

CONCEPT OF RIVER HEALTH

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The concept of river health is useful to the communication between the professional and the public and it is useful to river conservancy and management (Boulton, A.J., 1999; Fairweather, P.G., 1999; Karr, J.R., 1999; Norris, R.H. et al., 1999; Rapport, D.J., 1995). It evoked human's attention to degraded river condition. At present, there wasn't a suitable definition of river health. The existing definitions of river health based on river ecosystem and only emphasized the ecosystem health. When human benefit is considered in the concept of river health it is difficult to use the definition to illustrate the relation between river and human social development. The definition of river health based on river system is more suitable to a research on river health than a definition based on river ecosystem. In the paper a definition of river health was presented that based on river system. The concept of river health was defined as: river health is a condition of river in which river system have good structure and functions, that is, river system keeps natural evolution, natural ecological and environmental functions and can meet rational social demands. Under the condition species diversity is preserved and the utilization of river resources is sustainable. According to the definition of river health, the contents of river health included three aspects: (1) river natural evolution; (2) river ecological and environmental functions; (3) river social service function. The definition based on river system can be used to cover all river health issues from the three aspects. The intensions of river health include four aspects: (1) river natural evolution; (2) river ecological and environmental functions; (3) social attribute; (4) intension of sustainable development. The four aspects are interactional and interdependent. At the last some interesting areas of the concept of river health was discussed that included harmony among the different functions of a river, research on river management models and river restoration or rehabilitation.

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