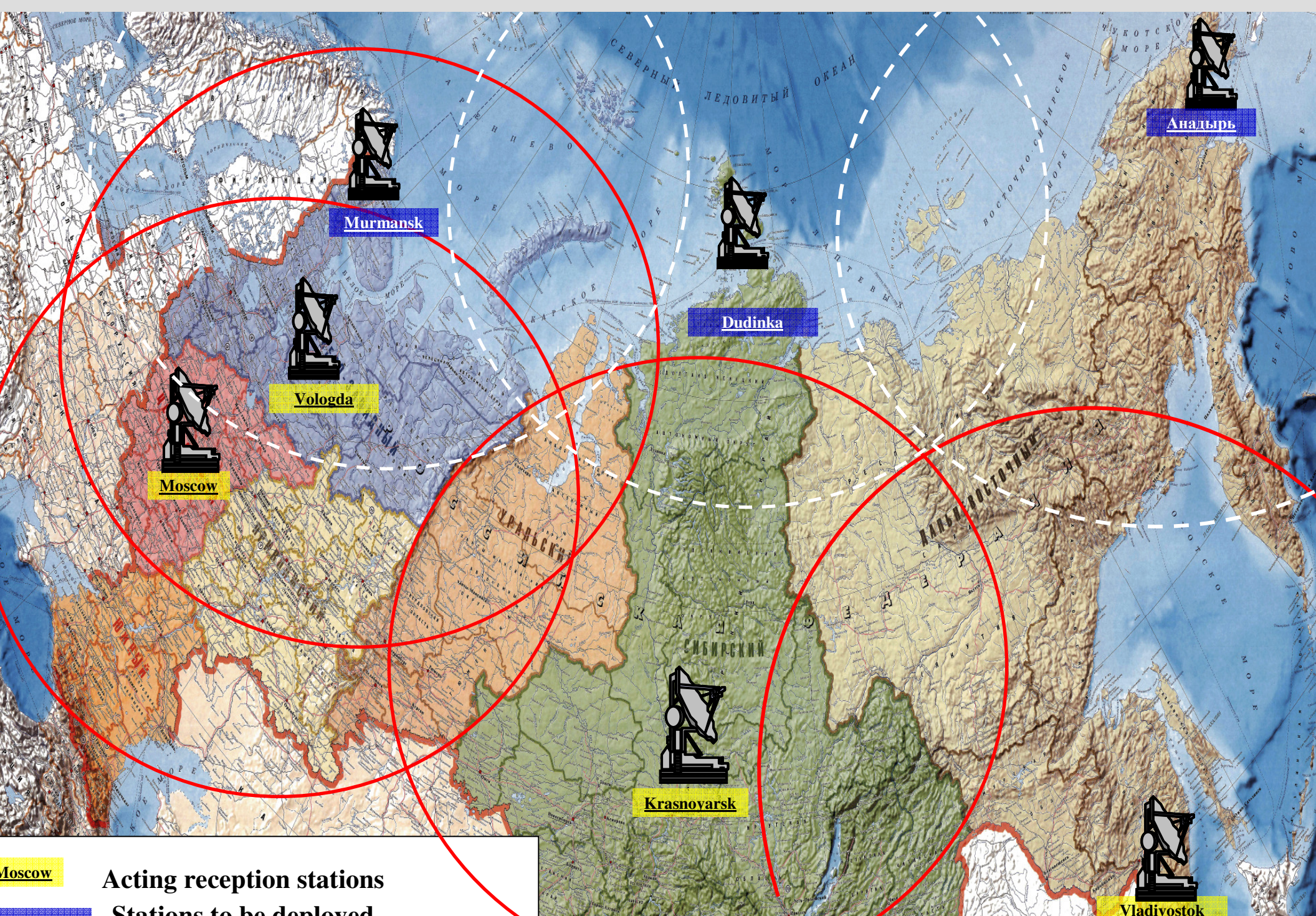




EXPERIENCE OF USING EARTH
REMOTE SENSING DATA FOR
MONITORING AND EMERGENCY
SITUATIONS FORECASTING IN
RUSSIAN FEDERATION

EMEREGENCIES SPACE MONITORING SYSTEM AND ITS DEVELOPMENT UNTIL 2015



Moscow

