

# International Forestry and Environment Symposium 2011

*Where researchers, policy makers and industry meet.....*

Organised by  
Department of Forestry and Environmental Science, University of Sri Jayewardenepura

28<sup>th</sup> – 29<sup>th</sup> October 2011  
at "Golden Rose" Conference Centre, Boralessgamuwa, Sri Lanka

## Symposium Program

**08.00 am Registration of participants**

**08 30 am – 09 30 am**

**INAUGURAL SESSION**

08.30 am	Lighting the traditional oil lamp
08.35 am	University Anthem
08.40 am	Welcome address: Prof. Hiran Amarasekara, Head, Department of Forestry and Environmental Science, University of Sri Jayewardenepura
08.45 am	Address: Prof. S.S.L.W. Liyanage, Dean, Faculty of Applied Sciences, University of Sri Jayewardenepura
08.50 am	Address: Dr. N.L.A. Karunaratne, Vice Chancellor, University of Sri Jayewardenepura
09.00 am	Address: Chief Guest
09.10 am	Address: The Guest of Honour; Mr. Benjamin Sawyer, Assistant Manager, Arid Forests Branch, Forest Products Commission, Australia
09.40 am	Vote of thank: Prof. Nilanthi Bandara, Symposium Coordinator, Department of Forestry and Environmental Science, University of Sri Jayewardenepura

09.45 am - 10.00 am

Tea break

Day 01 - 28<sup>th</sup> October 2011

	<b>Session 01</b> <b>Forestry &amp; Natural Resource Management</b> <b>Mr. Sarath Fernando, Former Conservator General of Forests, Forest Department</b>	<b>Session 02</b> <b>Waste Management &amp; Pollution Control</b> <b>Dr. Jagath Manthunge, Senior Lecturer, Department of Civil Engineering, University of Moratuwa</b>	<b>Session 03</b> <b>Plantation Management</b> <b>Mr. Anura Sathurusinghe, Conservator of Forest (Research &amp; Education), Forest Department</b>
1 10.00 am- 10.15 am	<b>34</b> Biological effects of three <i>Annona</i> species on <i>Callosobruchus chinensis</i> - A green alternative for storage pest management.  <b>U.K.P.R. Karunaratne</b>	<b>23</b> Eco-friendly method of manufacturing natural rubber latex dipped gloves containing minimum level of antigenic proteins.  <b>S. Liyanage</b>	<b>172</b> Effect of different seedling hosts on the growth of Indian sandalwood ( <i>Santalum album</i> ) at the nursery period.  <b>S.M.C.U.P. Subasinghe</b>
2 10.15 am- 10.30 am	<b>15</b> Joint forest management: a study of West Bengal in India.  <b>T.K. Mondal</b>	<b>01</b> A baseline survey on the eutrophic status of coastal waters in some selected western and southern coastal sectors in Sri Lanka.  <b>A. De Alwis</b>	<b>136</b> Research into sandalwood ( <i>Santalum spicatum</i> ) regeneration establishment in the semi arid and arid region in Western Australia.  <b>B. Sawyer</b>
3 10.30 am -10.45 am	<b>55</b> Effect of sward type and level of light on the agronomic performance and nutritive value of <i>Panicum maximum</i> VAR. Trichoglume and <i>Stylosanthes humilis</i> .  <b>C.J. Gajaweera</b>	<b>171</b> The Potential of GHG Emission Savings for Programmatic CDM by Municipal Solid Waste Composting in the Western Province, Sri Lanka.  <b>V.K.D.H. Kariyakarawana</b>	<b>135</b> Sandalwood Seeds for Oleochemical Industry: Sustainability in Sandalwood Agroforestry.  <b>D. Hettiarachchi</b>
4 10.45 am - 11.00 am	<b>58</b> Spatial variability of soil characteristics along a landscape gradient in Bellanwila-Attidiya area- Sri Lanka.  <b>R.U.K. Piyadasa</b>	<b>07</b> Pilot testing of bioremediation as an alternative treatment technology for municipal wastewaters.  <b>A. Pant</b>	<b>62</b> Run-off water harvesters and Agro-wells for supplementary irrigation of Rain-fed sugarcane at Sevanagala in Sri Lanka: A preliminary investigation.  <b>L.M.J.R. Wijayawardhana</b>

