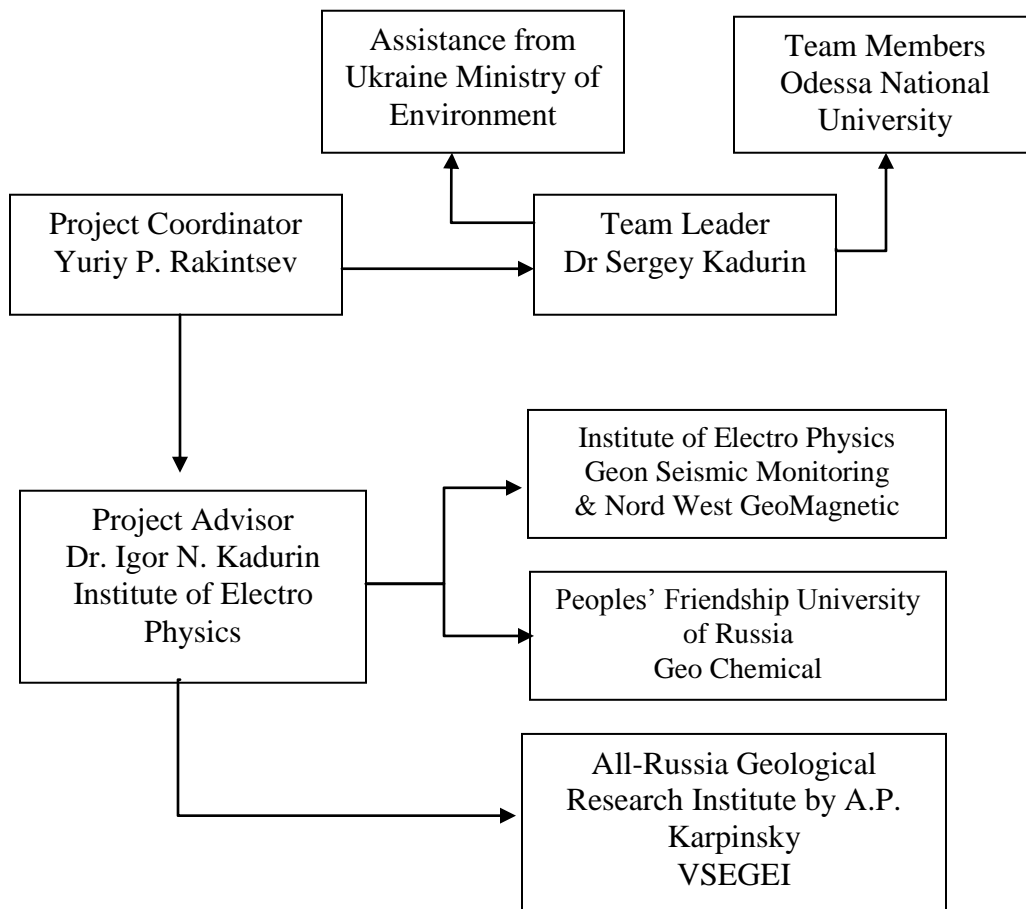


Lumpur Sidoarjo “LUSI” Russian Project Team

The Russian Team used various technological services such as:

- Interpretation of 2D seismic data to identify mud structures.
- Development of 3D seismic layers to trace the mud structure formation
- 3D image development of underground Mud Volcano.



The Research Team

Dr. Sergey Kadurin heads the Research Team and works with the Ukrainian Ministry of Environment and is also a senior lecturer at Odessa National University - Department of Marine and Physical Geology.

The Project Team is advised by Dr Igor N. Kadurin who is a senior expert from the Russian Government Committee on Geophysical and Geo-Ecological researches [GEON]. Dr. Igor N. Kadurin coordinates technology and equipment requirements for seismic monitoring techniques and geological events monitoring. Dr Igor N. Kadurin also assists in Geo Chemical and Geo Magnetic implementations for sub surface studies. As an advisor to the All-Russia Geological Research Institute by A.P. Karpinsky [VSEGEI] Dr Igor N. Kadurin coordinated and lead the verification of the Lumpur Sidoarjo "LUSI" Research Report.

The Research Team also included Dr. Akhmanov from Moscow State University, Faculty of Geology. Dr Akhmanov has researched and co-authored various articles on Lumpur Sidoarjo "LUSI" and is considered one of the experts on the LUSI Mud Volcano.

Dr Sergey V. Kadurin

Dr Kadurin is an expert in Geology with vast experience and critical complimentary expertise in related fields that include the following:

- Geology and marine geology
- Mineralogy and bio-mineralogy
- Marine Quaternary geology and palaeoceanography
- Paleoclimatology, global sea-level changes
- Quaternary history, paleoceanography, glacials and inreglacial, sapropels and anoxic events
- Environmental monitoring
- GIS in geology

Dr. Sergey V. Kadurin served at the Odessa National University- Department of Marine and Physical Geology as Assistant Professor between 1999 and 2001 and now holds a Senior Lecturer's position.

