



JSA Newsletter

Jaffna Science Association, Jaffna, Sri Lanka

Volume 21, Issue 1

March 2014

What's Inside :

Messages from
- The President

Articles by
Dr.(Ms)T.Mikunthan
Dr.P.A.D.Coonghe
Mr.V.Kumaradeepan
Ms.S. Balagobei

Jaffna Science
Association is
registered as a
voluntary services,
Non-Governmental
Organization at the
District Secretariat

**Registration
Number :**
JA/GA/P/CA/28

Date of Registration:
20th November '08

Compiled and Edited by
Mr. A. Rasakumaran,
Chief Editor/JSA

Message from the President



I am indeed delighted to send this message to the news letter of the Jaffna Science Association. The spectacular march of science & technology is profoundly affecting our lives. Genetic engineering and the associated reproductive technologies on plants, animals and human have brought forth ethical issues calling for greater regulation by involving social scientists and environmentalists. The process of globalization, and privatization have shifted the dynamics of knowledge production & dissemination dramatically, just as issues of intellectual property rights and proprietary information and knowledge have begun to open up new dialogues on public good versus private profit. New models of the innovation chain and new paradigms of the science-society contracts have begun to emerge.

Scientists have explored and found answers to fulfil man's curiosity to know how earth was born, how the universe functions and the reasons for the submersion of lands, the shrinking of great rivers and oceans, the cause for floods storms, tsunamis, global warming and for the extinction of rare species. They are able to predict the forth coming weather patterns and earth quakes and the eruption of volcanoes and actively seeking the possibilities of living beings in the other planets.

Man has now become dependent on and enslaved to the devices which have become indispensable to run the household, economic, business, agricultural, medical and other sectors. The establishment of nuclear plants, National Aeronautics and Space Administration (NASA), and the production of nuclear arms and ammunitions are the highest achievements of the advancement of science and technology. Yet every day in many countries, states and villages researches, scientific explorations and innovations are being carried out by numerous people from different age groups, genders, and socio economic, religious and educational backgrounds. Young scientists are now coming out with unimaginable and wonderful innovations. School children and

The JSA

The JSA was established in 1991 by the founder President late Prof.A.Thurairajah.

Would you like to contribute to your Community?

Need an appropriate platform for executing your ideas?

Become a LIFE MEMBER of JSA today!

The primary objectives of the JSA are dissemination of scientific knowledge among the intellectuals in Jaffna region, encouraging national as well as regional research studies and presenting them in the Jaffna society, and advancement of scientific knowledge among the secondary school students and at the undergraduate level.

other students from institutes and universities have postulated new ideas and theories which have an immense impact on the former theories and products in the global village.

What would the Jaffna Science Association's Role Be?

The Jaffna Science Association, which consists of academics and graduate students from all the fields in education, comprises a knowledge society. My message is we have to motivate the school students who get the opportunity annually to participate in the school science program to get involved in innovations continuously. Innovations come through creativity. Creativity comes from young children. Creativity has got multi dimensions like inventions, discoveries and innovations. Creative mind has the ability to imagine or invent something new by combining, changing or reapplying existing ideas. Creative person has an attitude to accept change and newness, a willingness to play with ideas and possibilities, a flexibility of outlook, the habit of enjoying the good, while looking for ways to improve it. Creativity is a process through which, we can continuously improve ideas and find unique solutions by making gradual alterations and refinements to our works. The important aspect of creativity is: seeing the same thing as everybody else, but thinking of something different. Hence, the school children will exhibit their own invention instead of displaying the past inventions. Such young and emergingscientists around the world will be working hard in finding solutions to problems. My hope is that such scientists will be able to contribute to the development of science and technology and hopefully, they will say either the first or the last word in the matter. I am sure the human mind will continue to explore.

Mrs. S. Ravindran
President
Jaffna Science Association

Importance for Water Conservation Measures

At global level, three fourth of the earth's surface is covered with water resources comprising 97.3% salt water and the balance 2.7% as fresh water. Of the latter, 75.2% exists as polar ice and glaciers, 22.6% groundwater, 0.3% in lakes and rivers and 1.9% in soil moisture and atmospheric vapour. The global water consumption is doubling every 20 years and is more than twice the rate of population increase which clearly explains the water scarcity. Nearly 250 million cases of waterrelated diseases are reported every year, causing 5 to 10million deaths. Diarrhea diseases leave millions of children underweight, mentally and physicallyhandicapped, and vulnerable to other diseases. Parasitic diseases are spread through ingestion orcontact with contaminated water. By 2030, more than half of the world population will face a shortage of water.Also factors such as climate change will increase pressures on natural water resources.