Acting reception stations

Stations to be deployed

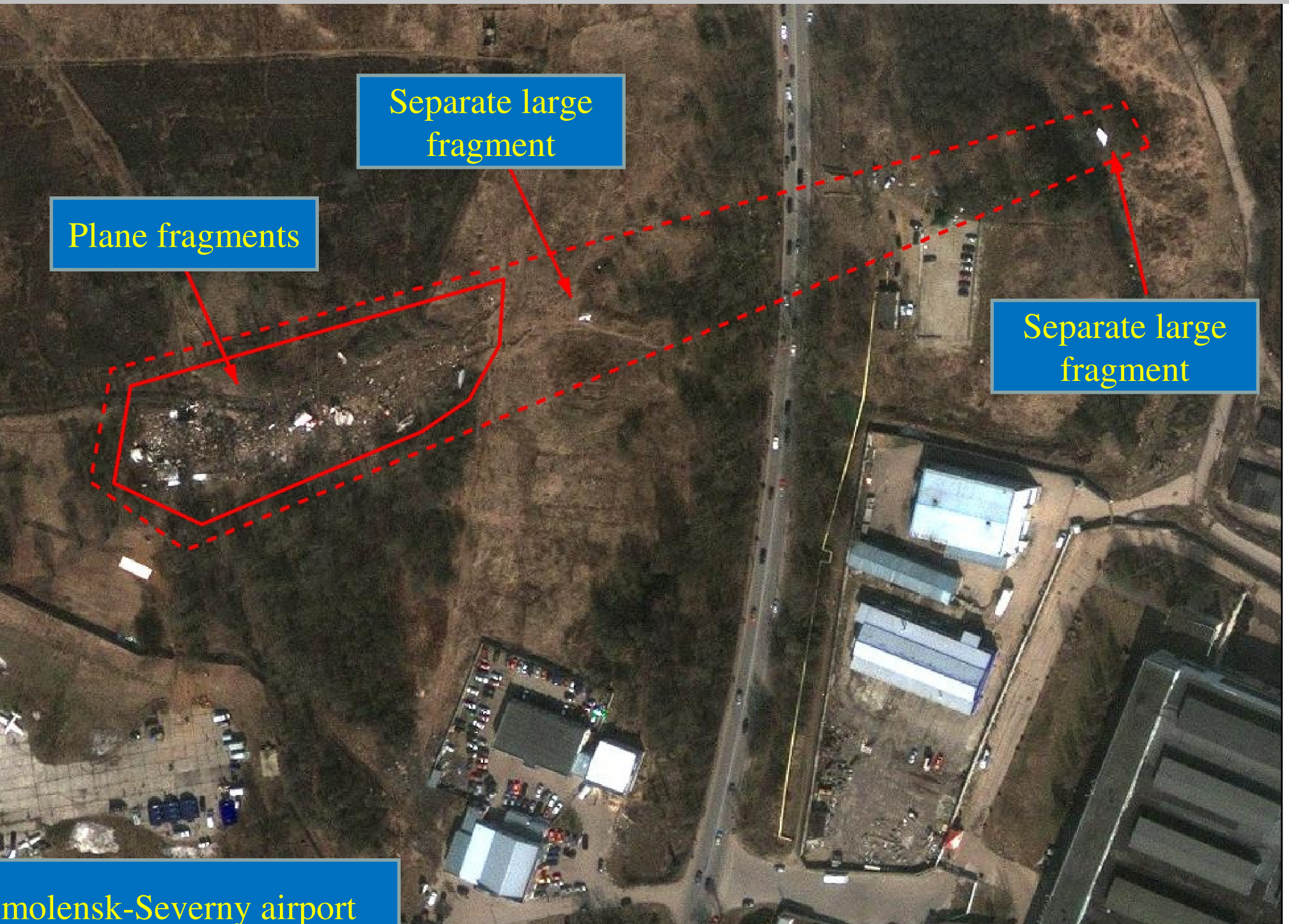
Vladivostok

TASKS TO BE RESOLVED BASED ON INFORMATION, RECEIVED BY EMERGENCY SPACE MONITORING SYSTEM

Tasks to be resolved based on real-time data from space:

1. Situation assessment within emergency areas, assessment of condition of potentially hazardous facilities and sites, located within the areas increased risk of emergency
2. Monitoring of emergency situations related to flash and season floods.
3. Wildfires monitoring.
4. Assessment of oil spills size and their propagation dynamics.
5. Search for sites in state of emergency in hard-to-reach and maritime areas.

SATELLITE IMAGE OF THE PLANE CRASH AREA NEAR SMOLENSK-SEVERNY AIRPORT



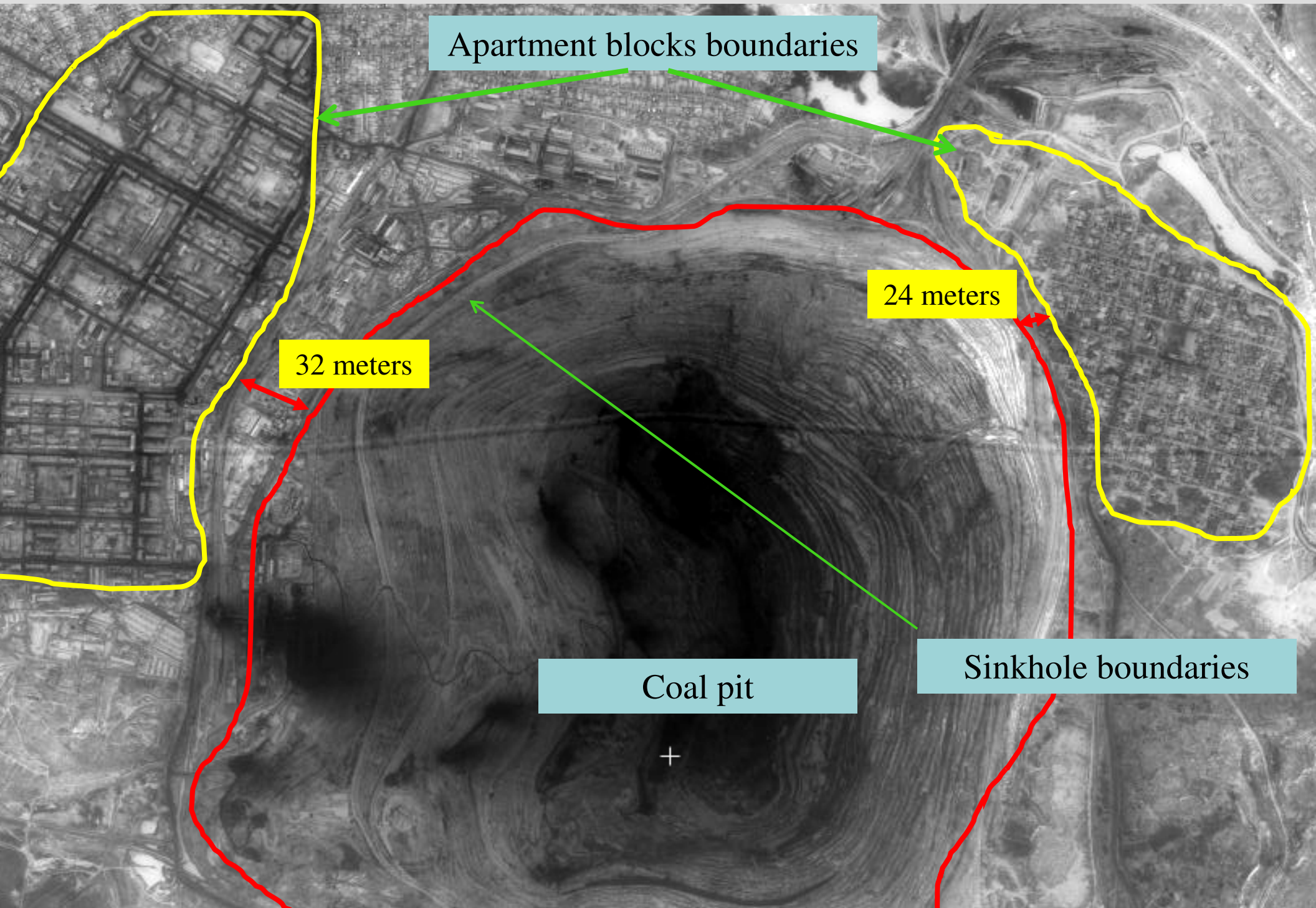
Plane fragments

Separate large
fragment

Separate large
fragment

Smolensk-Severnoy airport

SATELLITE IMAGE OF THE SINKHOLE WITHIN DANGEROUS PROXIMITY OF THE KORKINO RESIDENTIAL AREA, CHELYABINSK REGION



Apartment blocks boundaries

24 meters

32 meters

Coal pit

Sinkhole boundaries

HYDROLOGICAL SITUATION AS PER SPACE MONITORING DATA (Yenisei River area near Kyzyl town)

На р.Енисей в черте г.Кызыл наблюдаются процесс разрушения ледостава (полыньи, ледоход). Выше западного автомобильного моста наблюдается ледовый затор.