The courses he conducts include:

- Mineralogy
- Petrography
- Mathematic methods in geology
- Computer technologies in geology
- GIS in geology
- Introduction to geophysics
- Geology of mineral resources

SELECTED ACTIVITIES (last 5 years)

- Co-coordinator of working group 4 (Sedimentology and mineralogy) of IGCP 521 project, 2005-2009
- Member of HERMES (Hotspot Ecosystems Research on the Margins of European Seas) project, 2005-2009

In relation to Mud Volcanoes

- 2005-2009 HERMES (Hotspot Ecosystems Research on the Margins of European Seas) project
- 2005-2009 IGCP 521 Black Sea-Mediterranean Corridor: Sea level change and human adaptation - UNESCO-IUGS, Co-coordinator of working group.
- 1996-2000 EU COPERNICUS: Pollution by oil and herbicides in the Black Sea: Novel detection technologies and biological impact.

Field Work:

- 1995 - Expedition on the Research Vessel "Argon" in the Black Sea
- 1998 - Expedition on the Research Vessel "Argon" in the Black Sea
- 1999 - Expedition on the Research Vessel "Sprut" in the Black Sea
- 2007 - Expedition to the Kerch peninsula
- 2008 - Expedition on the Research Vessel "Vladimir Parshin" in the Black Sea

Publications:

1. *Shnyukov E., Inozemtsev Yu., Parishev A., Konikov E., Yanko-Hombach V., Kadurin S., Pedan G., Smytyna O.* 2008 Cold seeps and mud volcanoes of the Black Sea region: tectonics, lithology, geophysics and biogeochemistry. Mediterranean corridor during the last 30 ky: sea level change and human adaptation. 162-164
2. *Larchenkov E.P., Kadurin S.V.* 2005. Influence of Holocene active tectonics on forming of sea bottom landscapes in the area between Danube delta and Odessa bay. *Ekologia Dovkilla ta bezpeka gittedialnosti (Environment ecology and safety of life activity)*, 4, 13-20 (in Russian)
3. *Larchenkov E.P., Cherednichenko A.P., Kopilov S.A., Suchkov I.A., Kadurin S.V.* Ecological and statistical model of distribution macro- and microelements in bottom deposits on the North-West shelf of the Black sea. 2003. *Ekologicheskie problemi Chernogo moria, Sbornik nauchich stattei (Journal of Scientific Papers)*, Odessa, OCNTEI (Odesskii Center Nauchno-Tekhnicheskoi Informatsii), pp. 112-117 (in Ukrainian)
4. *Larchenkov E.P., Cherednichenko A.P., Kopilov S.A., Suchkov I.A., Kadurin S.V., Astafurova I.O., Goncharova I.A.* Paleoevolution of the North-West shelf of the Black sea as a reason of modern geochemical situation in bottom deposits. 2003. *Ekologicheskie problemi Chernogo moria, Sbornik nauchich stattei (Journal of Scientific Papers)*, Odessa, OCNTEI (Odesskii Center Nauchno-Tekhnicheskoi Informatsii), pp. 118-122 (in Ukrainian)
5. *Suchkov, I.A., Pun'ko, Kravchuk, A.O., Kadurin, S.V., Safranov, T.A.,* 1999. Ecological-geochemical aspects of soil pollution by heavy metals. *Meteorologia, Klimatologia, Hidrologia (Meteorology, Climatology, Hydrology)*, 37, 54-62 (in Russian).
6. *Chernishenko, E.O., Kadurin, S.V., Kravchuk, A.O.* 1995. Biomoneralogical investigations of marine sediments by method of thermography during field works. *Zbornik materialov konferencii "Biomineralogia i medichna ekologiya" Proceedings of the*

conference “Biomineralogy and Medical Ecology”, Volinski University, Luts’k, pp. 130–131.

7. *Dolukhanov P., Kadurin S., Larchenkov E.* 2009. Dynamics of the coastal North Black Sea area in Late Pleistocene and Holocene and early human dispersal. *Quaternary International* 197. 27 – 34.
8. *Kadurin S., Eriomina L., Larchenkov E.* 2008. Distribution of Holocene sediment thickness on the northwestern Black Sea shelf. Mediterranean corridor during the last 30 ky: sea level change and human adaptation. 75-78
9. *Larchenkov E.P., Kadurin S.V.* 2005 Modelling of coastline position along north-western part of the Black Sea for the past 25 ky. Black sea – Mediterranean corridor during the last 30 ky: sea level change and human adaptation. 1st plenary meeting. 78-79
10. *Berkovich O.O., Kadurin S.V., Kakaranza S.D., Nikulin V.V., Chepigko A.V.* 2004. Paragenetik association of elements in bottom deposits of Novoeuxian age in the transferable zone from Northwest shelf to deep-water cavity of the Black Sea. *Geologicheskii Zhurnal (Geological Journal)*, 4, 28-35 (in Russian).
11. *Tuleneva N.V., Kadurin S.V., Chepigko A.V.* Some particularities of distribution of bottom deposits on the North-West shelf of the Black sea. 2003. 15 international school of marine geology. Moscow, Russia. 342-343 (in Russian).

