

Section A. Basic information regarding the project or collaboration and Principal Investigator (s) (PI)

Please specify the type of grant reported

<input type="checkbox"/>	Project grant
<input checked="" type="checkbox"/>	Swedish Research Links - Research collaboration grant or Network grant

Project title (in English or Swedish)

How the East was won: Towards an environmental history of the Eurasian steppe

Principal Investigator (PI), First name

Mats

Principal Investigator (PI), Last name

Widgren

Gender of PI

<input type="checkbox"/>	Female
<input checked="" type="checkbox"/>	Male
<input type="checkbox"/>	Don't want to specify

The PI's working time spent on the project (% of fulltime for the whole funding period)

5

Was the PI's salary in any part financed by this grant? If yes, please state to what extent in the comment section below (approximate % of total salary)

<input type="checkbox"/>	Yes
<input checked="" type="checkbox"/>	No

Academic title of PI

<input checked="" type="checkbox"/>	Professor
<input type="checkbox"/>	Associate professor (docent)
<input type="checkbox"/>	Dr
<input type="checkbox"/>	If other, please specify

Current employment status of the PI

<input type="checkbox"/>	Professor	
<input type="checkbox"/>	Senior lecturer (Lektor)	
<input type="checkbox"/>	Researcher with a permanent position	
<input type="checkbox"/>	Researcher with a temporary position	
<input type="checkbox"/>	Junior research position (forskarassistent)	
<input type="checkbox"/>	Post doc	
<input checked="" type="checkbox"/>	If other, please specify	Professor emeritus

Swedish Research Links: Basic information on the International Principal Investigator(s)

Name of International PI

Ivan Moysienko

Gender of International PI

<input type="checkbox"/>	Female
<input checked="" type="checkbox"/>	Male
<input type="checkbox"/>	Don't want to specify

Academic title of International PI

<input checked="" type="checkbox"/>	Professor
<input type="checkbox"/>	Associate professor (docent)
<input type="checkbox"/>	Dr
<input type="checkbox"/>	If other, please specify

Country where International PI is active in research

Ukraine

Was the salary of the International PI in any part financed by this grant? If yes, please describe to what extent (approximate % of total salary)

<input type="checkbox"/>	Yes
<input checked="" type="checkbox"/>	No

Were there more than one International PI involved in this grant? (check yes for new section below)

<input type="checkbox"/>	Yes
<input checked="" type="checkbox"/>	No

Section B. Basic information regarding participating researchers

Note for Swedish Research Links: this section refers to any participating researchers *other than* the International Principal Investigator (see section above).

Were there any participating researchers involved in this grant?

<input type="checkbox"/>	Yes, same participating researchers as in the application
<input checked="" type="checkbox"/>	Yes, but the participating researchers changed partly or wholly from those in the application. Please, comment on changes below.
<input type="checkbox"/>	No, there were no participating researchers involved

Comment

Throughout the whole project, PhD student, and later researcher, Brian Kuns (Stockholm University) while not being listed as PI has played a crucial role in building bridges with the Ukrainian research team and in carrying out field work for a paper, included in his dissertation. Two of the Swedish participating researchers (Myrdal and Cousins) were only involved in the first year of the project. As the political situation in Ukraine deteriorated in autumn 2013 the project was on hold. When we were again able to start the cooperation in 2015 these researchers had other commitments and were no longer able to participate. Concerning the Ukrainian participants, Pylypenko was unable to participate due to teaching and administrative responsibilities, but Khodosovtsev participated. Later, two new participants joined us, Maria Zachwatowicz, Researcher from Warsaw University, and Polina Danjenko, a PhD student from Kherson State University.