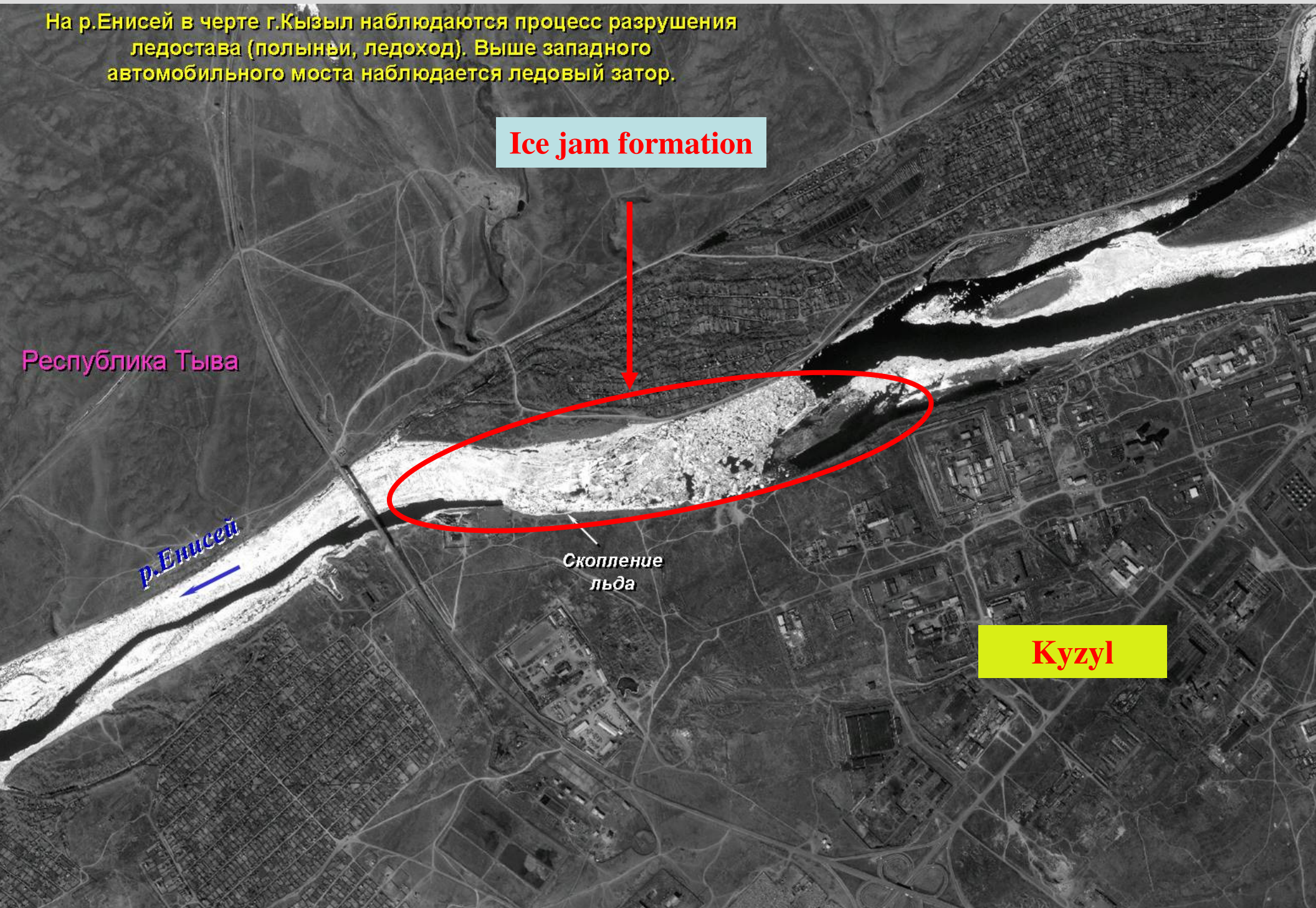
Ice jam formation

Республика Тыва

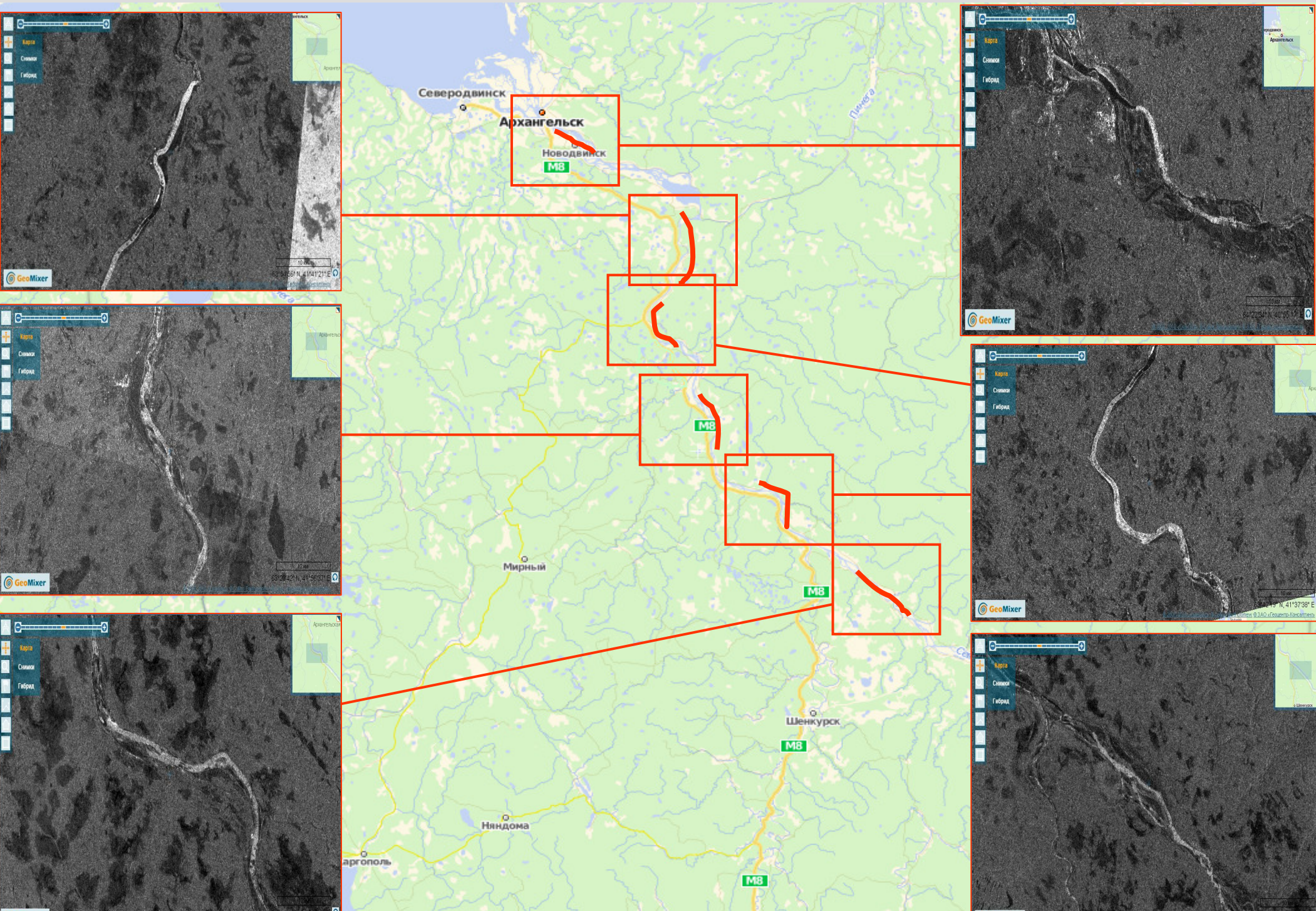
