



## **Spatial and temporal patterns of wildfires according to standard hydrological database**

S. Lobanov (1), V. Kulik (2), **D. Nikels**(3)

(1) Far Eastern Hydrometeorological Research Institute (FERHRI), 24, Fontannaya St., Vladivostok, Russia, 690600, e-mail:hydrologist@yandex.ru, (2) CYPUM PTY LTD, P.O. Box 863, Canberra City, ACT, Australia 2601 e-mail:kulik@scientist.com, (3) Saint-Petersburg State University, 7-9 Universitetskaya nab., St.Petersburg, Russia,199034 e-mail:hydrologist@narod.ru

River flow could be an indicator of the watershed wetness and, hence, the wetness of the fuel load. So, a bushfire is more likely to occur when the river flow is lower than some critical value. This is a good idea but it does not work properly. There is low flow before an intense bushfire, but there are also low flows during other periods. The low flow before a catastrophic bushfire is lower, but it does not seem to be very different from those at other periods. For some rivers there is no flow during very dry periods. A simple graphical analysis of recession curves is necessary. Runoff data allows the prediction of spatial and temporal patterns of wildfires earlier, with less overcaution, highlights the most dangerous watersheds and makes forecast more foolproof. In some cases hydroforecast improves the likelihood of prevention of a major disaster. It does not mean, however, that the developed earlier indices and other techniques of bushfire forecasting are to be abolished and forgotten. The hydrological data only supplements them.