Information on participating researchers involved in the project

	Female within Sweden	Male within Sweden	Female International	Male International
Professor	1	2		2
Associate professor (docent)				
Dr		1	1	
PhD student			1	
Other				

Was the salary of any of the participating researchers in any part financed by this grant? If yes, please describe to what extent (approximate % of total salary)

<input type="checkbox"/>	Yes
<input checked="" type="checkbox"/>	No

Section C. Scientific report

Please specify the main aim or research questions to be answered by the project, as well as changes made since the application (Maximum 2000 characters)

Post-Soviet reform has led to tremendous agricultural changes in the steppe region of Ukraine and other post-Soviet countries. While investment firms are now seeking to capitalize on the opportunity to conduct rational large-scale agriculture on the fertile steppe soils, a window of opportunity has also opened to discuss the steppe's future and the balance between intensive land use and sustainability, the preservation of nature, and equitable rural development. The proposed research aims to contribute to this discussion by investigating the dynamics of land cover and land use change, historically and today, in a part of the Ukrainian steppe. More specifically we seek to explore how the different methodologies and knowledge-bases of the joint Swedish and Ukrainian research team can enrich each others understandings of the drivers of land use/land cover change; use the results from the southern Ukrainian landscape to generate hypotheses about the dynamics of land cover and land use change in the Eurasian steppe in general; compliment climate modelling of the historical climate in the steppe, by grounding it in expert local knowledge; relate knowledge of historical land use and land cover dynamics to an on-going discussion on sustainability and rural development. Finally, our ambition is to establish a long-term research agenda about the steppe.

Short description (Maximum 5 000 characters)

There is a lot of research that follows and maps bio-diversity and land-use changes using large data-sets and satellite data. In contrast, we evolved an approach, as a part of this multidisciplinary project, where we examined a smaller area, but over a longer time period, using historical maps, historical statistics and reports, and material that is available today, including satellite data. Importantly, we conducted focus groups and interviews with people in the area today to get an oral history of changes to the landscape. Also, we walked the landscape to find signs of bio-diversity and land-use change. In this regard, we benefited from a multidisciplinary approach encompassing botany, historical geography, and physical geography. In other words, while our approach is only applicable to a smaller area, we produced rich material for telling a story on how land-use and bio-diversity have changed, and what the impacts have been, not least for the people living in this area. This approach was discussed in workshops, but it was mostly developed in the field, during two productive field work trips to Ukraine in 2017 and 2018. Common field work was carried out in the village of Zmiivka (Gammalsvensky), Kherson Oblast, with important comparative visits to other villages in the area. Before going to the field, however, we did an exhaustive search for historical maps in historical archives. We developed methods for digitization of these maps in low-tech environments. We then developed methods for geo-referencing these maps (i.e. giving these maps coordinates). In both cases our method development is potentially significant, as we are not aware of other research that has done this before in the wider region, based on 18th to mid 20th century cadastral maps. Moreover, these digitized, geo-referenced maps then became the basis of a historical database on land-use in different periods. While such maps are occasionally referred to in historical and political geographical work, our project showed that these maps can be an important component in GIS-related landscape and environmental history research. This is a proof of concept and there is a large potential here to be tapped.

What new research questions have been generated from the project? (Maximum 2000 characters)

How can historical maps and other information from this region help us understand historical land-use and biodiversity and how can this information be related to present day conditions? This region has seen major land reforms with contrasting objectives, resulting in drastic re-organizations of the landscape. These land reforms have foreclosed other alternatives, for example, when forced collectivization of agriculture stifled the growing prominence of khutori (family farmsteads larger than a peasant holding, but located close to their farmland). The Swedish and German farmers in the area of Zmiivka (Gammalsvensky) thus established smaller hamlets far away from the old village, but in the Swedish case these hamlets were abandoned when the repatriation of many of the villagers to Sweden in 1929 occurred. Could these settlements have been a viable, sustainable solution to steppe agriculture? Exploring this "path not taken" can help inform policy debate today on what sustainable agriculture should look like in this region. How do Soviet era investments in land-use infrastructure represent a break with the pre-Soviet period, and in what way do these investments shape land-use today?

Please describe any international collaborations contributing to the project (Maximum 2000 characters)

Environmental historian David Moon, author of "The plough that broke the steppes: agriculture and environment on Russia's grasslands, 1700-1914" (2014), participated in a project workshop in Stockholm in 2015, which helped to frame our approach and questions for this research.

Section D. Impact of the research

Describe how the project/collaboration/network, if applicable, has contributed to strengthen and benefited research institutions and research environments in low income and lower middle income countries

This research project has given our Ukrainian partners greater experience and capacity for working with historical maps in a Geographic Information System for a variety of purposes. The research took place during tumultuous events in Ukraine, in which Ukraine took a firm, but still contested step towards greater democracy. The academic exchanges that were the foundation of this project provided both an important stability and inspiration to Ukrainian colleagues, seeking to pursue their research objectives, while contributing to the development of academic freedom in their country.

