

Sustainable Development and Environmental Education

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Abstract

This paper is particularly concerned with the people requiring well organized environmental education in order to achieve the objectives of sustainable development in Sri Lanka. These people had been causing a considerable environmental damage as was evident in our research studies on social impact of development projects, environmental problems, and violation of environmental laws. They were observed and interviewed in urban and rural areas in different part of Sri Lanka. Findings reveal number of causal factors such as ignorance, negligence, poor knowledge, negative attitudes and behavioral patterns



which led these respondents to live and work in an environmentally harmful manner. It is contended that those people and communities continue their environmentally destructive behavioral patterns due to failure on the part of environmental education to address them effectively through proper mechanism exclusively developed considering real causal factors.

Introduction

Sri Lanka is a country with a great tradition and history of environmental protection and sustainable development. It has a history of over 2500 years old. In brief this long tradition was ideologically enriched by the Buddhist doctrine which accommodate environmental protection and development with due consideration for the functions of environment and it was empirically enriched by the development policies and programmes followed by the ancient kings. Most of Sri Lankan kings and other political authorities committed themselves to construct and maintain thousands of gigantic water tanks, not only for the cultivation of paddy but also for multiple purposes of greening the environment and thereby ensuring the ecological existence and well-being of all fauna and flora. In other words Sri Lanka was originally a green country with a green society and culture. The green norms and values had been embedded in the culture and they were transmitted from generation to generation until their collapse in the period of colonization. Today as a developing country Sri Lanka too experiences some of environmental problems at different levels as the other developed and developing countries have already experienced. As the Western model of development, which highly pivots on material well-being and conspicuous consumerism, progresses at an environmental cost, Sri Lanka has to face the repercussions of that environmental damage. Therefore Sri Lanka cannot dispense with the

ideologies of sustainable development and environmental protection so far developed by various nations through their experiences to deal with escalating environmental problems. Environmental education can be identified as an important component of those ideologies (Ho Peter.2006:5, Mol, 2006:30).

Sustainable development in Sri Lanka confronts with three major challenges such as the stability of society, increasing rate of economic development and the scarcity of resources (Central Bank: 2011). Sri Lanka has been able to restore peace and order throughout the island after the end of military conflicts protracted for nearly three decades and those conflicts and the cost of war have had an irreversible negative impact on the development processes and their sustainability. Therefore, the political and social stability of the country which was achieved at a higher human and material cost should be further strengthened to assure the sustainable development. We should not forget about the environmental repercussions of the political instability in the affected provinces and the importance of understanding the relationship between sociopolitical instability and environmental destruction should be taken into account in environmental education. Sri Lanka has been able to expedite its economic growth after the end of military conflicts in 2009 and it has to pay special attention to the impact of this growth on environment. The scarcity of resources required for this increasing economic development and the accompanied social development poses a serious threat to the sustainable development as different agents of development strive to reach their targets ignoring the environmental damage of their projects and businesses. In particular the vulnerability of transgressing the environmental laws, values and norms tends to increase in case the scarce resources are properly managed from the perspective of ecological modernization (Peter Ho.2006:8) Based on this perspective environmental education should be geared on to transform the "societal evolution from environmentally destructive to ecologically sustainable" society (Peter Ho.2006: 8). Accordingly Sri Lanka has to design environmental education so that it addresses all aspects of society at micro level and change them as required for the sustainable development. The Cases discussed in this paper highlight the importance of such an environmental educational approach.





Methodology

On the assumption that environmental education should address peoples knowledge, attitudes and behavioral patterns pertaining to environmental protection, present study made an attempt to identify a few cases attributed to environmentally destructive practices and analyzed them to reveal the areas where environmental education could play its due role.

A purposive sample of 55 people involved in agricultures, construction and building material supply, illegal mining causing environmental damages were interviewed with the objective of understanding the causal factors behind their environmentally destructive behavior. In particular attitudes and knowledge on destructive behavioral patterns were explored. Further samples of 6 Public Health Officials were interviewed to understand problems of environmental protection.





