

CURRICULUM VITAE

Family name GOLOSOV
First name Valentin
Year of birth 1959
Citizenship Russian Federation
Degree Dr Sn. (Doctor of Sciences)
Position Principal Research Scientist and Professor
Institutes Laboratory of Soil Erosion & Fluvial Processes
Faculty of Geography, Lomonosov Moscow State University and
Institute of Ecology and Environment Kazan (Volga Region) Federal
University.
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Education 2003 Dr Sn. Geomorphology and evolution geography, Faculty of Geography,
Lomonosov Moscow State, University, Moscow, Russian Federation.
1986 Ph.D. Geomorphology and evolution geography, Faculty of Geography,
Lomonosov Moscow State, University, Moscow, USSR.
1981 M.Sc. (Cum. Laude) Geomorphology, Faculty of Geography,
Lomonosov Moscow State, University, Moscow, USSR

Specialization Fluvial geomorphology, soil erosion and slope processes, radioecology and
environment sciences
Languages Russian, English fluently

Employment records
2018 –present Main research scientist, Laboratory of Geomorphology, Institute of Geography,
Moscow, Russian Federation
2001 – present Principal research scientist, theme leader, Laboratory for Soil Erosion and Fluvial
Processes, Faculty of Geography, Lomonosov Moscow State, University, Moscow,
Russian Federation
2010-2017 Professor, Institute of Geography and Ecology Kazan (Volga Region) Federal
University
1991-2001 Senior research scientist, Laboratory for Soil Erosion and Fluvial Processes,
Faculty of Geography, Lomonosov Moscow State, University, Moscow, Russian
Federation
1987 - 1991 Research scientist, Laboratory for Soil Erosion and Fluvial Processes,
Faculty of Geography, Lomonosov Moscow State, University, Moscow, Russian
Federation
1984-1987 Junior research scientist, Laboratory for Soil Erosion and Fluvial Processes,
Faculty of Geography, Lomonosov Moscow State, University, Moscow, Russian
Federation
1981-1984 Engineer, Laboratory for Soil Erosion and Fluvial Processes,
Faculty of Geography, Lomonosov Moscow State, University, Moscow, Russian
Federation

Selected assignments and projects

1981-1999 Experimental monitoring observations of soil and gully erosion
during snow-melt period at Satino Station (Kaluga

- region) (leader during period 1986-1990).
- 1981-1982 Estimation of soil erosion intensity and development soil conservation measures for Rutul River basin.
- 1982-1983 Evaluation and mapping of soil quality of Moscow region.
- 1981-1985 Elaboration principles and methods of mapping and composition of maps of erosion hazard lands on some large region and areas with intensive cultivation.
- 1982-1986 Experimental study of denudation processes in Tien-Shan Mountains (leader)
- 1986-1990 Elaboration of methods of erosion rate calculation for different landscape zones of USSR.
- 1986-1990 Development of methods of erosion intensity for choice of soil conservation measures.
- 1986-1990 Research of recent fluvial processes in small river basins.
- 1986-1990 Composition of erosion dangerous lands for regions, some districts and farms of Russia.
- 1989-1990 Development guide of estimation of soil erosion intensity for small river basins for choice of water and soil conservation measures (leader).
- 1992-1994 Development and testing of Process-Based erosion models for snowmelt conditions in Russia.
- 1992-1993 Complex investigations of Senez Lake and its basins with aim of determination of propitious conditions for its existence and development recommendations for their maintenance.
- 1993 Investigation of soil erosion, gullies and small river aggradation in Pronya river basin and development of complex of water and soil conservation measures.
- 1991-1995 Elaboration of model erosion and sedimentation processes for river basin.
- 1991-1994 Elaboration regional methods of prognosis and calculation of erosion intensity for soil conservation and resources saving technologies.
- 1994 Antropogenic changes of sediment budget in small rivers of steppe zone Russia (leader)
- 1994-1995 Degradation of Agrolandscapes in the Steppe Zone of the Russian Plain and Development of Protective Measures for Restoration of the Soil (leader)
- 1995-1996 Erosion and accumulation cycles in small river basins. Historical approach and prognosis (leader).
- 1996-1997 Recent rates of sediment redistribution in the upper parts of river systems (leader)
- 1996-2001 Assessment of soil erosion through the use of ¹³⁷Cs and related techniques as a basis for soil conservation, sustainable agricultural production and environmental protection (IAEA CRP), (leader from Russia)
- 1997-1999 Redistribution of Chernobyl Radionuclides in River Basins: Environmental and Geomorphological Perspectives (leader)
- 2000-2003 Holocene history of balkas of Russian Plain
- 2001-2003 Transformation of relief of temperate climate belt during agricultural period (leader)
- 2001-2003 Investigation of migration of artificial radionuclides in Russian Plain landscape for ecological monitoring tasks. (leader)
- 2002-2007 Assess the effectiveness of soil conservation techniques for

