

研究报告

珠江三角洲地区森林生物量及其动态

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摘要 利用生物量转换因子连续函数法, 通过69组不同龄级的森林样地实测数据, 拟合了珠江三角洲主要森林类型的生物量和蓄积量之间的回归方程, 并结合3个时段森林清查资料, 估算了区域森林生物量及其动态. 结果表明: 珠江三角洲的中幼林面积占森林总面积的80%以上, 其林下植被生物量约占森林总生物量的33%, 充分考虑林下植被生物量能提高区域森林生物量估算的精度. 在1989—1993年、1994—1998年、1999—2003年3个研究时段, 珠江三角洲森林生物量共增加了 14.67×10^6 t. 其中, 马尾松林、常绿阔叶林和针阔混交林的生物量约占区域总生物量的80%, 是区域森林生物量的主体; 而中、幼林的生物量所占比例达90%, 但呈逐年下降趋势. 珠江三角洲快速城市化和经济发展对区域森林生物量的积累并没有产生明显影响, 区域森林面积基本保持不变, 而区域森林生物量呈逐年增长趋势, 年增长率为1.2%. 随着珠江三角洲区域中、幼林不断发育成熟, 区域森林的生物量将不断增加, 其环境效应也将不断增强.

关键词 [区域森林生物量](#) [转换因子连续函数法](#) [林下植被生物量](#) [珠江三角洲](#)

分类号

Forest biomass and its dynamics in Pearl River Delta

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Abstract

Based on the observation data obtained from 69 sampling sites of different age class forests, and by using biomass expansion factor function, the regression equations of stand biomass and volume of the main forest types in Pearl River Delta were built, and the regional forest biomass and its dynamics were estimated on the basis of forest inventory data. The results showed that most of the forests in Pearl River Delta were of young-medium age, which occupied 80% or more of the total forest area, and their undergrowth biomass accounted for about 33% of the total forest biomass, indicating that the regional forest biomass could be estimated more exactly if undergrowth biomass was fully concerned. In the periods of 1989 [KG-*2] - [KG-*7] 1993, 1994 [KG-*2] - [KG-*7] 1998 and 1999 [KG-*2] - [KG-*7] 2003, the forest biomass in Pearl River Delta increased by 14.67×10^6 t in total, among which, Pinus massoniana forest, evergreen broadleaf forest, and conifer and deciduous mixed forest contributed about 80%. Young-medium age forest biomass accounted for 90% of the total, but the proportion was decreased gradually. The forest area in the Delta almost kept unvaried, and the forest biomass was increasing year after year, with an annual increment of about 1.2%. Better fostering and managing the existing forests is very important to have more forest biomass and better environmental effect that regional forests offered.

Key words

[regional forest biomass](#) [biomass expansion factor function](#) [undergrowth biomass](#) [Pearl River Delta](#)

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