

Relation between Run-off Ratio and Antecedent
Discharge as an Index of the Humidity of Basins in
the Korea Rivers

韓國河川의 流出率과 流出指標로서의 洪水直前 流量

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Summary

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This paper is a study on relation between run-off ratio and antecedent discharge, run-off ratio and antecedent discharge per unit area, antecedent discharge and antecedent precipitation, by the data from the five major river basins in Korea and the small river basins in Pusan.

The Nak-Kong rivers(An-Dong upper stream)

$$f = 0.4780 + 0.0124 \ln \delta_A \quad r = 0.99$$

$$\delta_A = 0.3368 e^{0.1101R} \quad r = 0.99$$

$$f = 0.5793 + 0.0146 \ln(\delta_A/A) \quad r = 0.99$$

The Nak-Dong rivers except Ga-song station

$$f = 0.2017 - 0.0841 \ln \delta_A \quad r = 0.75$$

$$f = 0.7012 + 0.0750 \ln(\delta_A/A) \quad r = 0.71$$

The Han rivers

$$f = -0.0035 + 0.1267 \ln \delta_A \quad r = 0.75$$

$$f = 1.1311 + 0.1263 \ln(\delta_A/A) \quad r = 0.71$$

$$L = 302.9064 - 43.8490 \ln \delta_A \quad r = 0.84$$

The Geun rivers(Mu-sin Cheon)

$$f = 0.295 + 0.1823 \ln \delta_A \quad r = 0.93$$

$$f = 0.8417 + 0.1823 \ln(\delta_A/A) \quad r = 0.93$$

$$L = 40.0456 + 62.0346 \ln \delta_A \quad r = 0.94$$

The Yeong-san rivers

$$f = 0.3766 + 0.0598 \ln \delta_A \quad r = 0.79$$

$$f = 0.8084 + 0.0599 \ln(\delta_A/A) \quad r = 0.79$$

The Seom-jin rivers

$$f = -1.3875 + 0.6505 \ln \delta_A \quad r = 0.92$$

$$f = 2.1633 + 0.3465 \ln(\delta_A/A) \quad r = 0.76$$

Small river basin in Pusan

$$f = 0.3635 + 0.1120 \ln \delta_A \quad r = 0.87$$

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