Case findings

Agricultural Sector

The agricultural sector development in Sri Lanka proceeds with a considerable impact on environment and that negative impact poses a serious threat to sustainability of development projects. Though that damage is caused by number of modern agricultural practices, here one of them, the use of pesticides was addressed only with the intention of understanding farmers' attitudes and knowledge on Pesticides and their use. Among the 30 vegetable cultivators observed and interviewed in two village areas in Bandarawela in Badulla district, indiscriminate use of pesticides was well evident. They openly accepted the practice of using pesticides "as they want" without abiding by the instructions and precautionary measures prescribed for the protection of people and environment. They used to add an additional amount of pesticides whatever the type and sometimes that additional quantity exceeds at least 30 per cent of the prescribed amount of pesticide. Questioned as to why they refrained from following the instructions of using pesticide, their direct answer was that the prescribed quantity is not sufficient to protect their cultivation from pests. A common attitude they had shared was that the quality of the pesticides available at the market remains well below the standard level due to corruption in business and production. Therefore they have resorted to excessive use of pesticides and believe that such a strategy brings about anticipated results.

Slash and burn cultivation can be sited as another agricultural sector in Sri Lanka causing a considerable environmental damage annually. It is still practiced in some areas in the Monoragala and Badulla districts. As observed in those areas this traditional practice of cultivation brings about a serious environmental damage as the fire spreads beyond the land area cleared for the cultivation. Even though such a fire is usually labeled as wildfire, actually it is not so. According to the 6 cultivators interviewed for the research, slash and burn is a traditional practice and without burning the slashed materials they cannot have the land cleared for cultivating the crops. They also believe that burning is necessary for having a good harvest. Accordingly they consider burning as a necessary practice. With reference to the spread of fire to other forest areas, their simple answer was "it is unavoidable" and it help them to protect the cultivation from wild life.

Construction Sector

The development in Sri Lanka is clearly visible from the expansion in the construction sector and the increasing demand for material resources. Today, Sri Lanka has confronted with a serious problem of supplying building materials such as bricks, Sands, timber, rubble and stone required for various constructions. As a result of the relative scarcity of such materials the prices remain at a higher rate and any problem causing scarcity increases the prices of those materials dramatically. In response to the market dynamics, those involved in the business of building materials attempt to transgress the law and meet the demand of the market and profit from the business. The sand and stone business in the construction field seemed running at a higher environmental cost. The illegal practice of digging out Lands and river basins for sand has already caused a serious damage to the environment as observed in 5 stone quarries in Athurugiriya in Colombo District and 5 sand quarries in Kaluganga (river) in Kalutara district. . The stone and sand quarries located in Colombo and Kalutara have caused a serious impact on people and their properties as observed. Asked about the environmental damage they have caused already, their response was that they had not caused any harm but quarried only sand and stones to earn their daily income on which they live.

The other disastrous practice, observed in the district of Colombo, was the business of sea sand without washing it properly. Sea sand is available at number of building material stores in Colombo for sale and the demand for sea sand increases when there is a scarcity of normal sand in the market. The dangerous impact of the dumping of sea sand at grounds of building material stores is the increasing salinity level of soil and ground water. As revealed by 5 laborers of building material stores, water of some wells located in adjacent to the places where the sea sand is dumped, has become salty and such wells have already been abandoned. This environmental damage has not been properly addressed so far and the business continues at the will of sea sand traders. The traders had taken the damage for



granted and said that they were not aware of such a problem.

Illegal Gem Mining

The environmental damaged caused by people engaged in illegal gem mining remains a hidden factor though the destructive impact of them cannot be underestimated. Illegal gem mining takes place in the forest areas of Moneragala district as was observed in Maligawila forest and along the Kumbukkan

oya(river). According the revelation made by 10 respondents who had actively involved in illegal gem mining, there had been thousands of gem mines dug by people destroying the whole environment without any concern about fauna and flora. Even though such people are arrested by the Police, still, well organized groups of continue the illegal mining for gem. As the primary target is to find gems, those gem miners destroy the environment irrespective of any value of natural resources. One important factor that was evident from the interviews with them was their unawareness of protecting certain types of rare and important fauna, flora and artifacts they unearthed from mines.