- sustainable watershed management using fallout radionuclides (IAEA CRP), (leader from Russia)
- 2004-2006 Morphodynamic of interfluvial slopes of European Russia (leader)
- 2007-2009 Evaluation of sedimentation rate on the river floodplain during late Holocene (leader)
- 2009-2013. Integrated Isotopic Approaches for an Area-wide Precision Conservation to Control the Impacts of Agricultural Practices on Land Degradation and Soil Erosion (IAEA CRP), (leader from Russia)
- 2010-2012 Evaluation of sediment and sediment-associated pollutants redistribution in the catchments with contrasting environment
- 2014-2016 ¹³⁷Cs lateral migration in the river basins in the radioactive contamination zones of Japan and Russia: quantitative assessment and prognosis (leader)
- 2014-2016 Quantitative assessment of sediment and sediment-associated pollutants redistribution in typical mountain catchments of Three Gorges Area and Western Caucasus region (leader).
- 2015-2017 Spatial-temporal patterns of the contemporary processes dynamics of natural and human-induced erosion on agricultural lands of Russia (leader)
- 2016-2018 Geomorphological consequences of the extreme erosion events (Leader)
- 2018 - 2020 Assessment and prediction of sediment and radionuclide fluxes in river basin affected by severe nuclear accident (Leader)
- 2019 – present Quantitative assessment of the slope sediment flux and its changes in the Holocene for the Caucasus mountain rivers (Leader)

SOME OTHER INTERNATIONAL CAREER HIGHLIGHTS

- 2019-present member of WASER Council
- 2014-2016 project professor, Institute of Environment Radioactivity, University of Fukushima, Japan
- 2013-2015 past-president of International Commission of Continental Erosion (ICCE)
International Association of Hydrological Sciences (IAHS)
- 2012-2013 visiting professor, Institute of Mountain Hazard and Environment, Chengdu, China
- 2012 professor, Erasmus Program, University of Life Sciences, Warsaw, Poland
- 2012 IAEA expert, regional training workshop, China
- 2009-2013 President of International Commission of Continental Erosion (ICCE)
International Association of Hydrological Sciences (IAHS)
- 2007-present Member of Steering Committee “International Sediment Initiative” (UNESCO)
- 2011-present Member of Steering Committee World Association of Soil and Water Conservation (WASWAC).
- 2012 visiting scientist, Tsukuba University, Tsukuba, Japan
- 2006-2011 IAEA expert, IAEA Technical Cooperation Projects TAD5005/01/01
“Application of fallout radionuclides for evaluation of erosion/depositional rates for Agricultural Lands of the Republic of Tajikistan” and TAD/5/005
“Developing Soil Conservation Strategies for Improved Soil Health”,
- 2007-2009 Elected-president International Commission of Continental Erosion (ICCE)
International Association of Hydrological Sciences (IAHS)
- 2005-2007 Vice-president International Commission of Continental Erosion (ICCE)
International Association of Hydrological Sciences (IAHS)
- 2004 Head of Organizing Committee of ICCE IAHS Symposium, Moscow, Russia
- 1993 Head of Organizing Committee of international Russian-American workshop “Soil erosion modeling”, Moscow, Russia
- 1990-1991 visiting scientist, Hohai University, Nanjing, China
- 1996-present Reviewer for Journals: Geomorphology, Hydrological Processes, Catena, Environmental Radioactivity, Eurasian Soil Sciences, Water Problems etc

