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Global, regional, and national levels of neonatal, infant, and under-5 mortality 1990-2013: a systematic analysis

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The Global Burden of Disease 2013 Child Mortality Collaboration

Abstract

Background

Remarkable financial and political efforts have been focused on reducing child mortality for the past a few decades. Timely measurements of levels and trends in under-5 mortality are important for assessing progress towards the Millennium Development Goal 4 (MDG 4) target of reducing child mortality by two-thirds from 1990 to 2015, and identifying success models.

Methods

We generated updated estimates of child mortality in early neonatal (0-6 days), late neonatal (7-28 days), post-neonatal (29-364 days), childhood (1 – 4 years) and under-5 (0 – 4 years) age groups for 188 countries from 1970 to 2013 using more than 29,000 survey, census, vital registration and sample registration data points. Gaussian process regression with adjustments for bias and non-sampling error was used to synthesize the data on under-5 mortality for each country. A separate model was used to estimate mortality for more detailed age groups. Explanatory mixed effects regression models were used to examine the relationship between under-five mortality and income per capita, maternal education, HIV child death rates, secular shifts, and other factors. Shapley decomposition was used to quantify the contribution of these different factors and birth numbers to the change in numbers of deaths in under-5 age groups from 1990 to 2013. Under-5 mortality rate scenarios were constructed from 2013 to 2030 using observed rates of change between 2000 and 2013.

Findings

We estimate that 6.3 million (5.8, 6.9) children died in 2013 under-5, a 65% reduction from 18.0 million (17.5, 18.6) in 1970. In 2013, child mortality rates range from a high of 152.1 per 1000 (130.0-177.0) in Guinea-Bissau to 2.3 (1.8-2.9) per 1000 In Singapore. From 1990 to 2013, annual rates of change ranged from -6.5% to 0.9%. 101 out of 188 countries, including 43 out of 48 countries in Sub-Saharan Africa, have seen faster decline in child mortality rate from 2000-2013 comparing to 1990-2000. In 2013, neonatal deaths account for 41.6% of under-five deaths up from 37.3% in 1990. Comparing 2013 with 1990, rising numbers of births, particularly in sub-Saharan Africa, led to 1.4 million more child deaths, rising income per capita and maternal education led to 859 thousand and 2.4 million fewer deaths, respectively. Changes in secular trend led to 4.1 million fewer deaths. Unexplained factors only accounted for -4% of the change in child deaths. In 23 developing countries, there is evidence that declines since 2000 have been faster than predicted on the basis of income, education and secular shift alone.

Interpretation

Only 29 developing countries are expected to achieve MDG 4. Declines since 2000 are accelerating in many developing countries particularly in sub-Saharan Africa. It is plausible but not definitive that the Millennium Declaration and increased development assistance for health have been a factor in faster declines in some developing countries. Without further accelerated progress many countries in West and Central Africa will still have high levels of under-five mortality in 2030.

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Introduction

Over the past few decades there has been substantial political, donor, and country focus on reducing child mortality. The Millennium Development Goal 4 (MDG 4) target of reducing child mortality by two-thirds from 1990 to 2015 has captured high-level leaders' attention.[1–5] The UN Commission for Accountability for Women's and Children's Health is a further reminder of intensified interest, along with numerous initiatives from donor organizations.[4,6,7] Global interest in child mortality reduction is not new; the child survival revolution,[8] Jim Grant's pioneering work at UNICEF on child interventions,[9] and the Health for All by the Year 2000 campaign[10] are indicative of the global focus on improving child survival that began more than three decades ago. Key actors such as the governments of the United States, Ethiopia, and India, together with UNICEF, are arguing for a continued post-2015 focus on further reductions in child mortality to eliminate all child deaths from preventable causes in our lifetime.[1] This global goal is primarily motivated not only by the huge disparities between and within nations in child mortality rates, but also by compelling evidence that child mortality can be reduced even in low-resource settings.[11,12]

Child mortality worldwide is declining and has been in many countries for many decades.[1,13–20] The declines achieved in high-, middle-, and low-income countries surely count among the more important achievements for humanity over the last 60 years.[21–27] Four types of interconnected explanations have been advanced for the sustained but heterogeneous declines in child mortality. Demographers and other social scientists have identified long-term relationships between child mortality and maternal education, income per capita, and technology change.[28–32] Health system researchers have explained why some health systems are able to achieve faster rates of decline or lower levels of child mortality at similar levels of income and health expenditure.[33] More recently, detailed analyses by the Countdown to 2015 and other groups have sought to explain levels and trends in child mortality through the coverage of a short list of proven technologies.[5,34] Political scientists have called attention to the potential role of global collective action, such as the Millennium Declaration itself, as a key contributor to social phenomenon and health development.[35,36] All of these explanations have merit; understanding the balance and interconnection between them may provide important insights for future global and national action to accelerate declines in child mortality.

