



RESEARCH AND DESIGNING
INSTITUTE "CADASTER"

Cultural Ecosystem Services Assessment within Natural Capital Assessment in Novokuznetsk District, Kemerovo Region, Russian Federation

Building Bridges between Policy, Welfare Economics and Accounting

24-26.04.2018, Bonn

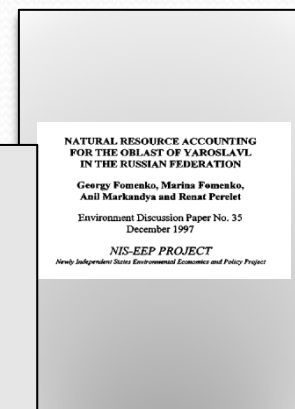
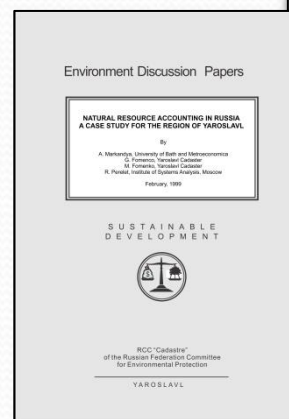
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PhD in Geography

Executive Director, Cadafter Institute

Development of Natural Capital Assessment in Russian Federation - Experiment on Improving Accounting and the Socio-Economic Assessment of the Natural Resource Potential

1. The experiment involved 32 federal subjects of the Russian Federation. It resulted in the adopted resolutions of the Heads of the federal subjects of the Russian Federation on the organization of accounting and socio-economic assessment of the natural resource potential.
2. 1993 - Cadaster Institute was established as a subordinate organization of the Ministry of Natural Resources of Russia for scientific and methodological support of accounting and socio-economic assessment of the natural resource potential.
3. 1993, 1995 - all-Russian seminars on the improvement of accounting and socio-economic assessment of the natural resource potential were conducted in Cadaster Institute.
4. 1996-2000 - Cadaster Institute carried out the first works on the implementation of monetary assessment of natural resources. Under the guidance of Professor Anil Markandya (World Bank), Cadaster Institute obtained the first results on the monetary assessment of the natural capital of the federal subject of the Russian Federation and the municipal district (Yaroslavl Region).



Most significant projects on natural capital accounting and assessment (experience of Cadaster Institute)