Dr. Igor A. Losev

Dr Kadurin is assisted by Dr. Igor A. Losev with expertise in the following:

- Environmental monitoring
- Geology of mud volcano’s
- Geology of mineral resources
- Geology and marine geology
- Mineralogy
- Marine Quaternary geology and palaeoceanography
- Paleoclimatology, global sea-level changes
- Marine Geophysics and Seismic interpretation

Dr Igor A Losev currently serves as the specialist of mineralogy analysis at Odessa National University.

Dr. Lubov Ju. Eriomina

Dr. Lubov Ju. Eriomina is the another member of the LUSI Research Team.

She currently serves under the Ministry Of Environmental Protection Of Ukraine.

Her expertise includes the following:

- Geology and marine geology
- Recent geological process and neotectonic
- The role of tectonic in the formation of minerals
- Regularity in the distribution of minerals and mineral potential estimate of the Black sea
- GIS in geology
- Palaeoceanography and marine Quaternary geology
- Global sea-level changes

She also serves on the geologist on geology-geophysical expedition for Prichornomorske State Regional Geological Enterprise since 2007

Dr. Igor Nikolaevich Kadurin

Dr Igor Nikolaevich Kadurin - Senior GeoPhysics Expert

September 1971 - October 1972

Geophysicist - Ilijsky geophysical survey «Kazgeophysztrest»

October 1972 - April 1979

Head Geophysicist - Special experimental geophysical survey (SOMGE)

«Spetzgeophysica» MinGeo USSR

April 1979 - June 1991

Head of Department - Special regional geophysical survey (SRGE before SOMGE) in

«Neftegeophysica» MinGeo USSR

June 1991 - February 1995

Director - South branch of Government enterprise «Centre of regional geophysical and geoecological researches GEON by V.V. Fedynskiy» Government Committee of Geology and Mining - Russia.

February 1995 - February 2004.

Assistant to the General President - Government enterprise «Centre of regional geophysical and geocological researches GEON by V.V. Fedynskiy» in Government Committee of geology and mining in Russia.

February 2004 - August 2005

General President - Government enterprise «Centre of regional geophysical and geocological researches GEON by V.V. Fedynskiy in Government Committee of geology and mining in Russia.

August 2005 - Current

Head of Technology Department - Department of seismology and seismic monitoring in «VNIIGeophysica»

2002 - Current

Senior Advisor - Geophysical Section VSEGEI - «All-Russia research geological institute by A.P. Karpinsky»

Publications:

1. Velocity structure of Groznensky earthquake zone. Kadurin I.N. Research and protection of bowels. №10. 1994. Moscow. Nedra
2. Technique of complex deep geodynamic researches with use of local seismic networks for an estimation of seismodanger of territories. The collection of materials of scientifically-practical conference «Lessons and conclusions of the Sakhalin earthquake» Moscow. 1996. P 161-167.
3. The control of a geodynamic condition of earth crust around the Caucasian mineral waters according to seismic monitoring. Kadurin I.N., etc. Theses of reports of the All-Russia conference: «Monitoring of the geological environment – active endogene and exogene processes». – Kazan 1997
4. Monitoring of seismic-geodynamic conditions of the Caucasian mineral waters. Kadurin I.N., etc. Razvedka and protection of bowels. № 2. 1998 Moscow
5. The automated local seismological network as technology of the intermediate term forecast of seismic danger. Kadurin I.N., etc. Materials of conference «Experience of complex studying of geophysical fields for seismoforecasts». Moscow. 1998
6. Features of a structure of earth crust of seismoactive areas according to geotraverses GSZ-MOVZ. Materials of the All-Russia inter-regional conference. Irkutsk. 1997
7. Seismological control of a tension in earth crust on supervision with digital registrars "Alpha-GEON". Materials of the All-Russia inter-regional conference. Irkutsk. 1997

8. Seismological monitoring oil and gas provinces with the raised technological loading. - V.S.Seleznev, Geophysical service of the Siberian Branch of the Russian Academy of Science (Novosibirsk), I.N.Kadurin, Center "GEON", Moscow. The report of the Russian Academy of Sciences of the Russian Federation. (in Russian)
9. Seismic monitoring of Ministry of Atomic Energy objects (atomic power stations, storehouses of nuclear fuel, etc.). V.V. Seleznev, A.F.Emanov Geophysical service of the Siberian Branch of the Russian Academy of Science (Novosibirsk), I.N.Kadurin, Center "GEON", Moscow. The report of the Russian Academy of Sciences of the Russian Federation.
10. Operational experience of ecological security ranges with application of information-structural systems of data processing for the purpose of geological environment tension changes monitoring. I.N.Kadurin. The report of the Russian Academy of Sciences of the Russian Federation.
11. The geological report on object «Geophysical researches by seismoprospecting and electroprospecting methods of a deep structure Altai-Sayansk fold area on profiles in the general extent of 3300 km. The organisation and carrying out of regime geophysical supervision on Tyvinsky range». The executor – I.N.Kadurin. The state contract №3Ф-05 from 5/20/2005. SIBNEDRA Novosibirsk. 2008.