Timely, local, and valid assessments of trends in child mortality rates along with the associated drivers of these trends can provide an important input to national, regional, and global debates on next steps. While the long-term trend in child mortality has been downward, there is important heterogeneity across countries and age-groups. Understanding this heterogeneity can help to catalyse and optimise a process of shared learning from success stories as well as identify critical areas requiring more attention.

The Global Burden of Diseases, Injuries, and Risk Factors Study 2013 (GBD 2013) provides an opportunity to examine the levels and trends of child mortality, and to explore key factors associated with progress. In this paper, we use the GBD 2013 to report on three interrelated themes: 1) estimate the levels and trends in early neonatal (0 – 6 days), late neonatal (7 – 28 days), postneonatal (29 – 364 days), childhood (1 – 4 years) and under-5 (0 – 4 years) mortality from 1990 to 2013 for 188 countries (we have added one additional country to GBD2013[37] as we have included both Sudan and South Sudan in this analysis) using the most up-to-date data and methods; 2) explore the contribution of broad drivers of child mortality over the past few decades and whether there have been accelerated reductions beyond what might have been expected post 2000; and 3) forecast child mortality to 2030 in order to identify populations that are likely to be the main challenges to further global progress with child survival strategies in the mid-term.

Methods

Estimating child, infant, and neonatal mortality by country 1990-2013

We use the broad data analysis strategy from the Global Burden of Diseases, Injuries and Risk Factors Study 2010 (GBD 2010) for measuring national trends in child mortality. The accompanying appendix summarises the methods that have been used in multiple previous studies,[13,14,18] including further refinements based on critical feedback for the GBD 2010. Figure 1 shows the analytical steps in generating estimates of under-5 mortality. There are three components in this process. We begin with an analysis of the raw data on child mortality where we employ improved formal demographic methods to analyse empirical data on child deaths reported from censuses, vital registration systems, sample registration systems, disease surveillance systems and various surveys with different birth history modules. Demographic techniques applied to major sources of data collectively generate over 29,000 child mortality point estimates for countries in various years given that there might be multiple mortality estimates from different sources for a specific country in a given year. Next, we synthesise child mortality data for each country following a three-step process. First, we apply a non-linear mixed effects model to examine the relationship between child mortality, lagged distributed income per capita (LDI), maternal education, and the crude death rate from HIV/AIDS in the under-5 age group. In the second stage, spatial-temporal regression is applied to the residuals from the first stage regression where we effectively "borrow strength" over time and across countries within the same GBD region. Results from the second step are then used as priors in the third stage where we apply a Gaussian process regression (GPR) to generate best estimates of child mortality with a 95% uncertainty interval. In the final component, we apply an age and sex model to estimate age-specific and sex-specific mortality for early neonatal, late neonatal, postneonatal, and childhood age groups. The age and sex

model improves upon the GBD 2010[18] by applying a mixed effects model that accounts for the differential effect of the HIV/AIDS epidemic on age-specific mortality among the neonatal age groups and post-neonatal deaths under age 5. Detailed descriptions of each of these components are provided in the appendix.

Data and estimates for under-5 mortality, as well as visualization of model fits, are shown in the appendix for 188 countries.

Factors associated with child mortality trends

We explore the correlates of child mortality to elucidate the contribution of different factors to recent changes in under-5 mortality rates. We estimate the following equation using mixed effects linear regression,

$$\ln(5q0) = \beta_0 + \beta_1 * \ln(LDI_{cy}) + \beta_2 * maternal\ education_{cy} + \beta_3 * HIV_{cy} + \sum_{s=1}^{308} \alpha_s * year\_GBD\ super\ region_s + \gamma_c + \varepsilon_{cy} \quad \text{Equation 1}$$

where *c* is country, *y* is year, γ_c is a random effect on country, *LDI* is lagged distributed income per capita[38] for country *c* in year *y*, *maternal education* is the average years of education earned by women in the age group 15 to 49, HIV_{cy} is HIV-related child crude death rate[39,40] for country *c* in year *y* as estimated using Spectrum,[41,42] and ${}_5q_0$ is the probability of death before the age of five estimated from this study. We also added combined year and GBD super region fixed effects, *year_GBD super region*, to capture the differential secular trends of child mortality by geographic units. Following Preston,[32] we use time (year) as a proxy for changes in availability and use of technologies designed to improve child health that are correlated with time – here we use the term "secular trend" to more broadly encompass the availability of specific child health technologies, as well as changes in our understanding of how to more effectively deliver health interventions, and the interaction of health programs with other technological change such as the expansion of roads or other related infrastructure.