The targets of the natural resource management	Location / Customer / Year
Federal level	
1. Methodological support of monetary assessment of natural resources	Methodologies for calculating (1) indicators of the economic value of biological resources; (2) the volume of environmental expenditures by types and directions of costs / Rosstat / 2014, 2007-2009
2. Methodological support of SEDA development	Development of first indicators for natural resource assessment in federal subjects of Russia and in the country as a whole/ Russian Ministry of Environment and Rosstat / 2007-2009.
3. Increasing the management efficiency of the system of specially protected areas of federal significance	Obtaining and monitoring of indicators of economic value of natural resources and ecosystem services provided by PAs (97 reserves and 40 national parks) / Russian Ministry of Environment/ 2010, 2015
4. Development of management plans for protected areas of federal significance	Reserve "Stolby" / State natural reserve "Stolby" / 2012 National Park "Pleshcheyevo Lake" / Rosprirodnadzor / 2005 Kostomukhshsky Reserve / Rosprirodnadzor / 2005
Federal subject level	
1. Development of the system of natural resource accounting in Yaroslavl Region	Report on the project on development of the system of natural resource accounting in the Yaroslavl Region / Goskomecologii of Russia, Yaroslavl Region administration / 1988-1999
2. Increasing the efficiency of the use of natural resources and environmental protection	Proposals on the territory development programs and plans for the Yaroslavl, Kaluga, Leningrad, Ryazan, Tomsk regions, the Republic of North Ossetia-Alania and others / administrations of the subjects of the Russian Federation, Russian Ministry of Environment/ 1998-2008.
3. Planning and development of specially protected areas of regional importance	Obtaining indicators of economic evaluation of natural resources and ecosystem services and their inclusion in the management of regional PAs by subjects of the Russian Federation: the Yaroslavl, Kaliningrad, Kaluga, Kostroma, Ryazan, Tomsk, Kamchatka, Krasnodar Regions, Republic of North Ossetia-Alania, Karachay-Cherkessia Republic and others / administrations of federal subjects, UNDP, GEF, Russian Ministry of Environment / 1998-2017
4. Development of measures to increase the efficiency of the use of natural capital	Ecosystem services assessment in the Yaroslavl Region / Administration of the Yaroslavl Region / 2017
Municipal level	
1. Preventing a budget crisis of the territory	Forecasting the depletion of the mineral resources in the municipal district for promotion of compensatory measures / the administration of the Saratov region / 1999.
2. Preservation of parks and green spaces as the basis for maintaining biodiversity in cities and towns	Assessment of the socio-economic value of the urban park for the development of measures for its conservation (including adjusting the payment for land) / Kostroma administration / 1999.
3. Increasing the effectiveness of planning of socio-economic development at the municipal level	Economic evaluation of natural resources as an information basis for the program of environmental management and transition to sustainable development for: (1) Danilov district, (2) Pervomaisky district (Yaroslavl region), (3) Iraf district (Republic of North Ossetia-Alania), (4) Mikhailovsky district (Ryazan region) / Rosprirodnadzor, administrations of federal subjects of the Russian Federation, municipalities / 1996-1997, 2002, 2005.
4. Development of a strategy for social and economic development. Implementation of the Strategic Environmental Assessment (SEA)	Assessment of the ecosystem services of the coal-mining area to improve the information support of planning the socio-economic development of the territory / UNDP / 2016-2017.
Local level	
1. Prevention and resolving of conflicts in environmental management	Economic evaluation of natural resources and ecosystem services provided to different users aimed at development of conciliation measures / Administration of the Tomsk region / 1999-2000.
2. Prevention of ethnic tension in the planning and implementation of wildlife protection measures	The economic assessment of natural resources and ecosystem services aimed at justifying the environmental restrictions when creating PAs in the rural municipality Arkhyz / CEPF for the Caucasus (Caucasus Hotspot) / 2005.
3. Increasing the efficiency of municipal water supply	Economic assessment of water in the household sector to promote reasonable decisions to improve rural water supply in the Danilovsky District of the Yaroslavl Region / GEF, Yaroslavl Region Administration / 1999.

Library

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ОБЩЕСТВО С ОГРАНИЧЕННОЙ ОТВЕТСТВЕННОСТЬЮ
"РЕСУРСЫ И КОНСАЛТИНГ"
НАУЧНО-ТЕХНИЧЕСКИЙ ЦЕНТР

О КОМПАНИИ ДЛЯ КОГО ПРОДУКТЫ ЦЕНТР ЗНАНИЙ

Библиотека

Добро пожаловать в наш Центр знаний. За годы работы в области устойчивого развития, «зеленого» инклюзивного роста, управления рисками, повышения жизнестойкости бизнеса, территорий, городов и поселений группа компаний «Ресурсы и консалтинг» накопила большой объем полезных и зачастую уникальных знаний об этих процессах. Мы с удовольствием делимся ими с нашими клиентами и партнерами, а также со всеми, кто стремится развиваться в этом направлении.

Специально для Вас мы создали Электронную библиотеку, в которой собираем все свои знания и наработки, накопленные за много лет. У нас за плечами десятилетия практического опыта и мы охотно делимся им со своими клиентами по всему миру, повышая результативность их работы.

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Приглашаем Вас пройти процедуру регистрации для получения полного доступа ко всем материалам.

Повышайте свои знания. Расширяйте свои возможности...



