

## Dartmouth Flood Observatory Flood Analysis Report 2003-077

Event:	DFO-2003-085, Southern Russia	Previous Events:	DFO-2002-144; 2002-193; 2000-039; 1999-066
Duration:	March 25 – April 11, 2003, 18 days	News Notes:	A record warm spring in the Primorye Territory.
Cause	11, Snowmelt.	Locations:	From news: Primorye Region: Spassk-Dalny, Chernigovsky. Rivers: Kuleshovka, Spassovka, Ilistaya, Ussuri, Bolshoi Ussuri, Bekina and Malinovka.
Region Affected:	30,390 sq. km	Watershed:	41,610 sq. km; Upper Ussuri River and tributaries; drainage into Lake Ozero Chanka.
Severity:	1	GIS vectors:	20030840200Primorye077M2.24 20030910205Primorye077M2.23 20030980210Primorye077M2.22 20031000200Primorye077M2.18
Magnitude:	5.0		

*Figure 1. Location of contributing watershed (yellow line) and area affected by flooding (red line)*



Causation categories are: 1, thunderstorm; 2, precipitation band; 3, squall line; 4, stationary front; 5, mesoscale convective complex; 6, convective cloud cluster; 7, tropical cyclone; 8, extra-tropical cyclone; 9, stationary synoptic front; 10, ITCZ wave disturbance; 11, snowmelt; 12, rain and snowmelt; 13, ice jam or ice break-up; 14, dam break; 15, avalanche.

Severity classes: 1, large, 20%-5% exceedance probability – and/or significant damage to structures or agriculture; 2, very large, 5%-1%; 3, extreme, <1%.

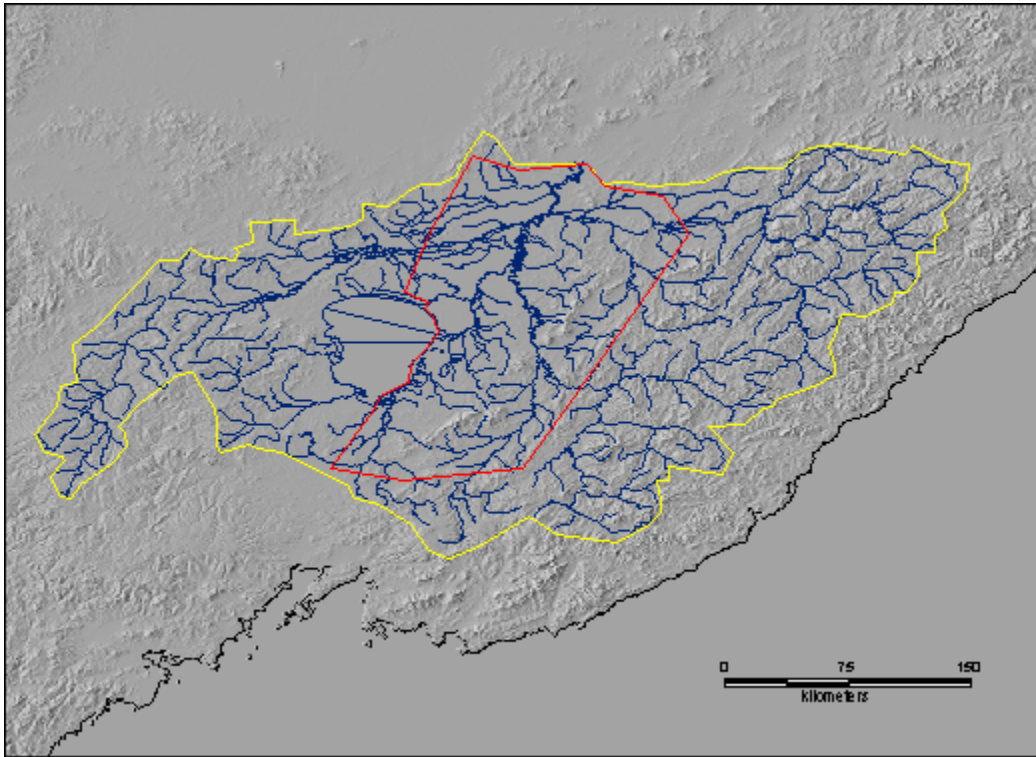
Flood Magnitude: {Natural Log duration (days)} x {severity class} x {sq rt region affected (sq. km)} x .01.

Duration, region affected, and intensity are estimates from news and government reports.

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*Figure 2. Flood-generating watershed for this flood event.*



**DFO event # 2003-077**



Area affected 

MODIS flood inundation limit

- April 24, 2003 
- April 10, 2003 
- April 8, 2003 
- April 1, 2003 
- March 25, 2003 

MODIS data cloud free area  
April 24, 2003 

Flooded Lands in: 2003   
2002 

MODIS reference water   
Main city 

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Universal Transverse Mercator  
UTM Zone 53 North; WGS 84  
Graticule: 2 degrees

