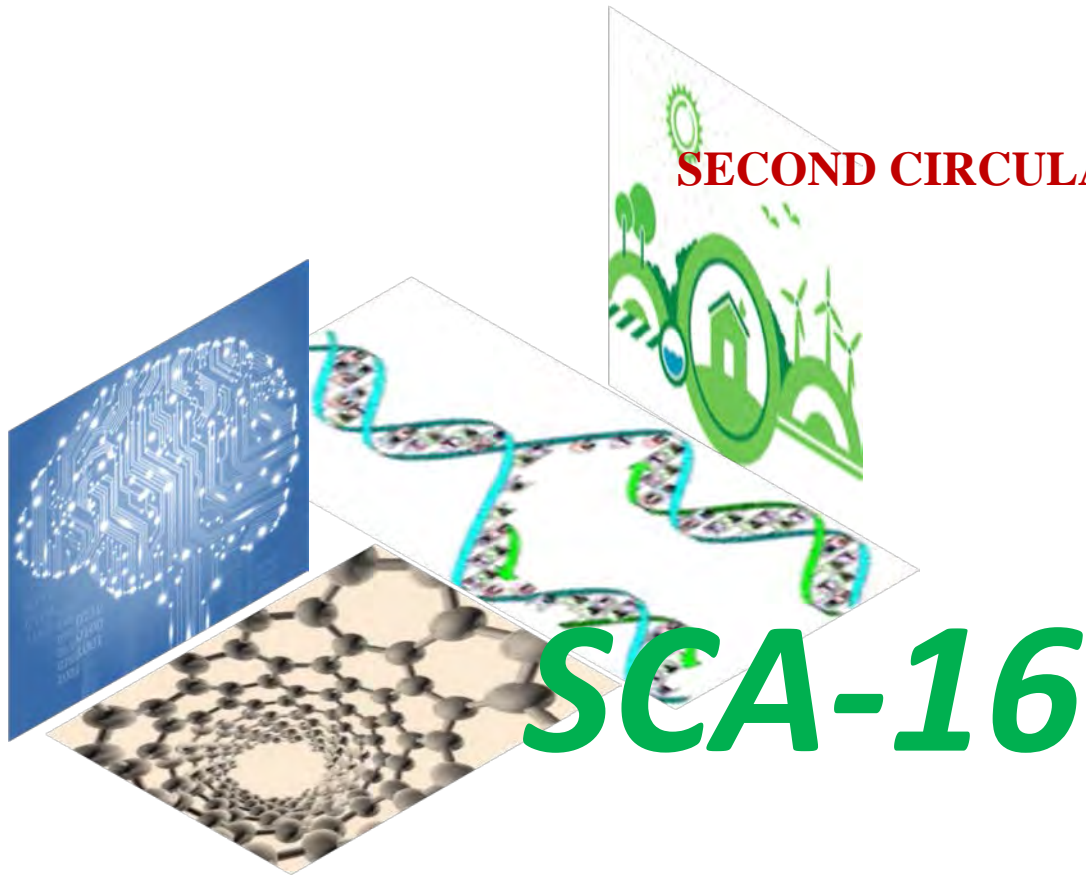


SECOND CIRCULAR



SCA-16

16th Conference of the Science Council of Asia

Theme:

**Science for the People: Mobilizing Modern
Technologies for Sustainable Development in Asia**

May 30-June 1, 2016

Colombo, Sri Lanka

Organized by:



**NATIONAL
SCIENCE
FOUNDATION**



**National Academy of Sciences
of Sri Lanka**

Science Council of Asia

The Science Council of Asia was formed in May 2000 to help the region more actively address the diverse and urgent science-related issues common to Asian countries, including population problems, medical care, food, water, energy, and knowledge of and education in the sciences. It had its origins in the Asian Conference on Scientific Cooperation (ACSC) hosted by the Science Council of Japan in Tokyo from 1993 to 2000 with the aim of promoting cooperation in scientific research in Asia. The first SCA conference was held in Bangkok, Thailand, in May 2001.

The annual SCA conference is held on a rotational basis so that each member country/region can actively participate in and contribute to the SCA. The annual conference consists of a biennial General Assembly, a Management Board Meeting, and a Symposium which provides a forum for discussions among scientists, engineers, policymakers, and young scientists in Asia. The sixteenth SCA conference will be held during May 30-June 1, 2016 in Colombo. The President of the SCA for 2014-2016 is Prof. Vijaya Kumar, President of the National Academy of Sciences of Sri Lanka (NASSL). The event is organized by the NASSL in partnership with the National Science Foundation, which is the other member of SCA from Sri Lanka.