5 11.00 am- 11.15 am	<b>84</b> Preliminary study on the adaptation of wild Guinea grass ( <i>Panicum maximum</i> ) to different agro climatic regions in Hambanthota District.  <b>C.J. Gajaweera</b>	<b>13</b> Development of a HPLC method to quantify <i>Hepatotoxin microcystin</i> - LR in water.  <b>P. Manage</b>	<b>157</b> Evaluation of drinking water supply schemes in estate sector-A case study on Telbedda estate Sri Lanka.  <b>G.G.T. Chandrathilake</b>
6 11.15 am- 11.30 am	<b>141</b> Breakdown of mangrove leaf litter in a replanted mangrove forest in Kalpitiya, Puttlam lagoon.  <b>M.D.J.N. Wijesinghe</b>	<b>173</b> The potential of waste oil generated from service stations in western province for the use in kiln co-processing in cement industry.  <b>K.K.D.H. Kumara</b>	<b>178</b> Pressure and non pressure preservation methods for rubber wood treatment by Boron preservatives.  <b>U. Abesinghe</b>
7 11.30 am- 11.45 am	<b>93</b> Foraging ecology of Red-vented Bulbul <i>Pycnonotus cafer</i> in University premises and nearby forest patch in Mihinthale, Sri Lanka.  <b>S. Rajakaruna</b>	<b>28</b> Design and development of a Municipal Solid Waste pyrolyzer for producing high quality biochar.  <b>C.R.S. Gajagan Hewage</b>	
8 11.45 am- 12.00 pm	<b>81</b> Response of multiple biomarkers in <i>Cirrhinus mrigala</i> during short term exposure to chromium.  <b>P. Rama Krishan</b>	<b>164</b> Waste disposal and health – with reference to incidence of cancer in the neighborhood of the National Cancer Institute, Maharagama.  <b>D.M.S.H.K. Ranasinghe</b>	
<b>12.00 pm- 12.15pm</b>			
<b>Discussion</b>			

**12.15 pm – 01.00 pm**

**Lunch**

1.00pm – 01.20pm

Poster Session

	<b>Session 01</b> <b>Forestry &amp; Natural Resource Management cont...</b>	<b>Session 02</b> <b>Waste Management &amp; Pollution Control cont...</b> <b>Prof. Niranjane Rathnayake,</b> <b>Department of Civil Engineering,</b> <b>University of Moratuwa</b>	<b>Session 04</b> <b>Biodiversity Conservation &amp; Management</b> <b>Dr. Devaka K. Weerakoon,</b> <b>Department of Zoology, Faculty of Science, University of Colombo</b>
9 1.30 pm- 1.45 pm	<b>109</b> Impact of cattle grazing and irrigation water influx to the Nitrate and Pospbate levels of lagoon ecosystem in Bundala national park.  <b>R.G.S.T. Aluthwattha</b>	<b>90</b> A study on plastic wastes and environment.  <b>R. Ponnusamy</b>	<b>44</b> Analysis of genetic diversity in candidate plus trees of <i>Moringa oleifera</i> through RAPD DNA marker.  <b>S.P. Mishra</b>
10 1.45 pm- 2.00 pm	<b>89</b> Assessing the C stocks in various land use practices: A case study from sub-humid tropics of eastern India  <b>S. L. Swamy</b>	<b>112</b> Multiple biomarker response in fish <i>Clarias gariepinus</i> during sub-chronic exposure to Benzotriazole.  <b>S.K. Satyanarayanan</b>	<b>38</b> Entomofauna diversity in the mangrove environment of Southeast coast of India.  <b>B. Srinivasan</b>
11 2.00 pm- 2.15 pm	<b>176</b> Analysis of mangrove vegetation cover and the present status of aquaculture.  <b>S.S. Nigamuni</b>	<b>06</b> Effect of Temporal Variation of Climates on Biodegradation and Leachate Pollution Levels of Gohagoda Dumpsite.  <b>S. Wijetunga</b>	<b>26</b> Intraspecific variation and taxonomic delimitation in <i>Munronia pinnata</i> (Meliaceae) in Sri Lanka.  <b>R.M. Dharmadasa</b>
12 2.15 pm – 2.30 pm	<b>170</b> Trends in extreme events of rainfall in low country wet zone of Sri Lanka.  <b>H.M.L.K. Herath</b>	<b>97</b> Estimation of Energy and Material Recovery Potential from the Gohagoda Dumpsite.  <b>R.T.K. Ariyawansa</b>	<b>20</b> Challenges in conserving the Mangroves associated with the Puttalam Estuary, with special reference to the Seguwantivu Conservation Forest.  <b>N. Perera</b>

