increased. Another constraint already experienced is inadequate accommodation, particularly at the regional level. There is an imbalance in the tourist accommodation available in the country. Most tourist accommodation is in Colombo, and Southern coastal resort regions. The room availability in other regions is inadequate. No such facilities are available at all in the Eastern coastal regions. Quality accommodation, in particular is in short supply in many areas.

The improvement of road conditions could enhance the comfort and safety of tourists and reduce travel time from one destination to another. At present the access to many tourist destinations and hotels is very poor. There are two aspects of development of the industry that must be kept in mind. Increased tourist traffic should not lead the industry into excessively increased room rates and excessive meal charges. It must always be remembered that tourism is internationally very competitive. It is easy to make the mistake of raising prices so much that could undermine the international competitiveness of the industry.

Though the Government stepped in and set up machinery such as a Tourist Board, a Hotels Corporation, a Hotels School and even a Tourism Ministry to co-ordinate all tourism development activities, this was not sufficient to ensure adequate development of Sri Lanka's strides the tourist industry. From the beginning, the tourist industry in Sri Lanka had been heavily dependent on state assistance. Not only was there direct investment by the Government (the first Five Star Hotel was put up by a Government Corporation), but there were constant 'aid packages' to keep the industry going. While there has recently been increasing private investment, it has not been large. Foreign participation had been more in management than in direct investment.

After the tourism industry gained some momentum in the 1970s up to the early 1980s, the next two decades became catastrophic, due to the deterioration in the law and order situation in the country. This was because of the 'ethnic disturbances', triggered off by the riots in 1983.

Since then, there had been continuous breakdowns in the law and order situation, with the LTTE not only taking over certain parts of the country, including the beautiful eastern coast, but also carrying out attacks in the heart of the capital city, Colombo. Though tourists were not particularly targeted in these attacks, there had been direct impact on tourist traffic due to their assaults on economic targets like the Central Bank of Sri Lanka. The worst was the attack on the one and only International Airport in the country, the Colombo Airport, in August 2001. Tourism being understandably sensitive to these developments, even the modest gains in tourism in the past decades were lost.

Fortunately, at present, the main impediment to tourism development in Sri Lanka is being tackled. There was evidenced a 'cease-fire' between the forces of the Government and LTTE, commencing in November/December 2001, followed by a formal Memorandum of Understanding. Since then, there has been no fighting between these groups. Discussions have been proceeding between the two parties to the conflict for over one year, aimed at a permanent solution and a sustainable peace. Though these talks have since stalled, the effort to resume them continues, with foreign facilitation. This has had a salutary effect on tourism and both investment and tourist arrivals have improved, as shown elsewhere in this chapter. Supplementing the prospects created by the improved law and order situation in the country are the positive steps taken by the Government to provide leadership, develop professionalism in the tourism industry and build on its existing infrastructure. The latter effort, is based on direct partnership with the private sector. The Government, is withdrawing from its existing direct involvement in tourist businesses (by privatization of state-owned tourist facilities) to make way for the private entrepreneurs. There is also increasing foreign participation in the Sri Lankan tourism industry. With improved law and order in Sri Lanka, tourism is poised to make an expanding contribution to Sri Lanka's economic development. In addition, peace is likely to facilitate greater decentralisation of Sri Lanka's tourism industry and encourage regional economic development. As the case study of Pinnawala Elephant Orphanage illustrates, much scope exists for stimulating economic decentralisation and regional development as a result of suitable tourism ventures. There are now good prospects that tourism will be able to make a sustained and growing contribution to Sri Lanka's economic development and that an improved balance will be achieved in its regional distribution of tourism.

## **Acknowledgements**

We wish to thank Mr Malraj B Kiriella, Director, Research Sri Lanka Tourist Board for helping us with secondary information.