We tested alternative model specifications including within and between estimators,[43] country fixed effects, and mixed effects models with different auto-regressive terms; the general magnitude of the effects for income, education, and time were robust to specification. We use the specification above because it is the simplest to explain, and there was no qualitative difference in our results across model specifications. We applied Shapley decomposition to this regression equation[44,45] to quantify the contribution of changes in income per capita, maternal education, HIV, secular trend, births, and a collective of "other" factors to the change in under-5 mortality from 1990 to 2013. Shapley decomposition is a method with a game theoretical foundation that allows for decomposition of changes in a variable due to different contributory factors. Specifically, to examine the impact of these six factors on changes in under-5 deaths from 1990 to 2013, 64 scenarios were constructed where all six factors take on values from either 1990 or 2013 in each specific scenario. To compute the impact of any

one factor, we examine 32 pairs of scenarios where all five remaining factors are kept constant. For each pair, we then calculate the change in under-5 deaths, where only the factor of interest changes value, and use this as a measure of the contribution of this specific factor to the change in under-5 deaths. The average of the changes in all 32 pairs of scenarios is the contribution of one factor when all other factors remain constant. The same process is repeated for all six factors. We used Equation 1 to predict annual rates of change for each country from 2000 to 2013 using observed changes in income per capita and maternal education and counterfactual levels of HIV in the absence of intervention. Counterfactual HIV death rates were generated using the UNAIDS Spectrum models[39,40] by setting prevention of mother-to-child transmission (PMTCT), co-trimoxazole prophylaxis, and antiretroviral therapy (ART) to zero for all years. These predicted rates provide an estimate of the impact of changes in income per capita, education, and the long-term secular trend by GBD super-region based on a comparison with observed rates of change.

Scenarios for under-5 mortality in 2030

We develop four scenarios to forecast the under-5 mortality rate in 2030 based on the distribution of observed annualised rates of change from 2000 to 2013. Scenario 1 uses the observed rate of change from 2000 to 2013 for each country to project to 2030. Child mortality rates in any country with an observed increase in mortality over this period are assumed to stay at a constant level over the projection period. In scenario 2, all countries experience the best 75th percentile rate of change measured across all countries from 2000 to 2013. In scenario 3, all countries experience a rate of change corresponding to the best 90th percentile, and in scenario 4, to the best 95th percentile rate of change. We use observed rates of change for all-cause mortality by detailed age groups: early neonatal, late neonatal, postneonatal, and child deaths at ages 1-4, to also generate scenarios for the age composition of under-5 deaths. Forecasts of the number of deaths are based on these predicted rates and UN Population Division fertility forecasts.[46] Forecasted age-specific and sex-specific mortality were then rescaled to match the forecasted all-cause under-5 mortality rate in 2030.

Analyses were done using Stata 13.1, R versions 2.15.2, 3.0.1, and 3.0.2, and Python 2.7.3.

Results

Figures 2a and 2b show the trend in the global under-5 mortality rate and the annualised rate of change from 1970 to 2013. Worldwide, under-5 mortality has declined by slightly more than two-thirds (-69.5%), from 146 per 1000 in 1970 to 85 per 1000 in 1990 and to 45 per 1000 in 2013. The global number of under-5 deaths declined from 18·0 million in 1970 to 12·2 million in 1990 and to 6·3 million in 2013. Child mortality fell at an annual rate of between -2·5 and -3·0% from 1970 until 1985 but slowed beginning in 1985, and was at its lowest (-1·2%) in 1994. Progress in reducing child mortality has steadily accelerated since 1997. Indeed, since 2003, the global child mortality rate has declined at a faster rate than in the 1970s and 1980s. Tables 1a and 1b show early neonatal, late neonatal, postneonatal, childhood (1-4 years), and under-5 mortality rates and number of deaths for 1970, 1980, 1990, 2000, 2010, and 2013. In 2013, 31·9% of under-5 deaths worldwide occurred in the early neonatal period, 9·7% in the late neonatal period, 29·1% in the postneonatal period and 29·1% between the ages of 1 – 4

years. The age composition of global child deaths has progressively changed over the last 43 years; the proportion of child deaths in the neonatal (early and late) period increased from 33·1% in 1970 to 37·3% 1990 and to 41·6% in 2013. Annual rates of change over the period 1970 to 2013 have been very similar (close to -3%) for late neonatal, postneonatal, and ages 1 – 4 years, but slower, -1·9%, for the early neonatal period. In the period 2000 to 2013, the annual rate of change for the early neonatal period was 1·2 to 1·4 percentage points slower than for other under-5 age-groups, albeit faster than the early neonatal rate of decline in previous decades. Trends for super-regions and annualized rates of change are shown in Web figure 2 in the appendix.