<p>13 2.30 pm- 2.45 pm</p>	<p><b>107</b> Population structure and dynamics of <i>Nerothermis tulla</i> (Odonata: Libellulidae) with water availability in rice field ecosystem.  <b>R.G.S.T. Aluthwattha</b></p>	<p><b>102</b> Heavy metal analysis in Alligator weed and compare with Sessile joy weed (Mukunuwenna).  <b>R. Fernando</b></p>	<p><b>54</b> Species richness and diversity of aquatic avifauna at the Annaiwilundawa Ramsar site of North-Western Sri Lanka.  <b>D. Mahaulpatha</b></p>
<p>14 2.45 pm – 3.00 pm</p>		<p><b>127</b> The investigation of the use of Laterite for removal of Cd<sup>2+</sup> from aqueous medium.  <b>R.G.S.T. Aluthwattha</b></p>	<p><b>168</b> Herbivory of tree seedlings grown in shade and sun along an altitudinal gradient of the Sinharaja forest.  <b>S. Ranathunge</b></p>
<p>15 3.00 pm- 3.15 pm</p>		<p><b>131</b> Extraction and Usage of Natural Enzymes to Produce Biodegradable Polymer Materials.  <b>A.M.P.B. Samarasekara</b></p>	<p><b>60</b> Development of a Macroinvertebrate - based Index of Biotic Integrity (M-IBI) for Colombo-Sri Jayawardhanapura canal system (A new approach to assess stream/ wetland health).  <b>R. Perera</b></p>
<p><b>3.15-3.30 pm</b></p>		<p><b>Discussion</b></p>	