Water conservation encompasses the policies, strategies and activities to manage fresh water as a sustainable resource to protect the water environment and to meet current and future human demand. Water conservation measures should aim:

- a) To promote a dynamic, interactive, and multi-sectoral approach to water resourcesmanagement, including the identification andprotection of potential sources of freshwater supply,
- b) To plan for the sustainable and rational utilization, protection, conservation and management of water resources based on community needs
- c) To design, implement and evaluate projects and programmes that are both economically efficient and socially appropriate

Development and application of clean technology is very essential specifically in the protection of water. Control of industrial waste discharges in to the water bodies, low-waste production technologies and waterrecirculation, in an integrated manner help to control the pollution of the water resources. Mean time, the policy regarding environmentalimpact assessmentof all project implementation plans,facilitates conservation of water resources.

Public awareness programmes and community level participatory programmes on water resource management have to be initiated in most of the areas to protect the natural water resources.

Efforts should be initiated to tap the surface runoff water and roof water by creating and renovating storages and building rain water harvesting tanks. It is an insurance against water scarcity, as the yield increases considerably for every unit of rainfall.

In protection and conservation of water resources, it is necessary to join together to plan our resource for the future generations.

Sections of JSA

Section A :
For Pure Sciences

Section B :
For Applied Sciences

Section C :
For Medical Sciences

Section D :
For Social Sciences

Activities of JSA

Organize annual School
Science programmes

Organize annual
conference on a timely
topic

JSA Sectional Activities

Arrange popular talks to
update people with
present happenings

Organize workshops to
empower people

Publish a magazine
called
'PirayogaVingnanaSudar'
and News paper articles
to disseminate
knowledge

JSA : Section - A

Pure Sciences

**2013/14
Office bearers****Chair Person**

Dr. T.Eswaramohan

Secretary

Dr.Mrs.J.Prabagar

Editor

Mr. A.Gugan

Members :

Mr. T.Piratheepan

Mr.K.Asohan

Mrs.T.W.Santhakumar

Dr.(Mrs)G.Rajkumar

Prof.S.Srisatkunarajah

JSA : Section - B

Applied Sciences

**2013/14
Office bearers****Chair Person**

Dr. (Mrs.) T.Mikunthan

Secretary

Dr.S.Vasantharuba

EditorDr.(Mrs.) K.
Chandrasekar**Members :**

Dr.S.Sivakumar

Mr.K.Pakeerathan

Mr.S.Shriparen

Mrs.M.Rajaram

Mrs.S.Aravinthan

"The earth is not ours, it is a treasure we hold in trust for our children and their children"

Dr.(Ms.)T.Mikunthan

Chairperson

Section B Applied Sciences

Jaffna Science Association

Prevention of Road Traffic Accidents (RTA)

Road traffic accidents - the leading cause of death by injury and the tenth - leading cause of all deaths globally now make up a surprisingly significant portion of the worldwide burden of ill-health. An estimated 1.2 million people are killed in road crashes each year, and while 50 million are injured, occupying 30 percent to 70 percent of orthopaedic beds in the hospital of developing countries. If the present trends continue, road traffic injuries are predicted to be third-leading contributor to the global burden of disease and injury by 2020.

In Sri Lanka, there have been 2721 casualties in the year 2011 and most of them (74 percent) have been in the 21-65 age group. Deaths among drivers and riders accounted for 1203 deaths (44percent of deaths) and deaths among pedestrians accounted for 898 deaths (33 percent of deaths).

Developing countries bear a large share of the burden due to road traffic accidents, accounting for 85 percent of annual deaths and 90 percent of the disability-adjusted life years (DALYs) lost each year globally. Since road traffic injuries affect mainly males (73 percent of deaths) globally and those between 15 and 44 years of age, this burden is creating an enormous economic hardship due to the loss of family breadwinners.

Driver impairment is an important component of road traffic accidents globally. Driving at excessive speeds, while under the influence of alcohol or drugs, while being steeply or tired, when visibility is compromised or without productive gear for all vehicle occupants are mayor factors that cause deaths and serious injuries in crashes.

Preventive Interventions

1. All road users should act with civic responsibility.
- 2.Children high/junior school students/adults elderly people should be educated on traffic safety.
3. Safe driving programmes be conducted for drivers/riders and also conductors to be educated on safety.