Selected Publications

V.N. Golosov, A.L. Collins, N.G. Dobrovolskaya, O.I. Bazhenova, Yu.V. Ryzhov, A.Yu. Sidorchuk, 2021. Soil loss on the arable lands of the forest-steppe and steppe zones of European Russia and Siberia during the period of intensive agriculture. *Geoderma*, Vol.381, 114678, <https://doi.org/10.1016/j.geoderma.2020.114678>.

Tsyplenkov, A., Golosov, V., Belyakova, P. (2021) How did the suspended sediment load change in the North Caucasus during the Anthropocene? *Hydrological Processes* 35, Article number e14403

Anatoly Tsyplenkov, Matthias Vanmaercke, Adrian L. Collins, Sergey Kharchenko, Valentin Golosov, 2021. Elucidating suspended sediment dynamics in a glacierized catchment after an exceptional erosion event: The Djankuat catchment, Caucasus Mountains, Russia. *CATENA*, Vol. 203, 2021, 105285, <https://doi.org/10.1016/j.catena.2021.105285>

Shvarev, S.V., Kharchenko, S.V., Golosov, V.N., Uspenskii, M.I. (2021) A Quantitative assessment of mudflow intensification factors on the Aibga ridge slope (Western Caucasus) over 2006–2019. *Geography and Natural Resources* 42(2), 122–130

Wojciech Zgłobicki, Jean Poesen, Sofie De Geeter, John Boardman, Leszek Gawrysiak, Valentin Golosov, Ion Ionita, Lilian Niacsu, Jan Rodzik, Miloš Stankoviansky, Christian Stolz, 2021. Sunken lanes - Development and functions in landscapes. *Earth-Science Reviews*, Vol. 221, 103757, <https://doi.org/10.1016/j.earscirev.2021.103757>.

Petr Tsymbarovich, German Kust, Mikhail Kumani, Valentin Golosov, Olga Andreeva. 2020. Soil erosion: An important indicator for the assessment of land degradation neutrality in Russia. *International Soil and Water Conservation Research*, Volume 8, Issue 4, Pages 418–429, <https://doi.org/10.1016/j.iswcr.2020.06.002>.

A. V. Gusarov, V. N. Golosov, M. M. Ivanov, A. G. Sharifullin 2019. Influence of relief characteristics and landscape connectivity on sediment redistribution in small agricultural catchments in the forest-steppe landscape zone of the Russian plain within European Russia. *Geomorphology*. Vol. 327. — P. 230–247.

Valentin Golosov, Oleg Yermolaev, Leonid Litvin, Nelli Chizhikova, Zoya Kiryukhina, Gusel Safina Influence of climate and land use changes on recent trends of soil erosion rates within the Russian Plain // *Land Degradation and Development*. — 2018. — Vol. 29, no. 8. — P. 2658–2667. <https://doi.org/10.1002/ldr.3061>

Valentin Golosov, Oleg Yermolaev, Ivan Rysin, Matthias Vanmaercke, Regina Medvedeva, Mariya Zaytseva Mapping and spatial-temporal assessment of gully density in the middle Volga region, Russia // *Earth Surface Processes and Landforms*. — 2018. — Vol. 43. — P. 2818–2834. <https://doi.org/10.1002/esp.4435>

Christian Brandt, Gerd Dercon, Georg Cadisch, Nguyen Lam T., Paulina Schuller, Claudio Bravo Linares, Alejandra Castillo Santana, Valentin Golosov, Moncef Benmansour, Nourredine Amenouz, Zhang Xinbao, Frank Rasche Towards global applicability? erosion source discrimination across catchments using compound-specific $\delta^{13}\text{C}$ isotopes // *Agriculture, Ecosystems and Environment*. — 2018. — Vol. 256. — P. 114–122 <https://doi.org/10.1016/j.agee.2018.01.010>