Public Co-operation for Environmental Protection

With reference to the spread of dengue, the researcher interviewed 6 Public Health Inspectors working in Urban and rural areas in the District of Colombo. The main problem they had confronted was the hesitation of some people to offer their support and co-operation for carrying out their duties and thereby protecting lives of people from Dengue. According to the PHIs some people of higher social classes had refused to open the gates of their residences and allow them to observe the domestic environment. "We know how to protect our environment" and "need no advice from you" were some of unpleasant responses. However, when such places were observed by the PHIs with the help of police and the support of some high ranking officials, those residences had not been maintained to the slandered level of environmental cleanliness and protection from Dengue. The problem of obtaining public support and co-operation for environmental protection was identified as a more serious situation in urban areas than rural.

Discussion

All the cases mentioned above have something to do with the environmental education of people. The indiscriminate use of pesticides is based on wide spread and deep-rooted negative attitudes that farmers have developed and shared with reference to the low quality of pesticides and strategies to increase production. These attitudes motivate them to exceed the quantity of pesticide legally and scientifically prescribed for a particular use. They are not concerned with the additional cost they have to incur as their prime target is to profit from the cultivation. Further inquiry in to this behavior revealed an interesting bifurcation in the consumption of products as "for our use" and for their use". "Our use" refers to the farmer's family consumption and "their use" refers to the unknown customers' consumption. Farmers were highly constrained with the use of pesticides for vegetables cultivated for their own use, whereas they freely spray pesticides to the vegetables cultivated for the market. The profit motive has undermined a great social value of treating others as one treats oneself. Though they can increase the quantity without causing any harm to the quality of the product, their ignorance and wrong attitudes compel them to excessive use of pesticides. This bifurcation of production is based destructive individualistic attitude and it alienates farmers from collective responsibility. Collective and co-operative social values have to be inculcated to develop self discipline in farmers with reference to cultivation practices.

Blind imitation of traditional agricultural practices and the sluggishness to adapt oneself to modern agricultural methods have been conducive to the continuation of slash and burn cultivation. Such cultivation practices continue as those farmers have not been closely addressed through EE programs. The simple method of slash and burn cultivation could be replaced with well restrained agricultural methods by developing the personality of farmers.

The commercial attitude of profiting from the existing market at any environmental cost has made the people involve in sand and stone business without any consideration regarding the destructive impact on the environment. Though those businessmen were aware of the damage they cause they had not taken it seriously. The attitude was that " as others also conduct the business in this manner, we too

follow the same" The lesson that we have to learn from this behavioral pattern is that the environment needs to be protected through collective efforts and collective commitment of relevant groups of people engaged in businesses causing direct or indirect damage to environment. The 'command and order' technique of protecting the environment has limited results compared to the technique of environmental education and those traders could be educated to develop positive attitudes.

Those engaged in illegal gem mining share the attitudes that the environmental repercussions of their acts have no impact on themselves or others as they conduct their illegal acts in forest areas. Though the forest is a national resource that should be protected by all, their perception was that it was something alien to them. Such an attitude of alienation can motivate the culprits to cause any damage to the targeted environment. As mentioned above, proper environmental education is capable of reducing the environmental damage caused by Gem miners. As was evident, some have caused serious damages out of ignorance and accompanied negligence and such problems should be addressed by environmental education.

Environmental protection is influenced by social stratification and related attitudes of one's social status. In particular, due to class consciousness and arrogance, some people living in urban and rural areas in Colombo refrain from assisting the local authorities to enforce law and protect environment. Inspection of domestic environment for any danger is perceived those people as something challenging their social status consciousness and prestige. Such arrogant people think that they should not be questioned or even punished for any violation of the law. Public Health Inspectors were not allowed to inspect certain domestic environments by such people they had seek the support and protection of even the Police to carry out their duty. The problem is that whether such people could be changed through environmental. The people who refused to co-operate with environmental protection had a taken for granted attitudes towards the law and Dengue threat though the mass media had carried the message of assisting the authorities to keep the home gardens clean and eradicating the Dengue.

Conclusion

As is evident from the above cases and discussion on them a comprehensive environmental education is required to change negative attitudes and educate people referred in the above cases. The common programmes of environmental education may put the foundation for preparing the nation for an environmentally friendly behavioral pattern. The inclusion of environmental education in to the school curricula may bring about the anticipated results in the long run. However, exclusively developed educational programmes are required for changing the environmentally distractive behavior of the type of people found in the cases into environmentally friendly one. For that purpose groups of people involved in different types of activities causing any damage to the environment should be identified differently and the type of environmental education applicable and useful for a particular group should be decided and implemented through a proper mechanism.

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