Монографии



Статьи

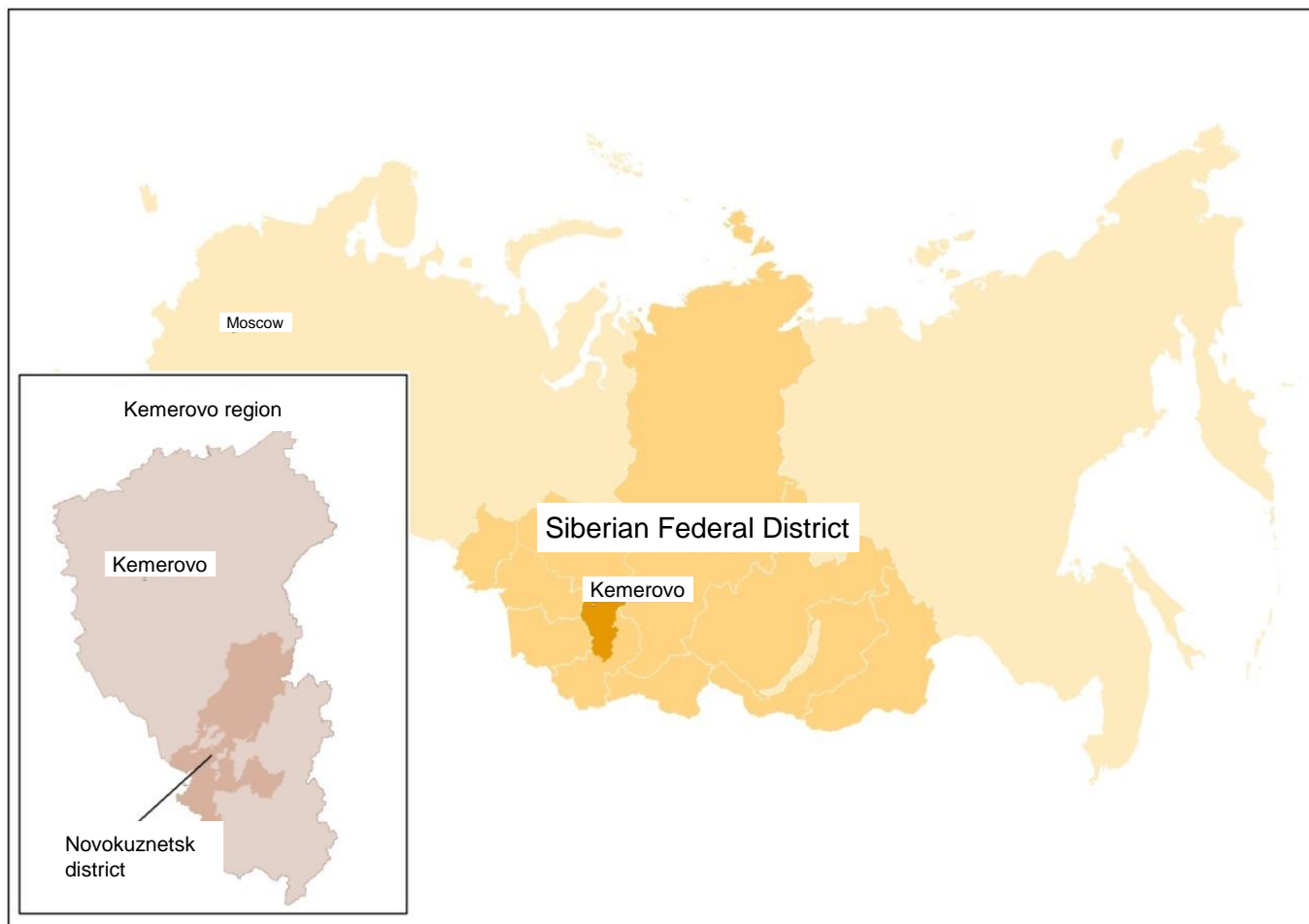


Презентационные материалы

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Brief description of Novokuznetsk district, Kemerovo region