р.Енисей

Скопление льда

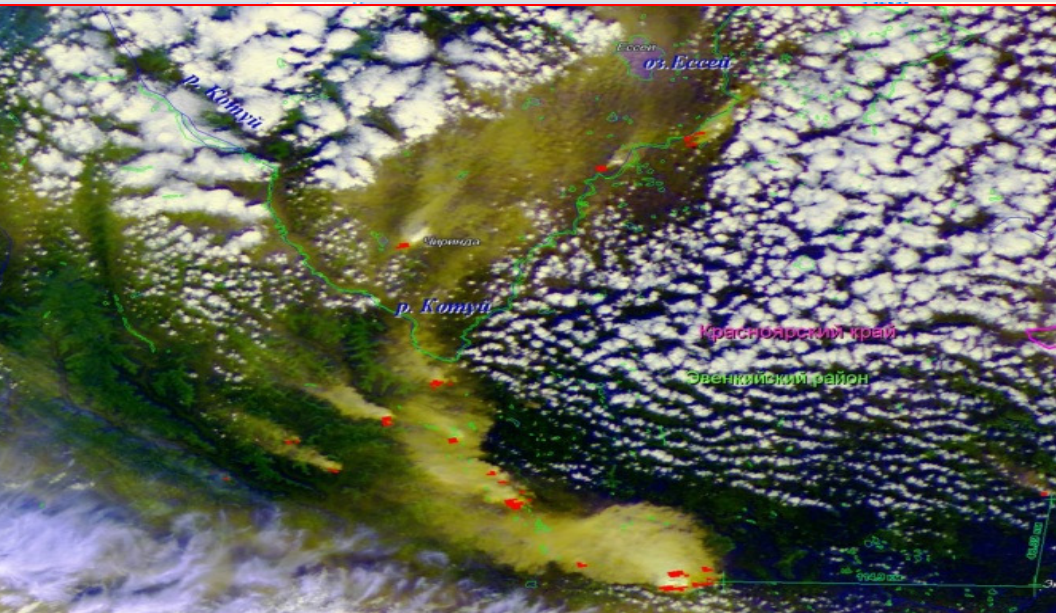
Kyzyl