## **References**

- Andriotis, K. (2002), "Scale of Hospitality Firms and Local Economic Development: Evidence from Crete", *Tourism Management*, Vol.23: 333-341
- Asian Development Bank/ADB (1998), Biodiversity Conservation Project, Sri Lanka PPTA No.2942-SRI. Asian Development Bank, Manila, Philippines
- Balaguer, J. and Jorda, M. C. (2002), "Tourism as a Long-run Economic Growth Factor: The Spanish Case" *Applied Economics*, Vol.34: 877-884
- Central Bank of Sri Lanka (2002), Annual Report, Central Bank of Sri Lanka, Colombo, Sri Lanka
- Dabour, N. (2003), "Problems and Prospects of Sustainable Tourism Development in the OIC Countries: Ecotourism", *Journal of Economic Cooperation among Islamic Countries*, Vol.24: 25-62
- Frederick, M. (1993), "Rural Tourism and Economic Development", *Journal of Travel Research*, Vol.7: 215-224
- Fossati, A. and Panella, G. (eds) (2000), *Tourism and Sustainable Economic Development*, Kluwer Academic, London, U.K
- Harrison, D. (2001), *Tourism and Less Developed World: Issues and Case Studies*, CABI Publishing, Wallingford, U.K
- Hichcock, M., King, V. T. and Parnwell, M. J. G. (1993), Introduction, in *Tourism in South East Asia*, M. Hichcock, V. T. King and M. J. G. Parnwell (Editors) pp. 2-6, Routledge, London, UK
- Karunaratne, N. D.(2001), "The Export Engine of Growth in Post-Independence of Sri Lanka", in *Sri Lanka's Development since Independence: Socio-Economic Perspectives and Analysis*, W. D. Lakshman, and C. A. Tisdell (Editors), pp. 235-257, Nova Science Publishers, Huntington, New York
- Lakshman, W. D. (Editor) (1997), *Dilemmas of Development: Fifty Years of Economic Changes in Sri Lanka*, Sri Lanka Association of Economists, Colombo, Sri Lanka.
- Lakshman, W. D. and Tisdell C. A. (Editors) (2000), *Sri Lanka's Development since Independence: Socio-Economic Perspectives and Analysis*, Nova Science Publishers, Huntington, New York

- Lanza, A. and Pigliaru, F. (1998), *On the Fast Economic Growth of a Small Country*  
Specialised in Tourism, U College London, U.K
- Sharpley, R. (2000), *The Influence of the Accommodation Sector on Tourism Development: Lessons from Cyprus*, *Hospitality Management*, Vol.19: 275-293
- Snodgrass, D.R. (1966), *Ceylon: An Export Economy in Transition*, Illinois: Richard D Erwin Inc. U.K
- Sri Lanka Tourist Board (2003), *Annual Report*. Sri Lanka Tourist Board, Colombo, Sri Lanka
- Sri Lanka Tourist Board (2000), *Sri Lanka Tourist Board Marketing Plan for 2000*. Sri Lanka Tourist Board, Colombo, Sri Lanka
- Tisdell, C. (2001), *Tourism Economics, the Environment and Development: Analysis and Policy*, Edward Elgar, Cheltenham, UK
- Tisdell, C. and Bandara, R. (2003a), “Wildlife-Based Recreation and Local Economic Development: The Case of the Pinnawala Elephant Orphanage in Sri Lanka”, *Economics, Ecology and the Environment Working Paper No. 83*, School of Economics, The University of Queensland
- Tisdell, C. and Bandara, R., (2003b), “Visitors’ Reaction to Pinnawala Elephant Orphanage in Sri Lanka: A Survey”, *Economics, Ecology and the Environment, Working Paper No. 82*, School of Economics, The University of Queensland
- Tooman, L. A. (1997), “Tourism and Development”, *Journal of Travel Research*, Vol.35: 33-40
- Tosun, C. (2001), “Challenges of Sustainable Tourism Development in Developing World: The Case of Turkey”, *Tourism Management*, Vol. 22: 289-303
- UNDP (1993), *Tourism Master Plan*, Sri Lanka, Office of the United Nations Development Program United Nations, Colombo, Sri Lanka
- Wen, J. J. and Tisdell, C. A. (2001), *Tourism and China’s Development: Policies, regional Economic Growth and Ecotourism*, World Scientific, Singapore, London
- Wickremasinghe, C. S. and Santhiapillai, C. (2000), “Can Wildlife Pay for its Conservation?”, *Loris*, Vol.22: 18-22
- World Tourism Organisation/WTO (2003), *Tourism Highlights –Edition 2003*, World Tourism Organisation, Madrid
- World Travel and Tourism Council (2003) *Travel and Tourism: A World of Opportunities*, World Travel and Tourism Council, Queen Victoria Terrace, Sovereign Court London, UK

