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Water resources carrying capacity:new perspectives based on eco\economic analysis and sustainable development

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Current understandings of water resources carrying capacity are analyzed with reviewing the concept of carrying capacity, and it is found that the connotation of sustainable development has not been effectively and successfully combined with water resources carrying capacity. Based on the theories of ecosystem services and values carried by freshwater ecosystem, an eco\economic analysis on water resources\ human system is performed and the aquatic ecosystem as a whole is adocated as the main carrying body. Conequently, studies on water resources carrying capacity should be carried out on the integrity of aquatic ecosystem and all of the utilities and values carried by the aquatic ecosystem. Furthermore, based on sustainable development, 4 connotations in ecological, technological, socioeconomic, and temporal and spatial aspects are discussed. Accordingly, water resources carrying capacity is defined as the maximum sustainable average comprehensive utility level that an aquatic ecosystem can support.

【Key Words】 : **carrying capacity water resources eco-economic analysis ecosystem service sustainable development**

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