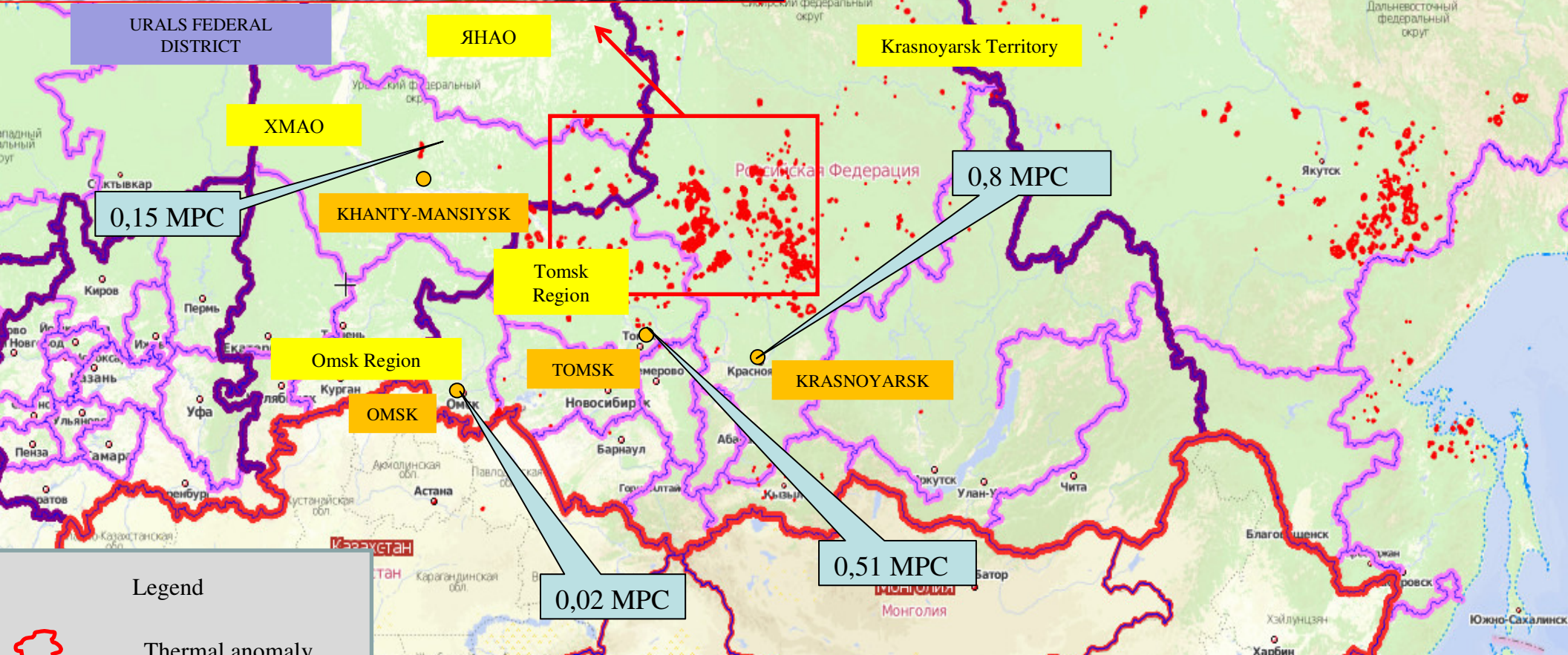
ICE JAMS ON THE SEVERNAYA DVINA RIVER (per space monitoring data as of March 1, 2012)



OVERALL INFORMATION ON WILDFIRES IN SIBERIAN REGION (as of 16:00 02.08.2012)