4. Road infrastructure defects be identified and rectified by RDA and all other stakeholders.
5. Disciplined driving method be taught examines driving knowledge skills and also the knowledge of rules and regulations and medical fitness be checked before issuance of driving and riding license.
6. Risk drivers be identified and action taken to cancel/suspend their licenses by judiciary or by demerits by the Controller of Motor Traffic.
7. Insurance premium be increased of risk drivers.
8. Deterrent punishment be imposed on offenders committing serious and fatal accidents.
9. Driving license be renewed of every 3 years having rechecked the knowledge on rules and regulations, health, driving skills and driving records.
10. Road safety be included in school curriculum.
11. Have special driving programmes for school leavers.

Dr.P.A.D.Coonghe

Chairperson

Section C

Jaffna Science Association

Green Marketing and sustainable development

Green marketing focuses on the green marketing efforts companies use, including corporate social responsibility plans and sustainability efforts. Many consumers are environmentally conscious, seeking eco-friendly products and services from organizations that are socially responsible.

Green marketing is the marketing of products that are presumed to be environmentally safe. Thus green marketing incorporates a broad range of activities, including product modification, changes to the production process, packaging changes, as well as modifying advertising. Yet defining green marketing is not a simple task where several meanings intersect and contradict each other; an example of this will be the existence of varying social, environmental and retail definitions attached to this term. Other similar terms used are **environmental marketing** and **ecological marketing**.

Green, environmental and eco-marketing are part of the new marketing approaches which do not just refocus, adjust or enhance existing marketing thinking and practice, but seek to challenge those approaches and provide a substantially different perspective. In more detail green, environmental and eco-marketing belong to the group of approaches which seek to

JSA : Section - C

Medical Sciences

2013/14

Office bearers

Chair Person

Dr. P.A.D.Coonghe

Secretary

Ms.V.Viniththira

Editor

Dr. (Ms.) S.Sritharan

Members :

Dr.(Mrs.)S.Sivabalan

Dr.R.Surenthirakumaran

Mrs.D.Thabotharan

Dr. S. Jamunanantha

Dr. (Ms.)S.Vinotha

JSA : Section - D

Social Sciences

2013/14

Office bearers

Chair Person

Mr. V.Kumaradeepan

Secretary

Mrs.S.Balagobei

Editor

Mr.A.Rasakumaran

Members :

Prof.R.Sivachandiran

Mr.S.Ragulenthiran

Mr.A.Kabilan

Mr.S.S.Uthayakumar

Mr.A.Nithilavarnan

Members joined
during May 2013
to
March 2014

Section A
Life members 01
Ordinary members 06

Section B
Life members 04
Ordinary members

Section C
Ordinary members 01

Section D
Life members 04
Ordinary members 09

Reported by
Dr.B.Nimalathan
General Secretary, JSA

address the lack of fit between marketing as it is currently practiced and the ecological and social realities of the wider marketing environment

According to scientists, the world is moving towards an environmental turmoil. The only way to save our planet is to go green on a full swing as quickly as possible. For this cause, economists have also been doing their parts. Green marketing is a relatively new phenomenon which has arisen as a result of increasing awareness that economic policies have a lot to do with our ecology.

In other words, green marketing, which is also termed as environmental or sustainable marketing, is the effort made by any business organization, large or small to design and promote products that are eco-friendly.

The main idea behind green marketing has been re-marketing of products that are already manufactured, which adhere to certain environmental guidelines. There has been a huge hue and cry from various environmental organizations about the damage caused to the planet by large scale production industries, and the inappropriate disposal methods they use. Having looked into these accusations, the government has imposed different agreements and guidelines on production units.

Some business organizations have used it to their advantage, by openly campaigning for the cause, hence gaining the support of customers. However, some critics claim that this is just an advertising stunt to promote business, and that no real steps have been taken towards the cause.

A green consumer is one who is aware of the background of the products he consumes, which he chooses upon careful investigation of their broad effects on the environment. This spirit is essential in customers, so that they do not blindly fall for a company's advertisements, which will hinder the progress of the green movement. Hence it is only with the right attitude from both the consumers and the marketers, that "going green" can be achieved in the true sense. And when that happens, we can finally feel safe, and at home!

V.Kumaradeepan
Lecturer/ Dept. of Marketing
Chairperson Section D
Jaffna Science Association

Feature Articles

Twenty five feature articles were in the 'Valampuri', a local daily published in Jaffna. These articles were authored by Mr.A.Kugan, Ms.K.Selvaladshumi and Mr.K.Gajapathy.

Activities of Section B

Popular Talks

	Date	Resource Person	Topic
1	08.01.2014	Prof.RichardThrongton, University of Leeds, England	Biodynamic agriculture in Northern Province
2	28.01.2014	Mr.Ketheeswaran, Senior Asst. Librarian, University of Jaffna	e-journal access in Sri Lanka : The possibilities
3	06.11.2014	Prof. D.K.N.G. Pushpakumara, University of Peradeniya	Environmental services of home garden agro forestry in Jaffna peninsula

Workshop

A three day residential training programme for A/L Agriculture school teachers of Northern Province and In-service Advisers from 26th to 29th of September 2013 at J/Kaladdy Methodist Mission School, Jaffna.

