

## MAPPING AND EVALUATING THE MAJOR FAMINES OF MODERN TIMES

S.G.Wheatcroft<sup>1</sup>, A.Garnaut<sup>2</sup>, C.O'Grada<sup>3</sup>, I.Bishop<sup>4</sup>

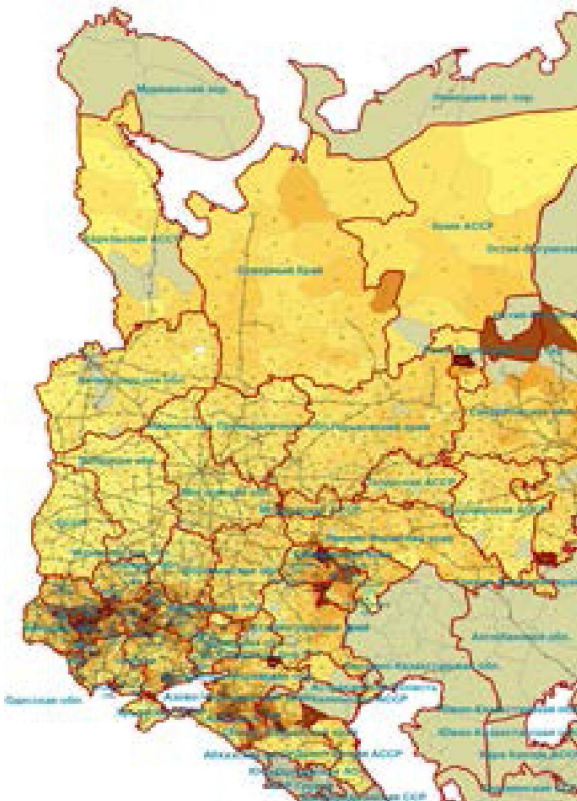
1. School of Humanities and Social Sciences, Nazarbayev University, Astana, Kazakhstan; Stephen.Wheatcroft@nu.edu.kz; 2. China Studies Centre University of Oxford, UK; 3. Department of Economics, University College Dublin, Ireland; 4. Department of Infrastructure Engineering, University of Melbourne, Australia

### INTRODUCTION.

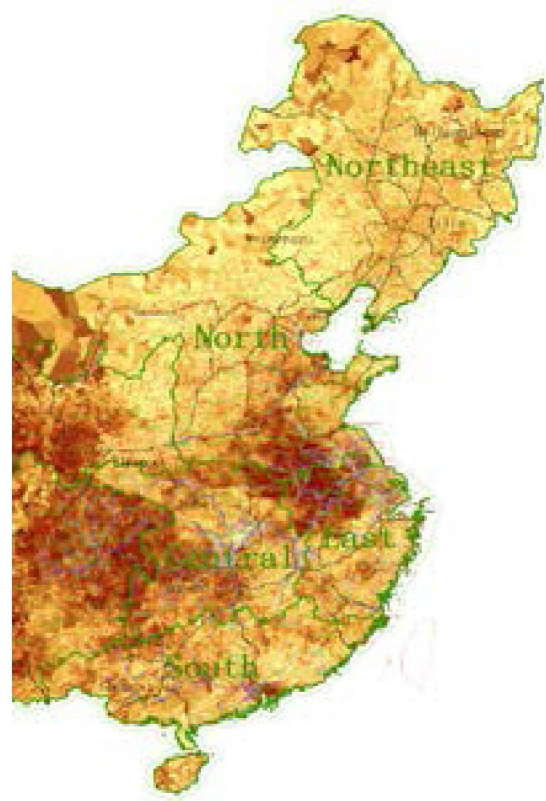
This abstract reports on an international project being carried out at Nazarbayev University that provides a more detailed picture of the geography and chronology of the largest famines of the twentieth century. Our preliminary results on the Soviet famine of 1932-33 challenge many of the conventional views. Because of international interest in this work, preliminary results concerning mapping the Soviet famine have been published in Russia and Ukraine, and are available on the website of the Russian State Archive Administration [1].

### MATERIALS AND METHODS.

Data on population size, and deaths in the USSR in the famine year of 1933 have been collected at the *raion* level from previously secret Soviet statistical archives.[2] The boundaries of these *raions* for these years have been scanned. Map 1 indicates layers of these death rates plotted on a Geographical Information System (GIS). For China, Garnaut has created similar county and township level indicators of population loss for famine years derived from age specific population data provided from the census of 2000; Map 2 presents the ratio of people born in the second half of the 1950s to trend at township level. Considerable effort has been taken to critically evaluate the reliability of the data used, and we will cross check the results of these indicators with other data.