## **PREVIOUS WORKING PAPERS IN THE SERIES**

### **ECONOMICS, ECOLOGY AND THE ENVIRONMENT**

1. Governance, Property Rights and Sustainable Resource Use: Analysis with Indian Ocean Rim Examples by Clem Tisdell and Kartik Roy, November 1996.
2. Protection of the Environment in Transitional Economies: Strategies and Practices by Clem Tisdell, November 1996.
3. Good Governance in Sustainable Development: The Impact of Institutions by K.C.Roy and C.A.Tisdell, November 1996.
4. Sustainability Issues and Socio-Economic Change in the Jingpo Communities of China: Governance, Culture and Land Rights by Ren Zhuge and Clem Tisdell, November 1996.
5. Sustainable Development and Environmental Conservation: Major Regional Issues with Asian Illustrations by Clem Tisdell, November 1996.
6. Integrated Regional Environmental Studies: The Role of Environmental Economics by Clem Tisdell, December 1996.
7. Poverty and Its Alleviation in Yunnan Province China: Sources, Policies and Solutions by Ren Zhuge and Clem Tisdell, December 1996.
8. Deforestation and Capital Accumulation: Lessons from the Upper Kerinci Region, Indonesia by Dradjad H. Wibowo, Clement a. Tisdell and R. Neil Byron, January 1997.
9. Sectoral Change, Urbanisation and South Asia's Environment in Global Context by Clem Tisdell, April 1997.
10. China's Environmental Problems with Particular Attention to its Energy Supply and Air Quality by Clem Tisdell, April 1997.
11. Weak and Strong Conditions for Sustainable Development: Clarification of concepts and their Policy Application by Clem Tisdell, April 1997.
12. Economic Policy Instruments and Environmental Sustainability: A Second Look at Marketable or Tradeable Pollution or Environmental-Use Permits by Clem Tisdell, April 1997.
13. Agricultural Sustainability in Marginal Areas: Principles, Policies and Examples from Asia by Clem Tisdell, April 1997.
14. Impact on the Poor of Changing Rural Environments and Technologies: Evidence from India and Bangladesh by Clem Tisdell, May 1997.
15. Tourism Economics and its Application to Regional Development by Clem Tisdell, May 1997.
16. Brunei's Quest for Sustainable Development: Diversification and Other Strategies by Clem Tisdell, August 1997.
17. A Review of Reports on Optimal Australian Dugong Populations and Proposed Action/Conservation Plans: An Economic Perspective by Clem Tisdell, October 1997.
18. Compensation for the taking of Resources Interests: Practices in Relations to the Wet Tropics and Fraser Island, General Principles and their Relevance to the Extension of Dugong Protected Areas by Clem Tisdell, October 1997.
19. Deforestation Mechanisms: A Survey by D.H. Wibowo and R.N. Byron, November 1997.
20. Ecotourism: Aspects of its Sustainability and Compatibility by Clem Tisdell, November 1997.

21. A Report Prepared for the Queensland Commercial Fisherman's Organisation by Gavin Ramsay, Clem Tisdell and Steve Harrison (Dept of Economics); David Pullar and Samantha Sun (Dept of Geographical Sciences and Planning) in conjunction with Ian Tibbetts (The School of Marine Science), January 1998.
22. Co-Evolutions in Asia, Markets and Globalization by Clem Tisdell, January 1998.
23. Asia's Livestock Industries: Changes and Environmental Consequences by Clem Tisdell, January 1998.
24. Socio-Economics of Pearl Culture: Industry Changes and Comparisons Focussing on Australia and French Polynesia by Clem Tisdell and Bernard Poirine, August 1998.
25. Asia's (Especially China's) Livestock Industries: Changes and Environmental Consequences by Clem Tisdell, August 1998.
26. Ecotourism: Aspects of its Sustainability and Compatibility with Conservation, Social and Other Objectives, September 1998.
27. Wider Dimensions of Tourism Economics: A Review of Impact Analyses, International Aspects, Development Issues, Sustainability and Environmental Aspects of Tourism, October 1998.
28. Basic Economics of Tourism: An Overview, November 1998.
29. Protecting the Environment in Transitional Situations, November 1998.
30. Australian Environmental Issues: An Overview by Clem Tisdell, December 1998.
31. Trends and Developments in India's Livestock Industries by Clem Tisdell and Jyothi Gali, February 1999.
32. Sea Turtles as a Non-Consumptive Tourism Resource in Australia by Clevo Wilson and Clem Tisdell, August 1999.
33. Transitional Economics and Economics Globalization: Social and Environmental Consequences by Clem Tisdell, August 1999.
34. Co-evolution, Agricultural Practices and Sustainability: Some Major Social and Ecological Issues by Clem Tisdell, August, 1999.
35. Technology Transfer from Publicly Funded Research for improved Water Management: Analysis and Australian Examples by Clem Tisdell, August 1999.
36. Safety and Socio-Economic Issues Raised by Modern Biotechnology by Dayuan Xue and Clem Tisdell, August 1999.
37. Valuing Ecological Functions of Biodiversity in Changbaishan Mountain Biosphere Reserve in Northeast China by Dayuan Xue and Clem Tisdell, March 2000.
38. Neglected Features of the Safe Minimum Standard: Socio-economics and Institutional Dimension by Irmi Seidl and Clem Tisdell, March 2000.
39. Free Trade, Globalisation, the Environment and Sustainability: Major Issues and the Position of WTO by Clem Tisdell, March 2000.
40. Globalisation and the WTO: Attitudes Expressed by Pressure Groups and by Less Developed Countries by Clem Tisdell, May 2000.
41. Sustainability: The Economic Bottom Line by Clem Tisdell, May 2000.
42. Trade and Environment: Evidence from China's Manufacturing Sector by Joseph C. H. Chai, June 2000.
43. Trends and Development in India's Livestock Industry by Clem Tisdell and Jyothi Gali, August 2000.
44. Tourism and Conservation of Sea Turtles by Clem Tisdell and Clevo Wilson, August 2000.
45. Developing Ecotourism for the Survival of Sea Turtles by Clem Tisdell and Clevo Wilson, August 2000.
46. Globalisation, WTO and Sustainable Development by Clem Tisdell, August 2000.