Gusarov A. V., Golosov V. N., Sharifullin A. G. Contribution of climate and land cover changes to reduction in soil erosion rates within small cultivated catchments in the eastern part of the Russian plain during the last 60 years // *Environmental Research*. — 2018. — Vol. 167. — P. 21–33. <https://doi.org/10.1016/j.envres.2018.06.046>

Valentin Golosov, Collins Adrian L., Qiang Tang, Xinbao Zhang, Ping Zhou, Xiubin He, Anbang Wen Sediment transfer at different spatial and temporal scales in the Sichuan hilly basin, China: Synthesizing data from multiple approaches and preliminary interpretation in the context of climatic and anthropogenic drivers // *Science of the Total Environment*. — 2017. — Vol. 598. — P. 319–329 <https://doi.org/10.1016/j.scitotenv.2017.04.133>

Golosov V.N., Walling D.E., Konoplev A.V., Ivanov M.M., Sharifullin A.G. Application of bomb- and chernobyl-derived radiocaesium for reconstructing changes in erosion rates and sediment fluxes from croplands in areas of European Russia with different levels of Chernobyl fallout // *Journal of Environmental Radioactivity*, VOL. 186, 2018, 78–89. <https://doi.org/10.1016/j.jenvrad.2017.06.022>

Vanmaercke, M., Poesen, J., Van Mele, B., Demuzere, M., Bruynseels, A., Golosov, V., Bezerra, J.F.R., Bolysov, S., Dvinskiy, A., Frankl, A., Fuseina, Y., Guerra, A.J.T., Haregeweyn, N., Ionita, I., Makanzu Imwangana, F., Moeyersons, J., Moshe, I., Nazari Samani, A., Niacsu, L., Nyssen, J., Otsuki, Y.,