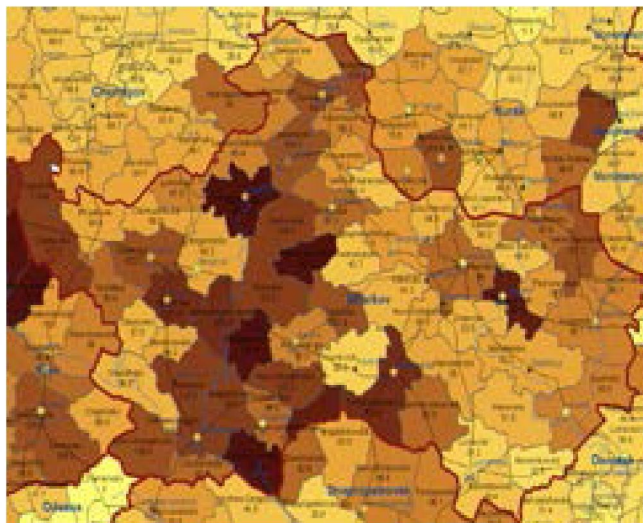
Map 1: USSR Crude Death Rate in 1933



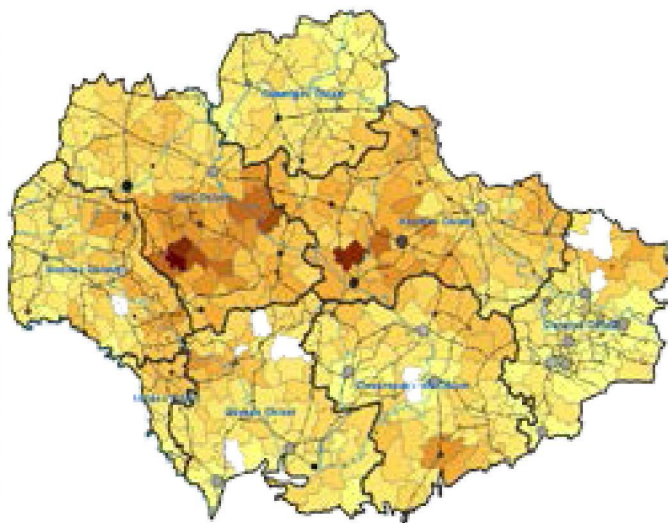
Map 2: China Famine Severity in 1956-60

## RESULTS AND DISCUSSION.

These maps provide indicators of the geographical impact of the famine as measured by the indicators used. Explanations for the famine need to explain the geographical and chronological pattern provided by these indicators. Map 3 provides a more detailed view of the pattern of mortality on the Ukrainian Russian border between Kharkov *oblast* and Kursk *oblast*. Map 4 provides a more detailed picture of mortality in and around the separate *oblasts* of Ukraine in 1933. Standard arguments associating high mortality with areas of central grain collections would expect mortality to be highest in the main central grain collection oblasts of Vinnitsa, Odessa and Dnepropetrovsk.



*Map 3: Death rates in the raions on the Ukrainian/Russian border in 1933*



*Map 4: Death rates in the raions of Ukraine in 1933*

## CONCLUSIONS.

It is demonstrated that between Kharkov & Kursk oblasts there was no uniform sharp decline in mortality passing from Ukraine to Russia. It is also demonstrated that mortality was highest in Kiev and Kharkov oblasts and not in the oblasts of centralized grain collections. Ukraine's failure to fulfill the impossibly high central grain procurement targets, not only led to more pressure being placed on the areas of central grain procurement, but also on a reduction of supplies of central grain to Ukrainian consumers and especially to Kiev city. Wheatcroft hypothesizes that Kiev could only have been provided with minimal food as a result of decentralized collections carried out after the completion of central collections, i.e. after January 1933. These would have been organized by the oblast party officials and would be limited to the area of the oblast. This is an explanation, which would explain the geography and chronology of the famine. The next step will be to test these hypotheses and to assemble raion level age specific data from the 1939 census to see whether the famine indicators provided by the census supports the results from the registration data.

## REFERENCES.

1. Уиткрофт С. (2013). 'Показатели Демографического кризиса в период голода в СССР'. *Голод в СССР, 1929-33*, Volume 3, Moscow, see <http://www.rusarchives.ru/publication/wheatcroft-pokazateli-demografy-crizis-golod-sssr>; and Уиткрофт С., Гарнаут А. (2013). 'Потери населения в отдельных районах СССР (1929–1934 гг.)', pp. 376–391, in *Голод 1933. Українці: Зб. наук. праць*. – Kiev: ДП «НБЦ «Пріоритети».
2. Russian State Archive of Economics (RGAE) Fond 1562, opus 329, dela 28