47. Environmental Impact of China's Accession to WTO in the Manufacturing Sector by Joseph Chai, August 2000.
48. Effects of Cartagena Biosafety Protocol on Trade in GMOs, WTO Implications, and Consequences for China (English version) by Dayuan Xue and Clem Tisdell, August 2000.
49. Effects of Cartagena Biosafety Protocol on Trade in GMOs, WTO Implications, and Consequences for China (Chinese version) by Dayuan Xue and Clem Tisdell, August 2000.
50. The Winnipeg Principles, WTO and Sustainable Development: Proposed Policies for Reconciling Trade and the Environment by Clem Tisdell, September 2000.
51. Resources Management within Nature Reserves in China by Dayuan Xue, October 2000.
52. Economics, Educational and Conservation Benefits of Sea Turtle Based Ecotourism: A Study Focused on Mon Repos by Clem Tisdell and Clevo Wilson, October 2000.
53. Why Farmers Continue to use Pesticides despite Environmental, Health and Sustainability Costs by Clevo Wilson and Clem Tisdell, November 2000.
54. Wildlife-based Tourism and Increased Tourist Support for Nature Conservation Financially and Otherwise: Evidence from Sea Turtle Ecotourism at Mon Repos by Clem Tisdell and Clevo Wilson, November 2000.
55. A Study of the Impact of Ecotourism on Environmental Education and Conservation: The Case of Turtle Watching at an Australian Site by Clem Tisdell and Clevo Wilson, December 2000.
56. Environmental Regulations of Land-use and Public Compensation: Principles with Swiss and Australian Examples by Irmi Seidl, Clem Tisdell and Steve Harrison.
57. Analysis of Property Values, Local Government Finances and Reservation of Land for National Parks and Similar Purposes by Clem Tisdell and Leonie Pearson, March 2001.
58. Alternative Specifications and Extensions of the Economic Threshold Concept and the Control of Livestock Pests by Rex Davis and Clem Tisdell, May 2001.
59. Conserving Asian Elephants: Economic Issues Illustrated by Sri Lankan Concerns by Ranjith Bandara and Clem Tisdell, June 2001.
60. World Heritage Listing of Australian Natural Sites: Tourism Stimulus and its Economic Value by Clem Tisdell and Clevo Wilson, September 2001.
61. Aquaculture, Environmental Spillovers and Sustainable Development: Links and Policy Choices by Clem Tisdell, October 2001.
62. Competition, Evolution and Optimisation: Comparisons of Models in Economics and Ecology by Clem Tisdell, October 2001.
63. Aquaculture Economics and Marketing: An Overview by Clem Tisdell, October 2001.
64. Conservation and Economic Benefits of Wildlife-Based Marine tourism: Sea Turtles and Whales as Case Studies by Clevo Wilson and Clem Tisdell, February 2002.
65. Asian Elephants as Agricultural Pests: Damages, Economics of Control and Compensation in Sri Lanka by Ranjith Bandara and Clem Tisdell, February 2002.
66. Rural and Urban Attitudes to the Conservation of Asian Elephants in Sri Lanka: Empirical Evidence by Ranjith Bandara and Clem Tisdell, May 2002.
67. Willingness to Pay for Conservation of the Asian Elephant in Sri Lanka: A Contingent Valuation Study by Ranjith Bandara and Clem Tisdell, May 2002.
68. Bioeconomic Analysis of Aquaculture's Impact on Wild Stocks and Biodiversity by Clem Tisdell, May 2002.
69. Will Bangladesh's Economic Growth Solve its Environmental Problems? by Clem Tisdell, May 2002.