**3.30 pm- 3.45 pm**

**Tea break**

	<b>Session 05</b> <b>Socio Economics of Natural Resources Management</b> <b>Prof. Marcus M. Karunanayake, Department of Geography, University of Sri Jayewardenepura</b>	<b>Session 02</b> <b>Waste Management &amp; Pollution Control cont...</b> <b>Prof. P.M. Jayaweera, Department of Chemistry, University of Sri Jayewardenepura</b>	<b>Session 04</b> <b>Biodiversity Conservation &amp; Management cont...</b> <b>Dr. U.K.G.K. Padmalal, Department of Zoology, OUSL, Colombo</b>
16 3.45 pm -4.00 pm	<b>29</b> Ethnobotanicals for storage pest management: Effect of powdered leaves of <i>Olox zeylanica</i> in suppressing infestations of rice weevil <i>Sitophilus oryzae</i> (Coleoptera: Curculionidae).  <b>H.S.D. Fernando</b>	<b>132</b> Preparation of photodegradable polymer blends using natural resources.  <b>A.M.P.B. Samarasekara</b>	<b>61</b> Conservation of aquatic avifauna: A case study in proposed Kotuattawala Nature Reserve Sri Lanka.  <b>D. Diwakara</b>
17 4.00 pm- 4.15 pm	<b>73</b> Evaluation of ISO recommendations on analysis of precision experiments.  <b>M.D.N. Gunaratne</b>	<b>145</b> Analysis of impact of compost bin method in Lunawa project area.  <b>N. Hettige</b>	<b>66</b> Recovery of bird feeding guilds during tropical forest regeneration.  <b>T. De Silva</b>
18 4.15 pm- 4.30 pm	<b>47</b> Management of aquatic invasive plants in dry zone tank habitats: exploring the primary stakeholder perceptions.  <b>U.K. Jayasinghe-Mudalige</b>	<b>04</b> Comparison assessment of utilization of coal fly ash, clinker ash and synthetic aggregates as a soil ameliorant for sweet potato cultivation.  <b>G. Jayasinghe</b>	<b>71</b> Termites in a remnant lowland wet evergreen Dipterocarp forest in Moraella in the knuckles range: a preliminary study.  <b>J.P. Edirisinghe</b>
19 4.30 pm- 4.45 pm	<b>51</b> Small scale environment projects and their impact on minimizing land degradation in Sri Lanka: A case study of Community Development Centre, Aranayake.  <b>D. Jayasinghe</b>	<b>63</b> The temporal variation of landfill leachate quality at Gohagoda dumpsite.  <b>H. Wijesekara</b>	<b>167</b> Leaf morphological variation of canopy dominant tree species in Sinharaja forest: Along an altitudinal gradient and differing light level.  <b>S. Ranathunge</b>

<p>20 4.45 pm- 5.00 pm</p>	<p><b>56</b> Occupational Risk factors of chronic kidney disease of unknown etiology in North Central Region of Sri Lanka.</p> <p><b>K.B. Jayasekara</b></p>	<p><b>160</b> An example of green nanotechnology; Antimicrobial nanosilver from waste X-ray photographic films.</p> <p><b>V. Karunaratne</b></p>	<p><b>85</b> Arbuscular mycorrhizae affect invasiveness of alien invasive plants through indigenous forest species in the dry zone of Sri Lanka.</p> <p><b>P.N. Yapa</b></p>
<p>21 5.00 pm -5.15 pm</p>	<p><b>123</b> Women's role in biodiversity conservation; A case study in bordering villages of Mihintale Sanctuary.</p> <p><b>R. Jayawardena</b></p>	<p><b>02</b> A study on the effect of dredging on the water quality improvement and fishery in the Lunawa Lagoon.</p> <p><b>A. De Alwis</b></p>	<p><b>99</b> Diversity, abundance and distribution of amphibians in the Mihintale sanctuary, in Sri Lanka.</p> <p><b>D.M.D.S.B. Dissanayake</b></p>
<p>22 5.15 pm- 5.30 pm</p>	<p><b>174</b> Estimation of damage cost of gem mining in Sri Lanka.</p> <p><b>D.S.A. Senarath Yapa</b></p>	<p><b>180</b> Structural changes of substrate(roof clay tile) up on rhizospheric changes in constructed wetland planted with <i>Typha angustifolia</i></p> <p><b>M. W. Jayaweera</b></p>	
<p><b>5.30 pm – 5.45pm</b></p>		<p><b>Discussion</b></p>	

