During 1980s to early 1990s, the only lobster variety exported was spiny lobsters: but with the absence of enough spiny lobster stock, marketers and buyers tend to demand slipper lobster also. Therefore, the catch also declined up to mid 1990s and slightly increased in a decreasing manner where the catch drop from 375 mt in 1996 to 247 mt in 2004 with slight variation during the period. So as the Catch Per Unit Effort (CPUE) also decreased from 0.33 percent to 0.09 percent during the period of 1986 – 1998. The decreasing is mainly due to the over exploitation. Therefore, new remedies, rules and regulations should be implemented.

Habitat enhancement, minimize near shore pollution, usage of appropriate gears, conduct larval settlement and lobster fattening programmes, and facilitate training, extension work cum awareness programmes are some suggestions that could be implemented. Also the primary regulations on lobster fishery should be implemented with restrictions on the fishing efforts (traps) and a quota system. The calculated yield levels permit to harvest only within the range of 359 mt – 388 mt annually.

032
Sustainable management of land resources

A P Pandey
Department of Economics , Banaras Hindu University, Varanasi , India

Since the dawn of civilization, land and water have been the basic elements of the life support system on our planet. The civilizations flourished well where these natural resources were available in plenty and they declined or perished with their depletion. Civilizations, therefore, learned to respect these resources and found the best ways of using them. In recent times the land resources have been subjected to a variety of pressures. Despite this is surviving and sustaining mankind. What is alarming is the way we use land – our tendency to over-exploit it for a number of reasons, which has led to this pristine resource being robbed of its legendry resilience. Man is the main culprit for degradation of our natural resources like land and water as he views these in terms of their utility and capability to meet his immediate needs and wants. Preserving, protecting and defending land resources have been part of our age- old culture. There are in numerable examples of the traditional practices and systems of conservation, which still survive and are effective. But, with the advent of new forces of consumerism, a predominantly materialistic value system, short-term profit-driven motives and the greed of the users, the tradition of conservation is detoriating. As a result land has degraded, soil fertility depleted, the rivers polluted and the forests destroyed. The ultimate sufferer is the common man, especially in the third world countries. On the global scale, degradation is equally striking. The world's population has doubled in the last forty years and is now more than five billion at this rate it will cross ten billion in the coming fifty years. The current growth rate of the global economy is a mere 3 percent. Even if this rate expands five times over there will be a critical demand for food, energy, and services.

Keeping in view the scope of degraded and salt affected lands in food security of India and numerous socio economic benefits, it is worth while to examine the pattern, practices policies implications relating to rehabilitation of these problematic lands. The main concern of this paper is to review the reclamation trend of salt affected land, technology available for reclamation economic feasibility and socio-economic benefit and socio-economy and policy constraints in reclaiming these lands.

033
Towards systematic compilation of environmental information: Review of sources of data on environment with special reference to Land Resource

H C Perera
Department of Forestry and Environmental Science, University of Sri Jayewardenepura, Sri Lanka.

Lack of reliable and up-to-date information on environment limits the effective policy and management decisions on natural resources sector. Eventhough the organizations responsible for supplying environmental information are well established, there is no effective mechanism to provide professional service in dissemination and maintenance of systematic date bases on regular basis. The level of accuracy of data isalways variable and most collected data and information are stored in paperarchives lacking integration within the sub sector. The objective of this study was to review the sources available

for updated data and information relates to environment and to review the available information of land resource. The methodology used to collect data and information consisted of reference to the literature through recent publications, annual reports, periodicals and internet, visits to relevant institutions and personal communication with experts and officials. The results revealed that some of the authorities are able to maintaining their information regularly where as few are unable to maintain due to lack of their resources and man power. Few of them can be summarized as follows. Latest Soil Classification according to international methods and development of a soil data base and soil map for wet and intermediate zones has published in 2005 by the Soil Science Society of Sri Lanka.The existing map of 24 agro ecological sub regions (1975) were updated into 46 sub regions in 2003. Preparations of hazardous maps for major areas in ten districts which are prone to landslide have been carried out by NBRO and few districts were already completed. At present the Department of Survey isplanning to publish the latest version of the National Atlas with up dated data and information and it includes distribution of almost all the natural resources and present land uses, further as a new chapter the tsunami information is also included. The Clean Air initiative, which releases regular ambient air quality monitoring reports, sets an important example in dissemination of public environmental information. Furthermore, the extent of coral reef in coastal area except North and East has been carried out by the NARA after the tsunami disaster. Survey of mineral resources of the country is been carried out by the Dept.of. Geological Survey and Mine Bureau as an ongoing project. Study emphasized the need for integration of the fragmented and sectoral information of the individual institutes and the need for timely reliable and systematic data base on environmental information that could aid in better decision making and management processes.

034
Assessment of soil erosion hazard of Victoria catchment area using GIS as a tool

K P G W Senadeera [1], S Piyasiri [1] and K D W Nandalal [2]
[1]Department of Zoology, University of Sri Jayewardenepura, Nugegoda, Sri Lanka.
[2]Department of Civil Engineering, University of Peradeniya, Sri Lanka.

Victoria reservoir is located at an elevation of 340 m to 440 m with a geographical position of 7° 15′ to 7° 19′ N and 80° 39′ to 80° 48′ E which has been constructed by damming the River Mahaweli at Victoria fall, in Sri Lanka in 1983. The reservoir storage capacity is 721.2 MCM and upstream dam site comprises 1338 km^2 in the districts of Kandy, Nuwara-Eliya and Matale. The elevation of the catchment ranges from 340 m to 2100 m.

Soil erosion is a major water quality issue in the upland reservoirs. The objective of this paper is to analyze catchment issues contributing to soil erosion in the Victoria reservoir and to evaluate the soil erosion risk areas in the catchment. Study was carried out from 2002 to 2004.

Soil erosion occurs due to natural causes such as rain fall, rainfall runoff and wind, and due to human activities. Universal Soil Loss Equation ($A = RKLSCP$) introduced by Wischmeier and Smith in 1965 is a most widely used method for estimating soil erosion. This encounters detachment of soil particles and its transport by raindrops and surface runoff, which depends on the rainfall erosivity (R), erodibility of soil (K), slope length factor (LS), cover and management factor (C) and the support practice factor of the equation.

The data on erosivity points were interpolated with 50 m resolution grid cells. The erodibility value relevant to each soil group was entered into the attribute table, which was converted into grid cells with 50 m resolution, containing soil erodibility values. The Triangulated Irregular Network (TIN) was created by contour interpolating with 20 m interval, and grid cell was 50 m. Using TIN, slope percentages map was derived, which was used to obtain LS factor. The C factor values relevant to each landuse type were entered into the attribute table. The map was converted into grid cells with 50 m resolution, containing C factor values.

The soil erosion of the Victoria catchment was categorized into five erosion categories, namely; low, moderate, high, very high and extremely high, which extend within Kandy, Nuwara-Eliya and Matale districts. All categories were spread both in the left and right banks.

Extremely high erosion areas extend over 24.34km^2 with a percentage of 1.82, Very high erosion areas extend over 121.24 km^2 with a percentage of 9.06, High erosion areas extend over 302.91km^2