Theme of the 16th SCA Conference

Science for the People: Mobilizing Modern Technologies for the Sustainable Development in Asia

Sub-Themes:

1. Opportunities in mobilizing Biotechnology, Information Technology, Nanotechnology and Renewable Energy Technologies for National Development
2. Social Dimensions of these technologies: Challenges faced by Asia in their exploitation, Risks from applying the technologies, Protection and preservation of cultural heritage.
3. Climate Change: Mitigation of and Adaptability to the Impact of Climate Change, Sustainable Development and Built Environment, Prevention of Natural Disaster.

The Conference will focus on all areas of emerging technologies, successes in their exploitation for national development and for social welfare and the challenges faced in utilizing them and how they can be overcome. Risks involved in the strategies, their identification and mitigation, the preservation of cultural heritage while introducing the technologies and social issues involved including social accountability in research will also form part of the theme. Climate Change and Prevention of Natural Disaster is another sub-theme of the Conference. Papers are invited in all topics within these broad areas.

Opportunities will be available to make oral presentations or poster presentations

Deadlines/Important Dates:

January 31, 2016: Abstract submission.

February 15, 2016: Notification of acceptance as oral presentation/poster

March 5, 2016: Submission of Revised abstract, if revision required

March 25, 2016: Early Bird registration for Conference

March 25, 2016: Hotel Reservation, Travel information, Excursion registrations

March 30, 2016: Submission of full paper

April 30, 2016: Submission of presentation materials for oral presentation

Conference Venue:

Hotel Galadari

64, Lotus Road, Colombo 1, Sri Lanka, Phone: +94-112-544544

<http://www.galadarihotel.lk>

Hotel Accommodation(Special Conference Bed and Breakfast Rates):

Hotel Galadari (Conference venue, 5 Star): USD 120 (Single)/130 (Double) per night

Colombo City Hotel (3 Star): USD 70 (Single)/80 (Double)

Shared Double room accommodation for students can be arranged at either Hotel if participants jointly inform the organizing committee that they are prepared to share.

Organizing Committee will make reservations if request is made on Registration Form

Registration:

Early Bird Registration Participant USD 120 (includes conference materials, conference bag, lunches/teas on conference days, invitation for conference dinner on May 30th), Accompanying Person: USD 80 (includes bag, lunch/tea on conference days, invitation for May 30thdinner and accompanying person programme)

Please register for the conference by sending the attached form or an email with the required information on or before March 25, 2016 to sca16srilanka@gmail.com. The registration fee may be sent to account of NASSL (Acct. No. 73178508) at Bank of Ceylon, Independence Square Branch, Colombo 7, Sri Lanka (SWIFT code: BCEYLKLX) or paid on arrival at the Conference.

Registration after March 25: USD 150 (Participant), USD 100 (Accomp. Person)

Abstracts

Abstracts in Times New Roman Font should fit into a single A4 page keeping 1” margins. A model Abstract is attached and a template is provided in the conference website. Please identify the particular conference sub-theme into which the abstract fits and include a one page CV of the presenter with the abstract.

Full papers should be less than 8 pages and in the same format.

Abstracts and Full papers should be sent to sca16srilanka@gmail.com

Proceedings will be published as hard copy and circulated at the conference. It will include all full papers received in time and abstracts of other papers.

Financial Assistance

The SCA regrets its inability to provide financial or travel assistance to participants.

Third Circular

The third circular will be sent only to registered participants.

Contact:

Conference website: <http://www.nassl.org>

Conference email: sca16srilanka@gmail.com

Other contacts: SCA secretariat, Japan, e-mail: sca@cao.go.jp; Phone: +81-3-3403-1949; NASSL Secretariat (Sriyani), email: nassl@slt.net.lk; Phone +94-11-2678770, Prof. Vijaya Kumar (Conference Co-Chair) email: ykumar155@yahoo.co.uk; Phone +94-77-3166613.

International Advisory Committee:

Prof. Vijaya Kumar (Chair)(Sri Lanka)
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Members of the Local Organizing Committee

Model Abstract (Presenter ABC David):

Nanocapsules of knowledge to replace pre-school education

A. B. C. David^a, E. F. G. Hussain^b and J. K. L. Muyama^a

^aCollege of Educational Nanotechnology, University of the Indian Ocean, Capital 20400, Paradise;

^bCentre for Nanotechnology, University of the Sea, Eldorado 16433, Vietbodua; david@email.com

Nanomaterials can be introduced into human bodies through a variety of method. They include oral consumption, sub-cutaneous vaccination, intra-venal vaccination and transdermal drug delivery through adhesive skin patches¹.