Describe the relevance of your research in relation to the overall goals of the Swedish development cooperation policy and to the goals for the Global development policy

In Sweden's Aid Policy Framework one of the main goals is to improve resilience to environmental impacts and natural disasters in developing countries (Sub-objective 3). We have explored the development of agriculture over a long time span, and how different food production systems have coped with the manifold challenges of agriculture in dry steppe environments where there are regular droughts. We have charted the various ways that different kinds of farms, at different scales of production and with different production orientations, have managed or not managed these environmental challenges. We have also seen how investments in infrastructure and technology create a path dependency in how successive generations deal with environmental challenges. In short, we have developed a better understanding of how agriculture has developed in relation to environmental challenges and historical events. Second, our research has explored the links between the expansion of agriculture in southern Ukraine, on the one hand, and decreasing steppe bio-diversity on the other hand, thereby threatening long-term resilience. In this regard, our research, and particularly our mapping of historical land-use, has led to concrete proposals in Ukraine for preservation of steppe biodiversity in the area. Overall, this research offers relevant insights for determining future agricultural development and nature preservation policies for an important agriculture region.

State the regions and/or countries for which the research has been directed

Ukraine, but with relevance for other post Soviet territories located in the Eurasian steppes.

Is the project part of a long-term partnership, or has it contributed to establish a long-term partnership with researchers in low income or lower middle income countries? If yes, please describe.

When this project started, there already was a tentative contact between the Ukrainian and Swedish researchers. This project strengthened these contacts, at the same time connecting Ukrainian researchers with other research environments and preservation efforts in Sweden. Discussions are ongoing to seek funding to continue this collaboration in a larger scale project.

Has the international research collaboration contributed to creating any further collaborations, i.e. research networks or intersectoral collaborations? If yes, please describe.

Over the course of this project, the research networks of the two research teams merged, which led to the productive involvement of researchers from the University of Warsaw in this project. This addition was a success, and discussions are ongoing between the Ukrainian, Polish and Swedish researchers on how to build further on this collaboration.

Section E. Output

For the following sections, we ask you to provide details of outputs that have arisen from this grant. As not all types of output may be relevant for your research project, you can navigate between the survey pages (see navigation at the end of the page).

The outcome sections come in the following order:

Peer-reviewed papers (page 5, this page), Monographs (page 6), Book chapters (page 7), Planned publications (page 8), Contributions to conferences (page 9), Popular scientific contributions (page 10), Other dissemination activities (page 11), Intellectual property (page 12) and Other output (page 13)

Output: Peer-reviewed papers

Please give the following information regarding any peer-reviewed papers published from this project grant: Names of all authors, title of the paper, journal name, year, volume, issue and page numbers.

Paper 1

Kuns, Brian 'In These Complicated Times': An Environmental History of Irrigated Agriculture in Post-Communist Ukraine, *Water Alternatives*, 2018, 11, 3, 866-892

Output: Monographs

Please give the following information regarding any monographs published from this grant: Name of author(s), title of the monograph, year, publisher, ISBNnumber

Monograph 1

Xodosovcev O.Ye., Moysiienko I.I., Bojko M.F., Kuns B., Mel'nyk R.P., Zahorodnyuk N.V., Darmostuk V.V., Zaxarova M.Ya., Klymenko V.M., Dajneko P.M., Malyuha N. H. Starovynni zabuti parky Xersonshhyny, 2019, Xerson: Vydavnychyj Dim «Hel

Output: Book chapters

Please give the following information regarding any book chapters published from this grant: Name of author(s), title of contribution, title of book, year, publisher, ISBN-number

Output: Submitted manuscripts and other planned publications

Please give the following information:

Type and status (e.g. submitted/manuscript) of planned publication, name of author(s), title.

Planned publication 1

Manuscript, Kuns, Brian, Zachwatowicz, Widgren, Mats, Mosyienko, Ivan,

Planned publication 2

Manuscript, Zachwatowicz M., Kuns B., Moysiienko I., Gomanuk M., Dayneko P., Widgren M, Bio-cultural landscape values as perceived at community level – a case of disappearing steppelandscapes, southern Ukraine,

Planned publication 3

Manuscript, Moysiienko I.I., Danjenko, P., Zachwatowicz, M., Dembicz, I., Sudnik-Wojcikowska, B.