Activities of Section D

	Date	Resource Person	Topic
1	08.01.2014	Dr. S.Santhirasekaram	Rehabilitation of Infrastructures in resettled areas of Jaffna District
2	09.01.2014	Mr. Jude Prakash, Chartered Accountant – Australia	Beyond Budgeting- an introduction
3	12.03.2014	K.Sivachandran	Problems faced by women

JSA
Annual
General
Meeting

2nd, 3rd and 4th April 2014

Theme of the year :

"Exploring new ways for
protection of
environment"

Popular Lectures:

1. 'Role of Statistics in
Environmental Studies
for
Management and
Decision Making'
Dr. T. Sivananthawerl,
Department of Crop
Science; Faculty of
Agriculture, University of
Peradeniya
2. "Environmental
Mitigation Measures in
Post Conflicts Water
Resource Development
with Special Reference to
Restoration of Blasted
Kalmadu Irrigation
Scheme in Northern in
Sri Lanka"
Dr.(Eng)S.Sivakumar
Department of Civil
Engineering, Faculty of
Engineering, University
of Jaffna
3. 'Social Determinants of
Health'
Hon. Dr.P.Sathiyalingam
Minister of Health &
Indigenous Medicine,
Northern Provincial
Council
'Social Determinants
of Health'



JSA Executive Committee

2013/14 members

President

Mrs.S.Ravindran

Past President

Dr. G. Bavani

President elect

Prof.(Ms)S.Kuganathan

General Secretary

Dr.B.Nimalathan

Asst. Secretary

Dr. P.Sewel

Treasurer

Dr. (Ms) A.Sivaruban

Asst. Treasurer

Ms.K.Niranjana

Chief Editor

Mr. A.Rasakumaran

CORPORATE GOVERNANCE AND SUSTAINABILITY

Corporate governance has become an issue of global significance. The development of corporate governance practices is widely recognized as one of the essential elements in strengthening the foundation for the sustainability and long-term economic performance of countries and corporations. Corporate governance is a part of economics that enables the investigation on securing or motivating effective management among industries and corporations through the employment of various mechanisms. These may come in the form of contacts, organizational structures and designs and legislations. The objective of corporate governance is mainly concentrated on the improvement of a corporation's image, financial performance and corporation's sustainability.

Corporate governance is critical for both public and private enterprises towards economic and social progress. High standards of corporate governance and ethics as well as greater interdependence between enterprises and the societies in which they operate is also becoming a critical element of sustainability development. Corporate governance is the set of processes, customs, policies, laws, and institutions affecting the way a corporation is directed, administered or controlled. Corporate governance comprises the long-term management and oversight of the company in accordance with the principles of responsibility and transparency. The governance structure specifies the distribution of rights and responsibilities among different participants in the corporation (such as the Board of Directors, Managers, Shareholders, Creditors, Auditors, Regulators, and other Stakeholders) and specifies the rules and procedures for making decisions in corporate affairs. Corporate governance provides the structure through which corporations set and pursue their objectives, while reflecting the context of the social, regulatory and market environment.

Sound corporate governance practices enhance shareholder value and ensure the long-term sustainability of the business. Corporate Governance is considered as a key element when

Web : jaffnascienceassociation.blogspot.com
e-Mail : jsajaffna2010@gmail.com

Facebook group : www.facebook.com/groups/thejsa
Facebook fan-page : www.facebook.com/thejsa

Please send your comments, suggestions, and articles to be included in the next issue to
A.Rasakumaran, The Chief Editor/JSA, Head/ELTC, University of Jaffna



JSA Executive Committee

2013/14 members

President

Mrs.S.Ravindran

Past President

Dr. G. Bavani

President elect

Prof.(Ms)S.Kuganathan

General Secretary

Dr.B.Nimalathan

Asst. Secretary

Dr. P.Sewvel

Treasurer

Dr. (Ms) A.Sivaruban

Asst. Treasurer

Ms.K.Niranjana

Chief Editor

Mr. A.Rasakumaran

reaching economic performance, growth and sustainability enabling to increase the investors' trust.

Corporate Governance and complexity of sustainable development call for global cooperation, based mainly on joint coordination of strategies and adopting of the best decisions. A company adopts sustainable development as its strategic goal. Sustainability is strategy of the process of sustainable development. It wins a special importance where this process assists the man in reaching sustainability or can discourage the man from this process. It means that sustainability is the corporate strategy monitoring long-time corporate growth, efficiency, performance and competitiveness by incorporating economic, environmental and social aspects into corporate management.

