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The values of CO₂ fixation and O₂ release by vegetation ecosystem in Qinling-Daba Mountains of Shaanxi Province

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According to different vegetation types and their cover degrees in Qinling-Daba Mountains in Shaanxi, using an improved model of net primary productivity of natural vegetation, regional energy balance, water balance and model of evapo-transpiration, goods produced by different types of vegetation have been calculated. Based on net primary productivity of natural vegetation, using equation of photosynthesis, reforestation cost and industrial method of making O₂, the value of CO₂ fixation and O₂ release by vegetation ecosystem in Qinling-Daba Mountains in Shaanxi can be estimated. The results are as follows: ① the total CO₂ fixation and O₂ release is 13.5×10⁷ t/a, 9.93×10⁷ t/a, respectively. ② Using reforestation cost, the value of CO₂ fixation is 352.24 billion RMB yuan/a. ③ Using reforestation cost and industrial method of making O₂, the value of O₂ release is 374.19 billion RMB yuan/a. ④ The temperate deciduous broad-leaved forest has the highest contribution rate, the second is subtropical deciduous shrub. This study can provide basic data and methods for setting up regional "green eco-account".

【Key Words】 : **vegetation CO₂ fixation O₂ release economic value Qinling-Daba Mountains in Shaanxi Province**
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