- Radoane, M., Rysin, I., Ryzhov, Y.V., Yermolaev, O. 2016. How fast do gully headcuts retreat? // *Earth-Science Reviews* 154, 336–355. doi.org/10.1016/j.earscirev.2016.01.009. 2
- Valentin Golosov, Xinbao Zhang, Qiang Tang, Ping Zhou, Xiubin He 2015. Principal denudation processes and their contribution to fluvial suspended sediment yield in the Upper Yangtze River Basin and the Volga River Basin". *Journal of Mountain Science*, vol.12, no.1, p. 101-122, DOI 1007/s11629-014-2975-7. 4
- Valentin Golosov 2014. Application of fallout radionuclides for assessment sediment redistribution: recent achievements and new perspectives. *Journal Environment Radioactivity* , vol.138, p.276-279, doi:10.1016/j.jenvrad.2014.09.006
- Golosov V.N., V. R. Belyaev and M. V. Markelov. 2013. Application of Chernobyl-derived ^{137}Cs fallout for sediment redistribution studies: lessons from European Russia. *Hydrological Processes*, no.6, vol.27,807-821
- G. Dercon , L. Mabit, G. Hancock, M.L. Nguyen, P. Dornhofer, O.O.S. Bacchi , M. Benmansour , C. Bernard , W. Froehlich , **V.N. Golosov** , S. Hacıyakupoglu, P.S. Hai , A. Klik, Y. Li, D.A. Lobb, Y. Onda, N. Popa, M. Rafiq, J.C. Ritchie, P. Schuller , A. Shakhashiro, P. Wallbrink, D.E. Walling , F. Zapata, X. Zhang 2012. Fallout radionuclide-based techniques for assessing the impact of soil conservation measures on erosion control and soil quality: an overview of the main lessons learnt under an FAO/IAEA Coordinated Research Project. *Journal of Environmental Radioactivity* 107, 78-85.
- Golosov V.N., Sosin P.M., Belyaev V.R., Wolfgramm B., Khodzhaev Sh Effect of Irrigation Induced Erosion on the Degradation of Soils in River Valleys of the Alpine Pamir *Eurasian Soil Science*, vol 48, no. 3, p. 325-336.
- V. R. Belyaev, A. S. Zavadsky, M. M. Markelov, R. T. Ottesen, J. J. Bogen, **V. N. Golosov**, E. N. Aseeva, Y. S. Kuznetsova 2011. Assessment of overbank sedimentation rates and associated pollutant transport within the Severnaya Dvina River basin. *Geography, Environment, Sustainability*, No.3, v.04., 68-84
- V. Golosov**, N. Ivanova, S. Ruleva 2011. Agricultural activity as cause of aggradation of small Siberian rivers. *Sediment Problems and Sediment Management in Asian River Basins* (Proceedings of the Workshop held at Hyderabad, India, September 2009). IAHS Publ. 349, 73-79.
- Golosov V.N.**, Belyaev V.R., Markelov M.V., Ivanova N.N., Kuznetsova Y.S. 2011. Application radionuclide technique and other methods for assessing the effectiveness of soil conservation measures at Novosil study site, Orel region. In: *International Atomic Energy Agency, Impact of Soil Conservation Measures on Erosion Control and Soil Quality*, IAEA-TECDOC. IAEA, Vienna, 131-157.
- Golosov V.N.**, Belyaev V.R., Markelov M.V., Kislenko K.S. 2010. Overbank sedimentation rates on the floodplains of small rivers in Central European Russia. *Sediment dynamics for a changing future*. IAHS Publ. 337, IAHS Press, Wallingford, UK, p. 129-136.
- Kuznetsova Yu.S., Belyaev V.R., **Golosov V.N.** 2010. Effect of topographic data scale on results of soil erosion rate estimations by an empirical model. *Sediment dynamics for a changing future*. IAHS Publ. 337, IAHS Press, Wallingford, UK, p. 334-344.
- V.R. Belyaev, **V.N. Golosov**, J.S. Kuznetsova and M.V. Markelov 2009. Quantitative assessment of effectiveness of soil conservation measures using a combination of ^{137}Cs radioactive tracer and conventional techniques. *Catena* 79, 214-227.
- Olson K.R., Gennadiyev A.N., **Golosov V.N.** 2008. Comparison of fly-ash and radio-caesium tracer methods to assess soil erosion and deposition in Illinois Landscapes (USA). *Soil Science*. Vol. 173. No. 8. P. 575-586.
- V.N. Golosov**, V.R. Belyaev, Yu.S. Kuznetsova M.V. Markelov, E.N. Shamshurina. 2008. Response of a small arable catchment sediment budget to introduction of soil conservation measures. *Sediment Dynamics in Changing Environments* (Proceedings of a symposium held in Christchurch, New Zealand, December 2008). IAHS Publ. No. 325, 106-113.
- Belyaev V.R., **Golosov V.N.**, Kuznetsova J.S., Markelov M.V. 2007. Combined application of the ^{137}Cs radionuclide tracer and conventional techniques for assessing soil redistribution rates and effectiveness of protective measures. *Proceedings of the 10th International Symposium on River Sedimentation*, August 1-4, Moscow, Russia, Vol.1, 141-149.
- K. J. Gregory, G. Benito, R. Dikau, **V. Golosov**, J. A. A. Jones, M. G. Macklin, A. J. Parsons, D. G. D. G. Passmore, J. Poesen, R. Soja, L. Starkel, V. R. Thorndycraft, D. E. Walling 2006. Past hydrological

events related to understanding global change: An ICSU research project. *Catena*, vol.66, Issue 1-2, .2-13.

V.N. Golosov 2006. Erosion and deposition processes in the river basins of cultivated plains. Moscow: GEOS, 296 p.

A. Sidorchuk , L. Litvin, **V. Golosov**, A. Cherhysh 2006. Soil Erosion in Europe. Chapter 1.8. Russia and Byelorussia. *Soil Erosion in Europe*, Eds. J. Boardman & J. Poesen, Wiley, 73-94.

A. N. Gennadiyev, **V. N. Golosov**, S. S. Chernyanskii, M. V. Markelov, R. G. Kovach, V.R. Belyaev, and N. N. Ivanova 2006 Comparative Assessment of the Contents of Magnetic Spherules, ^{137}Cs , and ^{210}Pb in Soils as Applied for the Estimation of Soil Erosion. *Euroasian Soil Sciences*, 10, vol.39, 1100-1116.