At present companies tend to focus on sustainable development as well as sustainability, which brings with it changes to the corporate culture as well as society. Sustainability has three important dimensions for all corporations: economic growth, social responsibility and responsibility for the environment. Sustainability is the ability to sustain the quality of life or the ability to maintain quality, which means that each generation has a responsibility for the quality of life and needs to continuously improve it. Sustainability in connection with the business environment has become part of the general awareness as a result of environmental approaches implemented in companies.

A good corporate governance framework establishes the mechanisms for achieving accountability between the Board, senior management and shareholders, while protecting the interests of relevant stakeholders. It also sets out the structure through which the division of power in the organization is determined. The importance of corporate governance lies in its contribution both to business prosperity and to accountability.

Corporate governance is of critical importance to the economy of Sri Lanka. In Sri Lanka, apart from weak regulatory and institutional frameworks, past 30 years internal war, increasing oil prices, overvalued exchange rates and rising inflation have been growing macro economic problems that were further worsened by December 2004 Tsunami and global financial crisis, which in turn affected the performance of the firms. For successful economic restructuring and long term development, Sri Lanka requires an efficient capital market capable of mobilizing domestic savings

Web : jaffnascienceassociation.blogspot.com
e-Mail : jsajaffna2010@gmail.com

Facebook group : www.facebook.com/groups/thejsa
Facebook fan-page : www.facebook.com/thejsa

Please send your comments, suggestions, and articles to be included in the next issue to
A.Rasakumaran, The Chief Editor/JSA, Head/ELTC, University of Jaffna



JSA Executive Committee

2013/14 members

President

Mrs.S.Ravindran

Past President

Dr. G. Bavani

President elect

Prof.(Ms)S.Kuganathan

General Secretary

Dr.B.Nimalathanan

Asst. Secretary

Dr. P.Sevvel

Treasurer

Dr. (Ms) A.Sivaruban

Asst. Treasurer

Ms.K.Niranjana

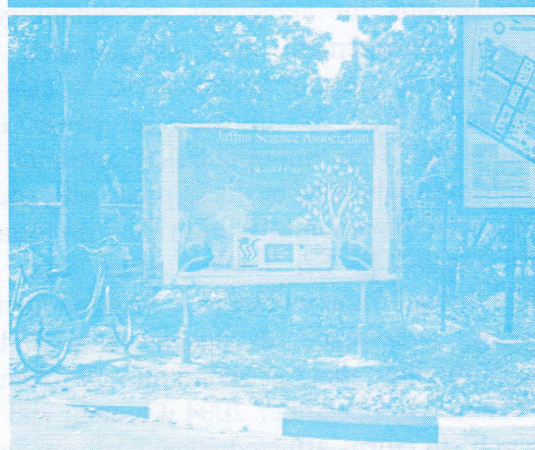
Chief Editor

Mr. A.Rasakumaran

and channelling them into the most productive uses. To establish such a market, good corporate governance is considered as essential (WTO, 2004).

Ms.Saseela Balagobai
Lecturer

Department of Financial Management,
University of Jaffna.



At the World Environmental Day celebrations organized by section A on 5th of June 2013.

The first invited lecture was performed by Mr. M. Jeevababu (Divisional Environmental Officer, Central Environmental Authority) on "Think, eat, save and reduce your footprint" on the WED theme.

The second lecture was performed by Dr.(Mrs).R.Ganeswaran (Head, Department of Zoology, University of Jaffna) on "Conserve pollinators to increase the food production." The final presentation was performed by Mr.Ajantha Paliawadana (Project manager-Forestry, Sewalanka Foundation) on "Reducing your carbon footprint by organic

Followed by the lectures, tree plantation was effectively performed within the University premises. All the participants were actively involved in the tree plantation as well. The schools which were committed to tree planting were supported Rs 1000/= worth voucher for purchasing school garden equipments. Also Sec-A have received 200 trees from forest department as the donations arranged by the sponsor and all most all the plants are being delivered to the schools for the school tree plantation competition. The handing over activity is performed by third year students of

Web : jaffnascienceassociation.blogspot.com
e-Mail : jsajaffna2010@gmail.com

Facebook group : www.facebook.com/groups/thejsa
Facebook fan-page : www.facebook.com/thejsa

Please send your comments, suggestions, and articles to be included in the next issue to A.Rasakumaran, the Chief Editor/JSA, Head/ELTC, University of Jaffna