Many developing countries have been unable to mobilize sufficient funding for education and pre-school education is neither formalized nor covered by the state educational system. However it has been established that high quality pre-school education equips a child with the knowledge required to perform well in primary, secondary and University education². Hindrances to successful transfer of knowledge at pre-school level include lack of interest on the part of children, limited concentration span, non-availability of specialized teachers and the inability to identify the talents student possess at a young age. Formal methods of education can therefore play only a limited role in providing high quality education to pre-school children.

We have developed data packages containing such educational materials using advanced information technology concepts including expert systems and cloud technology. Expert systems could identify areas where knowledge is required and access the cloud which has depositories of essential knowledge for high quality education at pre-school level. However problems arose as to how this knowledge could be transferred to the pre-school child.

We have now converted these data packages into nanomaterials which could be placed as a nano-layer on an adhesive skin patch. The patch could be successfully utilized for transdermal knowledge delivery when positioned above the right ear of an individual. The patch has been used on 110 pre-school children and a mean improvement of intelligence quotient of 30.3 % was recorded thirty days after exposure when compared to pre-exposure levels. Preliminary studies undertaken by us on adverse reactions to the health of the children caused by transfer of nanomaterials to the brain have revealed that while hyperactivity was observed in 12.3% of the subjects, this could not be solely ascribed to the treatment. However, we are presently studying animal models to ascertain what nanomaterial, if any, is transferred to brains of organisms when an adhesive skin patch is placed above the ear.

Financial support from the Galactic Empire (Grant 2040/X/10) is gratefully acknowledged

References:

1. A. B. Carbon, D. E. Fullerene and G. H. Indium, Review on methods of nanomaterial transfer to human organisms, *Journal of Speculative Nanobiology*, 2012, **4**, 213-232.
2. J. K. Learner and M. N. O. Pedagogue, Does Pre-school education affect learning ability at primary, secondary and tertiary levels ?, *Bulletin on Cosmic Educational Psychology*, 2008, **22**, 198-216.

ABSTRACT TEMPLATE

Title bold Times New Roman 13 pt centred single spacing if more than one line

12 pt space

Authors names Times New Roman 12 pt centred: Initials full stop space Family Name,
underline presenter's name; Superscript a, b, etc after name for affiliation, single spacing

12 pt space

Affiliation Times New Roman 11 pt centred after relevant superscript a, b, etc, followed by address
including country and semi-colon if there is more than one affiliation; Email of presenter

11 pt space

11 pt space

Text of Abstract in Times New Roman 12 pt justified, spacing 1.15 6 pt space after each
paragraph. No indentation

Space 12 pt at end of Text

Acknowledgement (if any): Maximum 2 lines in Times New Roman 11 pt italics aligned left

References, if any (Maximum two) numbered 1, 2 with all Author's initials, Family name
with and before last author followed by comma, Title of paper, Journal in italics, year,
volume, page numbers aligned left

SCIENCE COUNCIL OF ASIA CONFERENCE (SCA -16)					
Registration Form (Note: Early Bird Registration on or before March 25, 2016)					
Please tick (√) the boxes or provide information requested					
Prefix: (tick √)		Prof <input type="checkbox"/>	Dr <input type="checkbox"/>	Mr <input type="checkbox"/>	Ms <input type="checkbox"/>
Name (<u>underline</u> family name):					
Mailing Address	No/Street:				
	City:	ZIP Code:	Country:		
Telephone (with country code)					
E-mail address					
Passport No:					
Institutional Affiliation/Designation					
If you are from a SCA Member organization, organization name					
Accompanying Person (if any)					
Tentative Dates/Flight no./Times		Arrival			
		Departure			
Do you wish us to book you rooms at Hotel Galadari/Colombo City Hotel (Payment to Hotel at check-out)		Yes <input type="checkbox"/>	No <input type="checkbox"/>	If Yes, No. of nights	<input type="text"/>
		From	<input type="text"/>	To	<input type="text"/>
Preferred Hotel		Galadari <input type="checkbox"/>	Colombo City	<input type="checkbox"/>	
Would you be interested in Excursions		Conference Excursion on June 2, 2016			<input type="checkbox"/>
		Ruined Cities Excursion June 3-5, 2016			<input type="checkbox"/>
Do you plan to present a Paper at the Symposium		Yes <input type="checkbox"/>	No <input type="checkbox"/>		
		Preference: Oral <input type="checkbox"/>	Poster <input type="checkbox"/>		
Are you an official delegate to SCA ?		Yes <input type="checkbox"/>	<input type="checkbox"/>		
		If yes, representing:			
Method of Payment of the Registration Fee		Cheque/ <input type="checkbox"/>	Bank Transfer <input type="checkbox"/>	Payment on Arrival <input type="checkbox"/>	
		Bank Draft <input type="checkbox"/>	Please give details (Cheque No/Transfer Ref.)		
Completed form to be sent to:		E-mail: sca16srilanka@gmail.com			
		Mail: NASSL, 120/10, WijeramaMawatha, Colombo 00700, Sri Lanka			
Banking Details		Account Name: National Academy of Sciences of Sri Lanka			
		Account No: 73178508			
		Bank Name: Bank of Ceylon SWIFT Code: BCEYLK LX			
		Branch Name : Independence Square Branch, Colombo 00700			



