

**SCIENTIFIC BASE OF THE TRADITIONAL ENVIRONMENT  
MANAGEMENT AND CLIMATE CHANGE ADAPTATION  
APPLICATIONS IN SRI LANKA**

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It is clear that without proper environmental systems, sustainability cannot be achieved. However, rapid climate change tendencies caused many natural disasters during last few decades, which were not very common before. This shows that modern scientific world miss some essential parts, belonging to the traditional world. Purpose of this research is to study the traditional environmental concepts and applications in Sri Lanka, specially focusing on climate change adaptation applications, in the light of 'traditional scientific' concepts. In this qualitative study, documentary studies, in-depth interviews, focus group discussions, photographs, and video and audio recordings, case studies, and observation were the methods used for data collection. Archaeological sites and traditional villages in Uva, Central, North Central, and Southern provinces were the sites selected for data collection. All data were analysed by using maps, photographs, sketches and descriptions.

*Ayurvedic* concepts are the base of traditional scientific approach of environmental management. As a result traditional Sri Lankan societies identify the 'water element' as the key factor of any climate or environmental condition. Traditional Sri Lankan settlements can be divided into two types according to the geographical factors: 'Water reservoir based human settlements', and 'Water source based human settlements'. Again these two types can be divided in to three categories as: Settlement of general public, Settlements of Buddhist clergy, and Settlements of royalties and upper classes. Even though each of these categories is having different geographical and serving purposes, they all have one common characteristic. That is the focus on maintain the total wellbeing: physical, mental, social, and spiritual wellbeing, of the person. *Ayurveda* categorizes all the human population according to their personality types. Accordingly to it, environmental conditions have direct impact on deciding the personality type and the health of the individual. The study proved that makers of Sri Lankan settlements were able to identify one common environment type: *Sadharana environment type*, suitable for all these personality types.

The establishing of settlements based on the water sources can be seen from the beginning of human civilizations. However, the water reservoir based settlements are the Sri Lankan contribution to the world. It teaches the climate change adaptation techniques; especially the technique of creating a new climate, by changing the key environmental factors. The techniques used by the traditional Sri Lankan settlements to manage the climate changes according to their required focus is a very good solution for the most climate change related problems in modern world. This study proved that protecting and maintaining the traditional settlement structure is a very good solution for climate and environmental problems in Sri Lanka. On the other hand, these techniques also can be used for urban development projects.