**END OF FIRST DAY SESSION**

**Day 02 - 29<sup>th</sup> October 2011**

<p><i>Session 05</i>  <b>Socio Economics of Natural Resources Management cont...</b>  <b>Prof. Sampath Amarathunge,</b>  <b>Dean, Faculty of Management Studies &amp; Commerce, Univesity of Sri Jayewardenepura</b></p>				<p><i>Session 06</i>  <b>Climate Change</b>  <b>Prof. W.L. Sumathipala,</b>  <b>Department of Physics, Faculty of Natural Sciences, OUSL</b></p>				<p><i>Session 04</i>  <b>Biodiversity Conservation &amp; Management cont...</b>  <b>Mr. Gamini Gamage, Director, Bio-diversity Secretariat, Ministry of Environment &amp; Natural Resources</b></p>			
1 08.00 am -8.15 am		<p><b>10</b> Folk health practices by tribal community in Kinnaur district of western Himalaya: Need for restoration of old tradition.</p> <p><b>V. Thaplyal</b></p>	<p><b>179</b> Comparative enumeration for dominant species in selected natural forests, north central province, Sri Lanka to be used in assessment of carbon sequestration.</p> <p><b>A.A.S.C. Ranaweera</b></p>	<p><b>100</b> Heart rot of <i>Delonix regia</i> (flame tree) in urban landscape</p> <p><b>P. Fernando</b></p>							
2 08.15 am- 8.30 am		<p><b>43</b> Modeling susceptibility of a forest based community in drought prone region of West Bengal.</p> <p><b>G. Basu</b></p>	<p><b>114</b> Carbon mitigation potential of different land use systems in Northwest Himalayas of India.</p> <p><b>S. Kerketta</b></p>	<p><b>64</b> Studies on Saltwater crocodile <i>Crocodylus porosus</i>, Schneider. 1801 (Reptilia: Crocodilia); from the Madras Crocodile Bank Trust, Tamil Nadu</p> <p><b>S. Muthukumarasamy</b></p>							
3 8.30 am- 8.45 am		<p><b>57</b> Microbial formulation containing Eppawela Rock Phosphate (ERP) as a Source of Phosphorus to field crops.</p> <p><b>D.B. Kelaniyangoda</b></p>	<p><b>129</b> Forest management effects on carbon sequestration and Nitrous Oxide release.</p> <p><b>S. Gautam</b></p>	<p><b>92</b> Amphibian diversity and endemism in the swamp forests of Agusan Marsh, Philippines.</p> <p><b>O. Nuneza</b></p>							



<p>4 8.45 am- 9.00 am</p>	<p><b>83</b> Temporal Pattern of Livelihood Dependency and Anthropogenic Pressures in Kalakad-Mundanthurai Tiger Reserve, Tamil Nadu, India.</p> <p><b>S. Gupta</b></p>	<p><b>50</b> Global warming and climatic change: A case study on dairy farmers' awareness and adoption measures in Anuradhapura District of Sri Lanka.</p> <p><b>G. De Silva</b></p>	<p><b>94</b> Forest structure, species diversity and aboveground biomass of the Sundarbans Mangrove Swamps.</p> <p><b>H. Gupta</b></p>
<p>5 9.00 am -9.15 am</p>	<p><b>118</b> Economic impacts of forest on tribal livelihood: A diagnostic study in Similipal reserve forest in Orissa, India.</p> <p><b>S. Patra</b></p>	<p><b>52</b> ICT as a mode of transport to reduce the Climate Change: A Case Study in Colombo City Area.</p> <p><b>P.C.P. De Silva</b></p>	<p><b>104</b> Identification of different varieties of mangoes (<i>Mangifera indica</i> L.) in Jaffna.</p> <p><b>N. Krishnapillai</b></p>
<p>6 9.15 am – 9.30 am</p>	<p><b>82</b> Economic valuation of forest ecosystem services: A case of recreational services of Basavana Betta state forest, Karnataka, India.</p> <p><b>C.R.B. Venkatarayappa</b></p>	<p><b>134</b> <i>Hydrilla verticella</i> as a carbon capturing plant.</p> <p><b>C.D. Jayaweera</b></p>	<p><b>120</b> Selection of <i>Artocarpus heterophyllus</i> Lam. (jackfruit) varieties using AFLP markers.</p> <p><b>R.L. Thantrige</b></p>
<p>7 9.30 am- 9.45 am</p>	<p><b>46</b> An analysis of effects of Socioeconomic characteristics of households on food Production in homegarden systems in Kandy, Sri Lanka.</p> <p><b>V. Sivapathasundaram</b></p>	<p><b>137</b> Potential for voluntary carbon market in Sri Lanka - A success story of Hiniduma - Kanneliya Biolink project.</p> <p><b>S. Wahala</b></p>	<p><b>126</b> Behavior and territorial mapping of Indian Black Robin.</p> <p><b>M.A.J. Dissanayake</b></p>
<p>8 9.45 am- 10.00 am</p>	<p><b>53</b> Conservation of Ground Water Resources and Energy by Proper Selection of Water Treatment Processes.</p> <p><b>N. Ratnayake</b></p>	<p><b>139</b> Carbon stocks in selected dry and wet zone forests of Sri Lanka.</p> <p><b>K.A.J.M. Kuruppuarachchi</b></p>	<p><b>156</b> Behaviour of goats in a natural forest with special emphasis on eating behavior.</p> <p><b>D. Senaratna</b></p>