Scope of work for assessment

1. Land-use analysis and identification of ecosystem types

2. Identification of cultural ecosystem services under assessment

3. Choice of assessment methods

4. Assessment

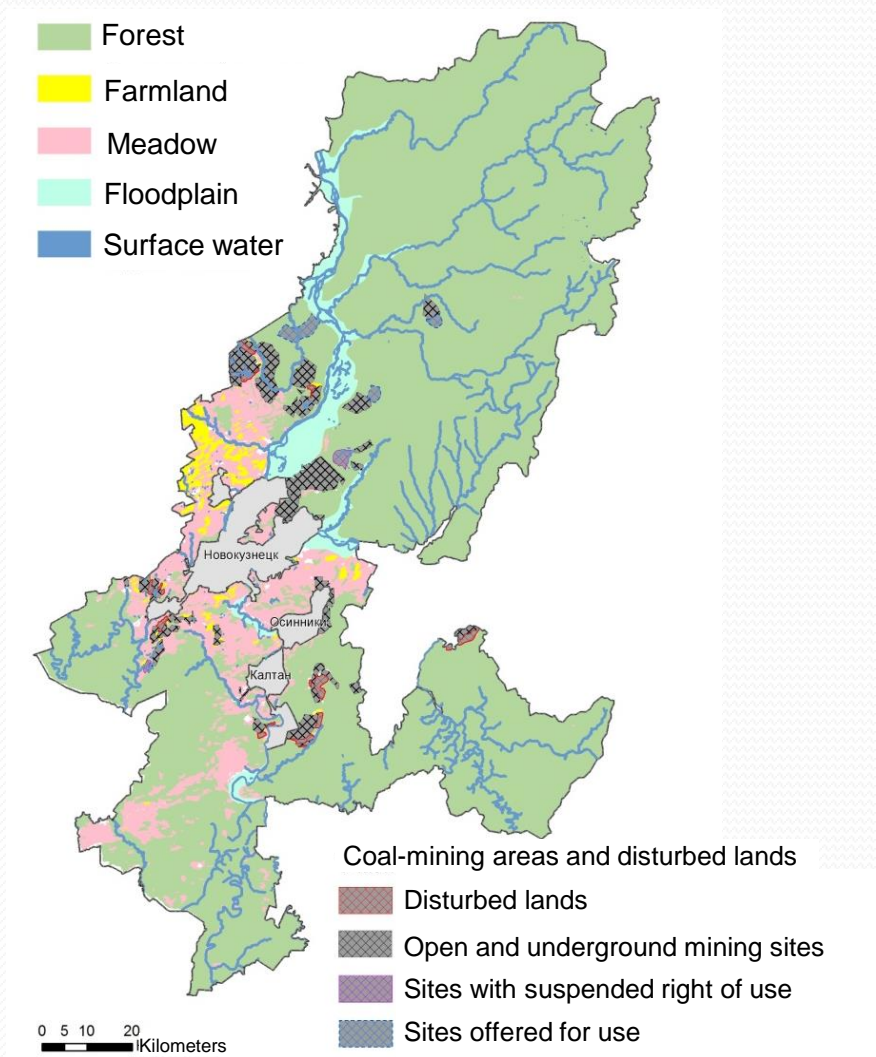
5. Results analysis

Features of Novokuznetsk district important for cultural ecosystem services assessment *:

- demand for affordable outdoor recreation;
- coal-mining development and problems of preservation of undisturbed natural areas;
- high level of informal involvement of households in collecting natural resources.

* - the research is made within the UNDP/GEF-Ministry of Natural Resources and Environment of Russia project "Mainstreaming Biodiversity Conservation into Russia's Energy Sector Policies and Operations"

Major ecosystems and coal-mining areas of Novokuznetsk district



Ecosystems, Cultural Ecosystem Services and Benefits

Ecosystems	Services	Benefits
Forest lands, floodplain areas and water bodies	Outdoor recreation	Possibilities for fishing, hiking, swimming, etc.
Forest lands, farmlands, meadows, floodplain areas	Hedonistic values	Environmentally favourable conditions for residential areas and living.

Assessment methods

Services	Value type	Nature of benefits	Assessment methods
Outdoor recreation	Value of indirect use	Non-market benefits	Value judgement method. The assessment on the basis of the data analysis of the people's willingness to pay for maintaining the possibility of using recreational functions of the district's ecosystems. The initial data were obtained from questionnaire survey of households in rural settlements.
Hedonistic values	Value of indirect use	Market benefits	Value transfer method*. The search for and analysis of data on ecosystems with similar characteristics and indicators of their hedonic values, for the development of specific indicators of hedonic values of ecosystems in the Novokuznetsk region.