Science Council of Asia

Tentative Program for 16th SCA Conference

Galadari Hotel, Colombo

Monday, May 30, 2016

Time	Program	Open to
8:00-	Registration	
9:00-10:00	SCA Management Board Meeting I	Delegates only
10:00-10:30	Tea	Delegates only
10:30-12:30	General Assembly Session I	Delegates only
12:30-13.30	Lunch	Delegates only
13:30-16:30	SCA Joint Project Workshops <i>A series of presentations of ongoing research projects between Sri Lanka and Japan</i>	Delegates and Participants who register
16:30-17:00	Tea	All Participants
17:00-18.30	Inauguration Ceremony of SCA-16 Followed by Plenary Lecture 1	All Participants and Invitees
18.30-21.30	SCA-16 Dinner hosted by NSF	All Participants and Invitees

Tuesday, May 31

Time	Program	Open to
8:00-	Registration	
9:00-17:00	SCA International Symposium "Science for the People: Mobilizing Modern Technologies for Sustainable Development in Asia" (Day 1)	All Participants
9:00-9:15	Welcoming Remarks	
9:15-10:45	Plenary/Keynote Lectures (30 min each)	
10:45-11:15	Tea	All Participants
11:15-13:00	Parallel Sessions on Biotechnology, Nanotechnology, Information Technology, Climate Change and Environment, Social Dimensions, Culture and Anthropology (Presentations of 15 min each)	All Participants

13:00-14:00	Lunch, Poster Session during Lunch Break	All Participants
14.00-15.00	Plenary Lecture Session	All Participants
15:00-17:00	Parallel Sessions Continued	All Participants
17:00-17:30	Tea	All Participants
17:30-18:30	SCA Management Board Meeting Session II	Invitees only
19.00 – 21.30	Dinner	Invitees only

Wednesday June 1

Time	Program	Open to
9:00-17:00	SCA International Symposium “Science for the People: Mobilizing Modern Technologies for Sustainable Development in Asia” (Day 2)	All Participants
9:00- 10:00	Plenary Session 3	
10:00-11:00	Tea, Poster Session (continued) through Tea Break	All Participants
11:00-13:00	Parallel Sessions (continued)	All Participants
13:00-14:00	Lunch	All Participants
14.00–15.00	Plenary Lectures Session 4	All Participants
15:00-15:30	Tea	All Participants
15.30 -16.30	General Assembly Session II - SCA Closing Ceremony and Transfer of Leadership	Delegates only
15.30– 18.30	Parallel sessions	All Participants

Thursday June 2

Time	Program	Open to
9:00-18:00	Excursion to Sri Lanka Institute of Nanotechnology and to Galle – No payment required	Non-Sri Lankan Participants who register

Friday June 3 to Sunday June 5

-	Excursion to Ruined Cities with Professional Guide Including 2 nights stay out of Colombo, all meals and Tickets to sites (Approximate cost \$ 400 to \$ 500). Two day Excursion can also be arranged at a cheaper cost	Participants who indicate interest at time of Registration
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GENERAL INFORMATION

Sri Lanka

Location: Island in the Indian Ocean, south of India. Latitude: 7.5653° N, 80.4303° E

Area: Total: 65,610 Sq. Km.

Languages: Sinhala, Tamil, English. English is widely spoken.