9 10.00 am - 10.15 am	<b>162</b> Status of renal failure in Vavuniya District - some causes and remedies.  <b>D.M.S.H.K. Ranasinghe</b>	<b>143</b> Role of ICTs in early warning of Climate-Related disasters: A Sri Lankan case study.  <b>K. Wickramasinghe</b>	<b>169</b> Leaf chlorophyll concentration of canopy dominant tree seedlings grown in different light environment across the topographic gradient.  <b>S. Ranathunga</b>
10 10.15 am- 10.30 am		<b>79</b> Variation in Biomass and C stocks in five promising <i>Populus deltoides</i> clones under an agroforestry system.  <b>A.M. Swamy</b>	<b>175</b> Study on leaf nutrients of canopy dominant tree saplings and soil nutrients across different topographic positions of a Sri Lankan rain forest.  <b>M.U. Perera</b>
<b>10.30 am- 10.45am Discussion</b>			

**10.45am 11.00 am**

**Tea Break**

		<b>Session 07 Sustainable Energy Dr. Mahesh Jayaweera, Department of Civil Engineering, University of Moratuwa</b>	<b>Session 04 Biodiversity Conservation &amp; Management cont... Prof. D.M.S.H.K. Ranasinghe, Department of Forestry and Environmental Science, University of Sri Jayewardenepura</b>
11 11.00 am- 11.15 am		<b>41</b> Water footprint of broiler meat production in Sri Lanka: An analysis.  <b>N.S.B.M. Atapattu</b>	<b>75</b> Lichens as indicators of changing environmental conditions in Horton Plains National Park, Sri Lanka.  <b>U. Jayalal</b>
12 11.15 am- 11.30 am		<b>103</b> Possibilities of micro algae <i>Nanachloropsis</i> sp. used as	<b>77</b> Species composition of Odonate fauna in Meegahawatta, a wetland area in

		renewable energy source under local condition. <b>C.P. Rupasinghe</b>	Hanwella, Sri Lanka. <b>H.K. Maddumagea Dona</b>
13 11.30 am- 11.45 am		<b>177</b> Screening the potential of plant species to be used for dendro energy generation. <b>D.N. Kannangara</b>	<b>59</b> Identification of shrew species of Sri Lanka using hair anatomy. <b>D. Manawadu</b>
14 11.45 am- 12.00 pm		<b>68</b> Factors to be taken into account in the use of solar water heaters as a sustainable energy option. <b>S. Karavita</b>	
<b>12.00 pm-12.15 pm</b>		<b>Discussion</b>	

<b>CONCLUDING SESSION</b>	
12.30 pm	Address by Prof. Hiran Amarasekara, Head, Department of Forestry and Environmental Science, University of Sri Jayewardenepura
12.50 pm	Vote of thanks

**01.00 pm      Lunch**