* Used databases:

EVRI (<http://www.evri.ca>);

ValueBase^{SWE} (<http://www.beijer.kva.se/valuebase.htm>);

EconPapers (<http://econpapers.repec.org>).

Results of Cultural Ecosystem Services Assessment in Novokuznetsk District

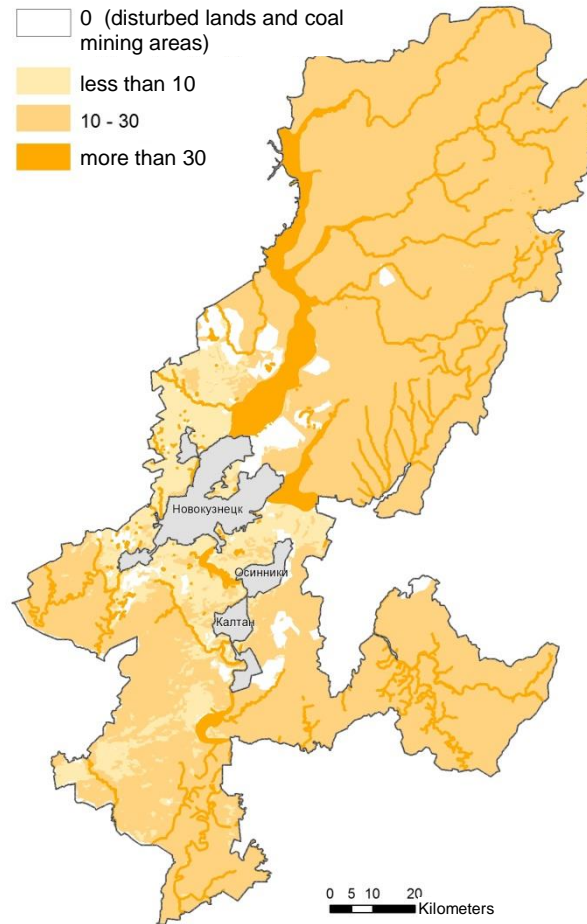
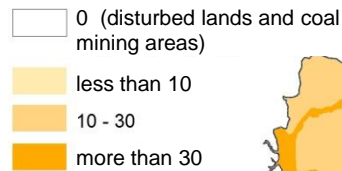
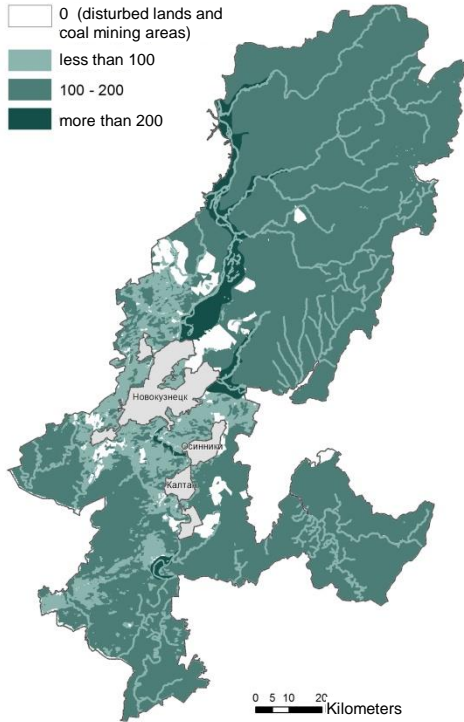
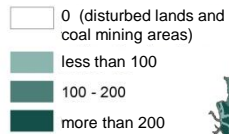
(price of 2016; 1 euro = 70 roubles)

Ecosystem	Area, hectares	Cultural ecosystem services		Specific average value
		Outdoor recreation	Hedonistic values	
		Thousand Russian roubles per hectare per year		
Forest lands	760145	0,006	17,8	17,806
Farmlands	16643		2,2	2,2
Meadows	122718		2,1	2,1
Floodplain areas	51839		36,32	36,32
Water bodies	7994	0,006	51,8	51,806
Areas of coal mining and disturbed lands	50498	-	-	-
Total	1009837	0,012	110,22	110,2