Passport and visa

All participants should have a passport valid for 6 months after the expected date of departure from Sri Lanka. Most participants, except those from Singapore and the Maldives, should obtain visas before leaving for Sri Lanka either on line (for details, see <http://www.eta.gov.lk/slvisa/visainfo/center.jsp>) or from the Sri Lankan Embassy. If a participant needs an invitation letter for this purpose, they should inform the Organizing Committee. In some cases, visas may be obtained on arrival, but this will cause delays in the immigration process and cost more.

Weather - Colombo

Temperature	27°C
Low Temperature	24°C
High Temperature	31°C
Sunshine Hours	7 hrs
Rainfall	369mm
Rainfall days	Monsoon rains were normal during May/June but no longer predictable

Electricity Supply

Electrical voltage in Sri Lanka is: 230 V at 50 Cycles. Adapters for different voltage requirement are not normally available from hotels and participants are advised to bring their own.

Currency and Credit Cards

Basic unit of the Sri Lankan currency is the Rupee (LKR). The exchange rate fluctuates slightly daily. Currently, the exchange rate for the US dollar hovers around 145 LKR for 1.00 USD. Foreign bank notes of major currencies can be exchanged into LKR at the airport, hotels, money changers and all local banks. Credit Cards such as Visa, Master, American Express and Diners are widely accepted and ATM machines can be used to access your home bank account.

Insurance and Emergency

The Organizing Committee will not be responsible for medical expenses, accidents, losses or unexpected occurrences. Participants are advised to arrange their own insurance that they regard as necessary.

Business Hours

The conference registration desk will be open daily from 08:30 to 18:00, through the conference period.

Sri Lanka adopts a five-day week, Monday to Friday.

Hours of business are normally.

Government Offices: **8.30 a.m. to 4.30 p.m. (Mondays- Fridays)**

Private Firms: **8.00 a.m. to 5.00 p.m. (Mondays - Fridays) ; 8.00 a.m. to 1.30 p.m. (Saturdays)**

Post Offices: **8.30 a.m. to 5.00 p.m. (Mondays - Fridays); 8.30 a.m. to 1.00 p.m. (Saturdays)**

Shops: **10.00 a.m. to 8.00/10.00 p.m. (Mondays - Saturdays)**

Banks: **9.00 a.m. to 3.00 p.m. (Mondays - Fridays)**

Telephone and Faxes: **Overseas Telecommunications Services are available in the Hotel 24 hours a day for domestic or international telephone calls and faxes. Inexpensive local Sims can be obtained on arrival from Service Provider counters at the airport arrival lounge.**

Meals and Shopping

In addition to Sri Lankan foods, international cuisine including Western, Chinese and Japanese foods are available in the hotels and other restaurants within walking distance of the venue. There is variety of food choices with a price of meal starting at around 7 US dollars. Tap water is drinkable, but one may also easily get economically priced bottled water. People can enjoy shopping for many goods like textile, porcelains, hand- made goods and souvenirs.

Travel

Although the bus services are well developed, they are usually crowded and not comfortable. There are trains with reserved seating to most of the important cities out of Colombo. Taxis may be booked by phone from Kangaroo Cabs (011-2588588) and smaller vehicles from budget taxis (011-7299299). You can also hail a three wheeler taxi, freely available on the streets, sometimes metered, often cheaper over short distances.

Post-Conference Tours

An excursion will be arranged by the organizing committee for June 2 for non-Sri Lankan participants who indicate their interest on the Registration Form. The excursion will include a visit to the Sri Lanka Institute of Nanotechnology (SLINTEC) followed by a visit to Galle, a city in South Sri Lanka with a Fort built by the Dutch and a Seaside Hotel. It will be free of cost to the participant.

It would also be possible to arrange a three day tour of the 13th century capital of Polonnaruwa and the rock fortress of Sigiriya(5th century) and rock cave of Dambulla with two nights hotel stay out of Colombo if sufficient participants are interested. The excursion will cost about \$ 400 per person, \$ 550 for twin sharing + ticket price of \$ 65 per person (\$ 37.50 for SAARC Country tourists carrying their passports). Sri Lanka is a popular tourist destination and a wide range of

tours and visits are available commercially . If you are interested in a particular tour, you can book them on line or contact one of the travel agents housed in and around the hotel. Many younger visitors to the island also make their own backpack tours after arrival on public transport with stays in cheaper guest houses

SIGIRIYA

Sigiriya, a monastery from the 3rd century built as a rock fortress in the shape of a lion by King Kassapa I in the late 5th century, is about 100 km from Kandy. The lion's mouth entrance to the palace halfway up the rock, leads to the summit where there are remains of the palace and gardens. Remains of terraced gardens with its fountains and canals make up part of the old palace gardens at the base of the rock. Halfway up the rocks, in a rather inaccessible shelter, are the world renowned rock paintings or frescoes depicting 21 beautiful female figures. Just before the lion's mouth is a "mirror" wall on which are inscribed the 'Sigiri graffiti' believed to be among the most ancient texts of the Sinhala language.