Output: Contribution to conferences

Please give the following information regarding any contributions to conferences resulting from this grant:

Type of contribution (e.g. peer-reviewed proceedings article, poster, invited presentation, session chair or oral presentation), name of author(s), title of contribution, journal (if applicable: journal name, year, volume, and issue), conference name, date and location.

Conference contribution 1

Moysiienko I.I., Sudnik-Wójcikowska B., Zachwatowicz M., Dembicz I., Zakharova M., Kuns B. 2017. Poster: Old cemeteries as objects of preservation of steppe phytodiversity, 14th Eurasian Grassland Conference, 6-7 July 2017, Riga, Latvia.

Conference contribution 2

Moysiienko I., Dembicz I., Sudnik-Wójcikowska B., Zachwatowicz M., Kuns B., Zakharowa M. 2018. Poster: Ancient settlements as refuges for steppe flora in southern Ukraine. 27th Congress of the European Vegetation Survey, 23-26 May 2018, Wrocław, Poland

Conference contribution 3

Zachwatowicz M., Kuns B., Moysiienko I., Dayneko P., Widgren M. 2018. Poster: The old maps and remote sensing data in landscape-ecological research of historical borderlands. 17th International Conference of Historical Geographers, 15-20 July 2018, Warsaw, Poland

Conference contribution 4

Zachwatowicz M. (accepted). Poster: Historyczna i aktualna struktura krajobrazu, a bogactwo flory stepowej w skali lokalnej. Zarysmodelu (Historical and actual landscape patterns, and the richness of a steppe flora at local scale. A model outline; in Polish). BioGIS Forum, Adam Mickiewicz University in Poznan, 21-22 March 2018, Poznan, Poland

Conference contribution 5

Zachwatowicz M., Kuns B., Moysiyenko I., Dayenko P., Widgren M. 2018. Poster: The old maps and remote sensing data in landscape-ecological research of historical borderlands. 17th International Conference of Historical Geographers, 15-20 July 2018, Warsaw, Poland

Conference contribution 6

Kuns, B. Zachwatowicz M., Moysiyenko I., Sudnik-Wójcikowska B., Dayenko P., Widgren M 2019. Presentation (accepted).

Conference contribution 7

Kuns B., Zachwatowicz M., Moysiyenko I., Sudnik-Wójcikowska B., Dayenko P., Widgren M (poster proposals submitted). Poster: A mixed-methods approach to historical-ecological analysis of pre-Soviet, Soviet and post-Soviet steppe landscape transformations. A case study from southern Ukraine. 10th IALE World Congress: Nature and society facing the Anthropocene: challenges and perspectives for landscape ecology, 1-5 July 2019, Milan, Italy.

Conference contribution 8

Zachwatowicz M., Kuns B., Moysiyenko I., Gomanuk M., Dayenko P., Widgren M., (oral presentation proposal submitted). Oral presentation: Bio-cultural landscape values as perceived at community level – a case of disappearing steppelands, southern Ukraine, 10th IALE World Congress: Nature and society facing the Anthropocene: challenges and perspectives for landscape ecology, 1-5 July 2019, Milan, Italy.

Conference contribution 9

Moysiyenko. I : 2019 IAVS (The International Association for Vegetation Science) 62nd ANNUAL SYMPOSIUM

Output: Popular science contributions

Please give the following information as appropriate:

Name of author(s), title of contribution, type of contribution (e.g. article, seminar, exhibition), broadcasting channel, group of audience, date.

Output: Other dissemination activities

Please give the following information regarding any dissemination activities, other than contributions to conferences or popular scientific contributions.