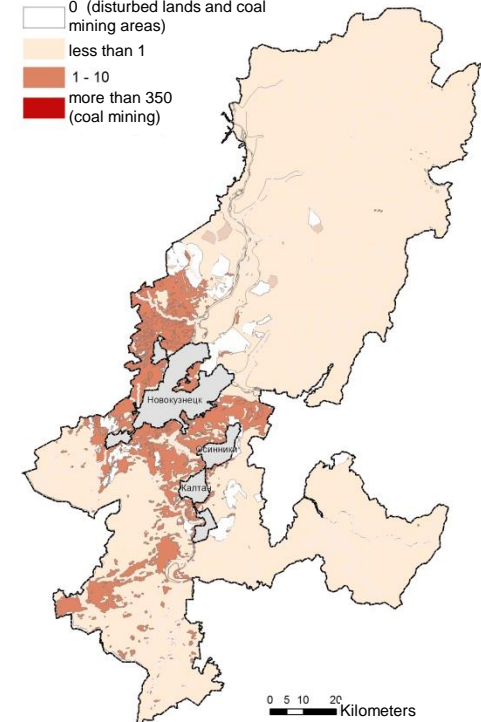
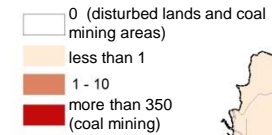
Cultural ecosystem services	Ecosystems					Total value, million roubles/year
	Forest lands	Farmlands	Meadows	Floodplain areas	Water bodies	
Outdoor recreation	4,6	-	-	-	0,1	4,7
Hedonistic values	13532,1	36,6	257,7	1882,8	414,1	16123,3
TOTAL	13536,7	36,6	257,7	1882,8	414,2	16128

Value of cultural ecosystem services, thousand roubles per hectare per year

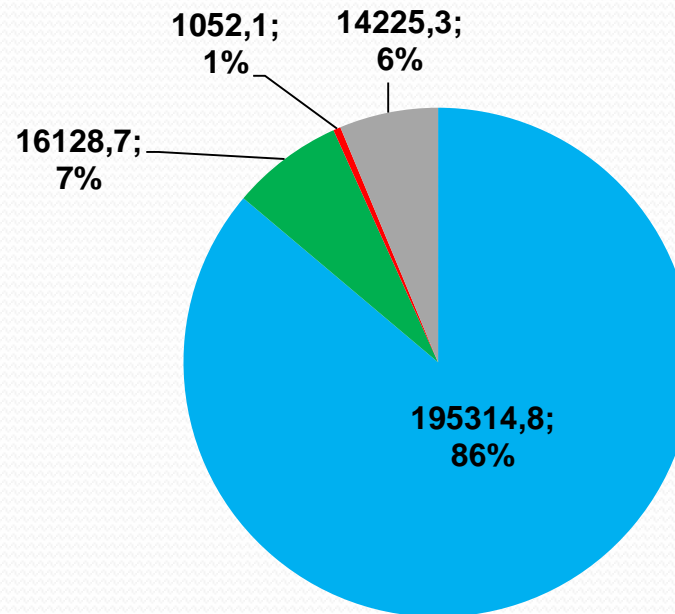
Value of regulating ecosystem services, thousand roubles per hectare per year



Value of provisioning ecosystem services and abiotic services, thousand roubles per hectare per year



Share of Cultural Ecosystem Services in Natural Capital of Novokuznetsk Region, million roubles/year



Evaluation methods:

- market evaluation,
- contingent evaluation,
- transfer benefits.

- Regulating ecosystem services
- Cultural ecosystem services
- Provisioning ecosystem services
- Abiotic services (coal extraction)

Discussion of assessment results

1. The value of cultural ecosystem services is 7% (16128.7 million roubles / year) of the value of natural capital of Novokuznetsk district (226,720 million roubles / year).
2. Unlike abiotic services (coal mining), cultural ecosystem services have more resilient (as they are renewable) employment potential for the local population. This plays an important role in the economy of households, ensuring the welfare of the population.
3. Attention to cultural ecosystem services increases the interest of local people and authorities in the preservation of undisturbed ecosystems, biodiversity, natural monuments and culture.



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Thank you for attention!

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