DAMBULLA

The rock of Dambulla, about 75 km from Kandy on the way to Sigiriya, Anuradhapura and Polonnaruwa, is the centre of a Buddhist cave-temple complex established in the 3rd century BC and occupied continuously until today. The complex has a number of cave temples, rock paintings in five caves and 157 statues of various sizes dating from the 3rd century to the 13th century. In the 18th century the upper terrace and statues were restored and the paintings redone in the Kandy style of that period.

POLONNARUWA

Polonnaruwa, 140 km from Kandy and 65 km from Dambulla became the capital of Sri Lanka, after the fall of Anuradhapura in the 10th century. The seven storied palace, the Lankatilake (image house of Buddha), the Gal Vihara with its gigantic rock sculptures and the TivankaPilimage, with its wall paintings of the 13th century illustrating the Jataka stories, which describe the previous lives of Buddha, were built during the reign of Parakramabahu I, who was also responsible for constructing ParakramaSamudra, the largest irrigation tank in country.

GALLE

Galle is a large town and port in southern Sri Lanka, the capital of the southern province located about 115 km from the city of Colombo.

The highlight of the city is the old Fort, which was completed by the Dutch in 1663. In 1988 the Fort was listed as a world heritage site by UNESCO, and is now one of six historic attractions and UNESCO in Sri Lanka. Inside the Fort are architectural landmarks, museums, a lighthouse, churches, and buildings in the old European style.

Other places of tourist interest in Sri Lanka include

KANDY

Kandy, a small and crowded quaint city about 115 km from Colombo is in a valley 500 metres above sea level surrounded by hills. It was the last capital of the Sri Lankan kings, who successfully resisted numerous attempts by the Portuguese and Dutch to capture it but the British were able to capture it in 1815. The Dalada Maligawa temple, adjoining the palace of the last King, houses the tooth relic of Lord Buddha. Peradeniya in the outskirts of Kandy is the site of the Royal Botanic Gardens modelled on the Kew Gardens of Britain. Opposite the Gardens is the sprawling campus of the University of Peradeniya, both of which are bordered by the Mahaweli Ganga, the longest river in Sri Lanka

ANURADHAPURA

Anuradhapura, 140 km from Kandy, and founded in the 4th century BC, was the capital of the country for 10 centuries. Visitors can view the magnificent ruins of the ancient city where Buddhism was introduced in 250 BC and the famed Bo tree, grown from a sapling of the original tree under which Lord Buddha attained enlightenment. It is probably the tree with the oldest recorded heritage in the world. The sapling was brought to Sri Lanka in the 3rd century BC by Sanghamitta, daughter of King Asoka of India. Mihintale, 11 km east of Anuradhapura is believed to be where King Devanampiyatissa embraced Buddhism while the Aukana Buddha statue, over 12 metres high (the tallest ancient statue of Buddha) is at Kalawewa, a few km west off the main road midway between Dambulla and Anuradhapura.

NUWARA ELIYA

Nuwara Eliya, (altitude 1,868 m) is about 75 km from Kandy, was built in the 19th century as a resort town for the British colonial rulers. Its architecture mimics that of an English country town, with red-brick walls, country house like Hill club, mock-Tudor half-timbering and a golf links and club house dating back to 1891. The road to Nuwara Eliya goes through some of the finest tea country in the island with breathtaking views of valleys, meadows, mountains and greenery.

GOLDEN BEACHES OF THE SOUTH

Sri Lanka has over 1000 km of palm fringed Coastline. The long golden beaches and their glistening clear waters guarantee year around water sports like water-skiing and scuba diving, swimming and sunbathing. The most easily accessible beaches are in the South West of the island. The beach resorts in the South West begin at **Beruwela** which is about 60 km from Colombo followed by **Benthota**, a few km away. **Hikkaduwa** is about 100 km from Colombo and **Unawatuna** 120 km while **Weligama** with its fishermen on stilts and **Mirissa** with its clear beaches are about 140 km from Colombo

Anuradhapura, Dambulla, Galle Fort, Kandy, Polonnaruwa and Sigiriya are UNESCO Cultural World Heritage sites.