V.N. Golosov, Panin A.V. 2006. Century-scale stream network dynamics in the Russian Plain in response to climate and land use change. *Catena*, vol.66, Issue 1-2, 2006, 74-92.

K. J. Gregory, G. Benito, R. Dikau, **V. N. Golosov**, E. C. Johnstone, J. A. A. Jones, M. G. Macklin, A. J. Parsons, D. G. Passmore, J. Poesen, R. Soja, L. Starkel, V. R. Thorndycraft, D. E. Walling 2006. Past hydrological events and global change. *Hydrological Processes* Volume 20, Issue 1, 199-204

V Belyaev, P. Wallbrink, **V. Golosov**, A. Murray, A. Sidorchuk 2004. Reconstructing the development of a gully in the Upper Kalaus basin, Stavropol region, (Southern Russia) *Earth Surface Processes and Landforms*, vol.29, 323-341.

A. Yu. Sidorchuk, **V. N. Golosov** 2003. Erosion and sedimentation on the Russian Plain, II: the history of erosion and sedimentation during the period of intensive agriculture *Hydrological Processes* Volume 17, Issue 16, 3347-3358.

Belyaev, V.R., **Golosov, V.N.**, Markelov M.V., Tishkina 2005. Human-accelerated soil redistribution within intensively cultivated dry valley catchment of the Southern European Russia. *IAHS Publication* 291, 11-20

Golosov, V.N., Litvin, L.F. 2005. Sediment budget within cultivated slopes and slope catchments: evaluation of slope morphology influence. *IAHS Publication* 291, 3-10.

Belyaev, V., **Golosov, V.**, Wallbrink, P., Sidorchuk, A. 2005. Application radionuclide for reconstruction stages of recent gully development. *Geomorphologiya*, 1, 31-44.

Belyaev, V., Wallbrink, P., Golosov, V., Murray, A., Sidorchuk, A. 2005. A comparison of direct measurement, USLE and caesium-137 based methods for evaluating soil redistribution from severe sheet and ephemeral gully erosion, Stavropol region, southern European Russia. *Geomorphology* №1, 173-193.

V R Belyaev, A Yu Sidorchuk, **Golosov V.N.**, P J Wallbrink, A S Murray 2006. Assessing the contribution of different processes to soil degradation within an arable catchment of the Stavropol upland, southern European Russia. *Soil Erosion and Sediment Redistribution in River Catchments: Measurement, Modelling and Management*, Edited by P N Owens; A J Collins, CABI, 32-44.

Golosov V. N., Panin A. V. and Markelov M. V. 1999. Chernobyl ^{137}Cs Redistribution in the Small Basin of the Lokna River, Central Russia. *Phys. Chem. Earth (A)*, vol. 24, No. 10, 881-885.

Golosov V.N., Walling D.E., Panin A.V., Stukin E.D., Kvasnikova E.V. Ivanova N.N. 1999. The spatial variability of Chernobyl-derived Cs-137 inventories in a small agricultural drainage basin in Central Russia. "Applied Radiation and Isotopes", 51, 341-352.

Walling D.E., **Golosov V.N.** Panin A.V. and He, Q. 2002. Use of radiocaesium to investigate erosion and sedimentation in areas with high levels of Chernobyl fallout In: *Tracers in Geomorphology*. ed. I.D.L. Foster, John Wiley

Kvasnikova E.V., Stukin E.D., **Golosov V.N.**, Ivanova N.N., Panin A.V. 1998. Caesium-137 behavior in small agricultural catchments on the area of the Chernobyl contamination. *Czechoslovak Journal of Physics*, 48, 109-115.

Golosov V.N., Markelov, M. V., Panin A.V. & Walling, D.E. (1998) Cs- contamination of river systems in Central Russia as a result of the Chernobyl incident. In: *Hydrology in a Changing Environment*, vol.1, H. Wheeler & C.Kirby (eds.), *Proceedings of the British Hydrological Society International Conference*, Exeter, UK, 1998, Wiley, Chichester, pp.535-546