THERMAL SPOTS – 1499
DANGEROUS – 45



SPACE IMAGE OF THE EMERGENCY OIL SPILL IN IRKUTSK REGION
ON THE ANGARA RIVER

IRKUTSK REGION

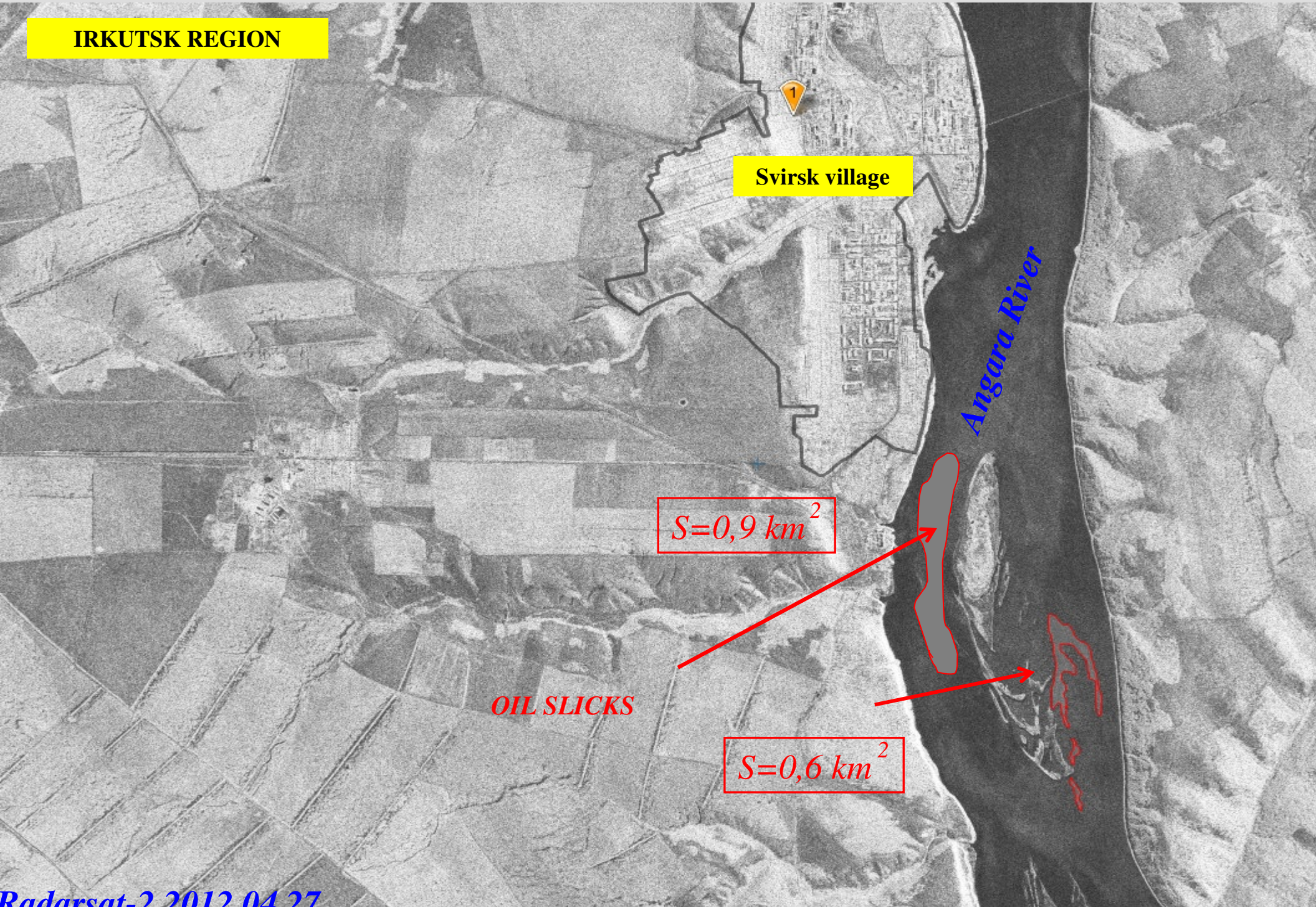
Svirsk village

Angara River

$S=0,9 \text{ km}^2$

OIL SLICKS

$S=0,6 \text{ km}^2$



SPACE IMAGE OF THE LOST HELICOPTER SEARCH AREA IN TVER REGION (as of 19.04 Moscow time on November 21, 2012)

ZOOMED-IN FRAGMENT OF THE HELICOPTER
CRASH SPOT



56°52'07" N, 36°17'16" E



56°53'24" N, 36°20'00" E

56°53'23" N, 36°20'26" E

56°52'56" N, 36°19'22" E

56°52'48" N, 36°19'23" E

56°52'46" N, 36°19'11" E

Presumed helicopter
crash locations

56°52'07" N, 36°17'16" E

SPACE IMAGE OF THE SHIP-IN-DISTRESS SEARCH AREA AT WHITE SEA (as of 14.13 Moscow time 16.11.2012)