Dissemination activity 1

<input checked="" type="checkbox"/>	Workshop
<input type="checkbox"/>	Interview
<input type="checkbox"/>	Lecture
<input type="checkbox"/>	Article
<input type="checkbox"/>	Oral presentation
<input type="checkbox"/>	Exhibition
<input type="checkbox"/>	Public debate
<input type="checkbox"/>	Report to decision maker or investigator
<input type="checkbox"/>	If other, please specify

Description of the dissemination activity

Historical ecology of agriculture of the southern Ukrainian steppe, Stockholm, May 11-13, 2015, Workshop focused on developing ways to map and understand the expansion (or contraction) of agriculture – what are the driving forces, how was it conditioned by the environment – and the effect this had on steppe ecology. Researchers from Sweden, Ukraine and the U.K. participated in this workshop.

Target groups for activity 1

<input checked="" type="checkbox"/>	Researchers within the same area
<input checked="" type="checkbox"/>	Researchers within other or several areas
<input type="checkbox"/>	Decision- or policymakers
<input type="checkbox"/>	Media
<input type="checkbox"/>	The public
<input type="checkbox"/>	Undergraduate students
<input checked="" type="checkbox"/>	PhD students
<input type="checkbox"/>	Governmental agencies
<input type="checkbox"/>	Potential users
<input type="checkbox"/>	If other, please specify

Dissemination activity 2

<input checked="" type="checkbox"/>	Workshop
	Interview
	Lecture
	Article
	Oral presentation
	Exhibition
	Public debate
	Report to decision maker or investigator
	If other, please specify

Description of the dissemination activity

Workshop, Kherson, Ukraine, 20-21 October 2015, Ecological history of agriculture in southern Ukraine

Target groups for activity 2

<input checked="" type="checkbox"/>	Researchers within the same area
<input checked="" type="checkbox"/>	Researchers within other or several areas
	Decision- or policymakers
	Media
	The public
	Undergraduate students
<input checked="" type="checkbox"/>	PhD students
<input checked="" type="checkbox"/>	Governmental agencies
	Potential users
	If other, please specify

Dissemination activity 3

<input checked="" type="checkbox"/>	Workshop
	Interview
	Lecture
	Article
	Oral presentation
	Exhibition
	Public debate
	Report to decision maker or investigator
	If other, please specify

Description of the dissemination activity

Workshop, Kherson, Ukraine, Sept 21, 2017, Historical ecology of agriculture of the southern Ukrainian steppe

Target groups for activity 3

<input checked="" type="checkbox"/>	Researchers within the same area
<input checked="" type="checkbox"/>	Researchers within other or several areas
	Decision- or policymakers
	Media
	The public
	Undergraduate students
<input checked="" type="checkbox"/>	PhD students
	Governmental agencies
	Potential users
	If other, please specify

Dissemination activity 4

	Workshop
	Interview
	Lecture
	Article
	Oral presentation
	Exhibition
<input checked="" type="checkbox"/>	Public debate
	Report to decision maker or investigator
	If other, please specify

Description of the dissemination activity

Combining focus group with reporting back to residents and mayor of village where field work took place (Zmiivka / Gammalsvensky). 22 April 2018

Target groups for activity 4

<input checked="" type="checkbox"/>	Researchers within the same area
	Researchers within other or several areas
	Decision- or policymakers
	Media
<input checked="" type="checkbox"/>	The public
	Undergraduate students
	PhD students
<input checked="" type="checkbox"/>	Governmental agencies
	Potential users
	If other, please specify

Output: Intellectual property (apart from publications)

Please provide information regarding intellectual property and licensing resulting wholly or partly from this grant.

Please give the following information:

Type of intellectual property (copyright, patent etc.), name or title of the discovery, date for receiving this protection.

Output: Other output

If applicable, please give the following information regarding any other output resulting from the grant.

Specify type of output and describe it in the textbox below. Should you have more than one of the same type of output, please list all in the same description box.

Section F. Comments on the survey

Navigating back and forth in this document takes too much time. Imagine you find out , when your are on the last page, just about to submit, that you want to check what you wrote on the first page..... click, click, click etc on "Previous Page". finding a better way to do this would be good!!

You have now reached the end of the survey.

Once you submit the survey, you will be able to download and save a pdf of your finished report. **Please send this pdf file to the Swedish Research Council by email registrator@vr.se** Remember to to include your **Project registration number (diarienummer)** in the email and/or subject line.

If you want to preview your survey report you can print a copy of the survey by using the "print" button below. Once you click submit you will not be able to make any additional Changes.

Thank you for reporting on your research grant!