70. Socioeconomic Causes of loss of Genetic Diversity: Analysis and Assessment by Clem Tisdell, June 2002.
71. Empirical Evidence Showing The Relationships Between Three Approaches For Pollution Control by Clevo Wilson, August 2002.
72. Energy-Use, the Environment and Development: Observations with Reference to China and India by Clem Tisdell and Kartik Roy, September 2002.
73. Willingness of Sri Lankan Farmers to Pay for a Scheme to Conserve Elephants: An Empirical Analysis by Ranjith Bandara and Clem Tisdell, January 2003.
74. The Public's Knowledge of and Support for Conservation of Australia's Tree-kangaroos by Clem Tisdell and Clevo Wilson, February 2003.
75. Ecotourism/Wildlife-based Tourism as Contributor to Nature Conservation with Reference to Vanni, Sri Lanka by Clem Tisdell, March 2003.
76. Visitor Profiles and Environmental Attributes, especially of Birds, Attracting Visitors to Lamington National Park: Tourist Attitudes and Economic Issues by Clem Tisdell and Clevo Wilson, March 2003.
77. Wildlife Damage, Insurance/Compensation for Farmers and Conservation: Sri Lankan Elephants as a Case by Ranjith Bandara and Clem Tisdell, May 2003.
78. Open-Cycle Hatcheris, Tourism and Conservation of Sea Turtles: Economic and Ecological Analysis by Clem Tisdell and Clevo Wilson, May 2003.
79. Attitudes to Entry Fees to National Parks: Results and Policy Implications from a Queensland Case Study by Clevo Wilson and Clem Tisdell, June 2003.
80. Use and Non-use Values of Wild Asian Elephants: A Total Economic Valuation Approach by Ranjith Bandara and Clem Tisdell June 2003
81. Valuation of Tourism's Natural Resources by Clem Tisdell, August 2003.
82. Visitors' Reaction to Pinnawala Elephant Orphanage in Sri Lanka: A Survey by Clem Tisdell and Ranjith Bandara, August 2003.
83. Property Rights of Landholders in Non-Captive Wildlife and Prospects for Conservation by Clem Tisdell, August 2003.
84. Wildlife-Based Recreation and Local Economic Development: The Case of the Pinnawala Elephant Orphanage in Sri Lanka by Clem Tisdell and Ranjith Bandara, August, 2003.
85. Willingness to Pay for Different Degrees of Abundance of Elephants by Ranjith Bandara and Clem Tisdell, September 2003.
86. Conflicts over Natural Resources and the Environment: Economics and Security by Clevo Wilson and Clem Tisdell, September 2003.
87. The Net Benefit of Saving the Asian Elephant: A Policy and Contingent Valuation Study by Ranjith Bandara and Clem Tisdell, October 2003.
88. Economics of Wildlife Tourism by Clem Tisdell and Clevo Wilson, October 2003.
89. Notes on Market Failure and the Paretian (Kaldor-Hicks) Relevance and Irrelevance of Unfavourable Externalities by Clem Tisdell, December 2003.
90. Does Ecotourism Contribute to Sea Turtle Conservation? Is the Flagship Status of Turtles Advantageous? By Clem Tisdell and Clevo Wilson, December 2003.
91. Influences of Knowledge of Wildlife Species on Patterns of Willingness to Pay for their Conservation by Clem Tisdell, December 2003.
92. Economic Incentives to Conserve Wildlife on Private Lands: Analysis and Policy by Clem Tisdell, December 2003.
93. Recreational Fishing: Its Expansion, its Economic Value and Aquaculture's Role in Sustaining it by Clem Tisdell, December 2003.