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## THE EFFECTS OF ENVIRONMENTAL DEGRADATION AND PEOPLE MANAGEMENT ON WORLD HERITAGE

In view of environmental change including water/air/soil movement, World Heritage should be categorised into three sub groups, which include an independent cultural structure, natural heritage and people-managed cultural/natural heritage, rather than just cultural and natural heritage. Probably, the third concept needs some explanation. People managed-cultural/natural heritage was artificially created by people within the pure natural processes, which should be maintained adequately according to natural process in regional society, including rainfall, river flow and land conditions. For example, Val d'Orcia in central Italy and the Rice Terraces of the Philippine Cordilleras need a fair bit of management by local people. Therefore, in order to maintain the heritage, it is crucial that people keep their traditional way of life there, rather than just listing the site on the World Heritage List and obtaining management funds. Sometimes it is challenging because this procedure means keeping the people's lives at a certain level. In order to maintain this heritage appropriately, scientific techniques can help. For example, in the Tobacco fields in the Viñales Valley of Cuba, people use cows and wooden ploughs to cultivate the land. This technique provides shallow cultivation of the local soil, which is beneficial for avoiding drying processes of the soil body or for keeping soil aggregation in good condition. If we can provide this scientific information to local people or governments, people can maintain the heritage more effectively rather than just keeping the traditional way of life.

In natural-related heritage or people-managed cultural heritage, water relates strongly to the degradation of the heritage. Water movement including rainfall carries many substances, such as chemicals and soil. Thus, the landscape around will inevitably be changing. Natural related heritage itself is always changing, namely, we just cut and see the heritage out of long geological processes. Therefore, it is quite natural to see that the heritage is changing and there is no guarantee for the shape and condition. As long as the trend is slow and longer than hundreds or thousands years, it is considered as a natural process. However, if this change happens at an undesirable speed within a period shorter than people's lives, we call it as degradation. Salt accumulation in arid/semi-arid region and acid rain in developing countries are some such examples. If global warming causes localised heavy rain, traditional agriculture, such as the Tobacco fields in the Viñales Valley of Cuba or Rice Terraces of the Philippine Cordilleras will be threatened by soil erosion.

In all, for the maintenance and management of World Heritage, it is appropriate to categorise world heritage into three sub groups, which are independent cultural structure, natural heritage and people-managed cultural/natural heritage, rather than just cultural and natural heritage.