Table 2 provides estimates and uncertainty intervals for early neonatal, late neonatal, postneonatal, childhood, and under-5 mortality rate by country for 2013, as well as under-5 deaths and the annualised rates of change in under-5 mortality rate from 1990 to 2000, 2000 to 2013, and 1990 to 2013 for 188 countries and 21 GBD regions. Under-5 mortality rates range 66·9-fold from 152.1 per thousand in Guinea-Bissau to 2·3 per thousand in Singapore in 2013. The 10 countries with the highest under-5 mortality rate in 2013 are all in sub-Saharan Africa. 56 countries have achieved under-5 mortality rates below 10 per 1000 in 2013; 10 of them are developing countries.[47] 25 countries in 2013 account for 80% of child deaths in the world (Afghanistan, Angola, Bangladesh, Brazil, Burkina Faso, Cameroon, Chad, China, Cote d'Ivoire, Democratic Republic of the Congo, Ethiopia, Ghana, India, Indonesia, Kenya, Malawi, Mali, Mozambique, Niger, Nigeria, Pakistan, Philippines, Sudan, Tanzania, and Uganda). Neonatal mortality rates range from 42·4 per thousand in Mali to 1·2 in Singapore in 2013. Based on the observed rates of change from 1990 to 2013, 29 out of 138 developing countries are likely to achieve the MDG 4 target of a two-thirds reduction in child mortality from 1990 levels by 2015 (Armenia, Bahrain, Bangladesh, Benin, Bhutan, Brazil, Burma, China, Egypt, El Salvador, Ethiopia, Federated States of Micronesia, Grenada, Iran, Lebanon, Liberia, Libya, Maldives, Nepal, Nicaragua, Oman, Peru, Saudi Arabia, Sri Lanka, Thailand, Timor-Leste, Tunisia, Turkey, and United Arab Emirates).

Figure 3 compares annualised rates of change over the period from 2000 to 2013 with the period 1990 to 2000. Countries plotted under the equivalence line experienced faster rate of change from 2000 to 2013 comparing to 1990 to 2000. The MDG 4 target rate of -4·4% per year is shown for reference. 101 of 188 countries had faster rates of decline between 2000 and 2013 than for the period 1990 to 2000. Of note, 90% (43 out of 48) of countries in sub-Saharan Africa had an acceleration in the rate of decline. 21 of 29 countries in Central Europe, Eastern Europe, and Central Asia have also had accelerated declines. Conversely, 22 of 29 countries in Latin America and the Caribbean had slower rates of decline post 2000 than before. In addition, slower rates of change were observed, on average, in nine regions. Large differences in the rate of change of child mortality are apparent in several small island nations, most likely due to larger random fluctuations over time. For convenience, Figure 3 excludes North Korea and The Bahamas due to substantially higher rates of change in these two countries that distort the scales in the figure. The speed of decline in child mortality has been fastest in southern sub-Saharan Africa where child mortality increased in the 1990s likely due to the HIV epidemic, and then subsequently declined with the scale-up of PMTCT and ART.[48–53] Bangladesh has maintained a consistently higher rate of change of around -4·7 to -5·5% since 1970, slightly higher than in neighbouring India (-3·0 to -4·2%), although the pace of child mortality change in India has picked up over the last 13 years, reaching -4·5%

in 2013. Timor-Leste had one of the fastest rates of change (-7·6% per year) since 2000. Nine countries account for two thirds of the global decrease of 3·0 million child deaths in 2013 compared with 2000 (in order of magnitude): India, China, Ethiopia, Bangladesh, Indonesia, Pakistan, Brazil, Afghanistan, and South Africa.

Summary results for four regression model specifications examining the broad determinants of change in under-5 mortality rates are shown in Table 3. These models account for a very large share of the observed variation in under-5 mortality rates – R-squared values range from 0·84 to 0·98. For the mixed effects regression model, the impact of a 10% increase in income per capita corresponds to a 1·4% decrease in under-5 mortality. A one year increase in maternal education corresponds to an 8·6% percent decrease in under-5 deaths. Our findings thus confirm and quantify the findings of other researchers that improving levels of maternal education in low- and middle-income countries will have a far greater and impact on reducing child mortality compared with any other intervention [28–32]. The year fixed effects for each super-region that capture the secular trend unobserved by income, maternal education, or HIV were essentially linear for all regions, even though the slope and level of these regional time trends were quite heterogeneous across regions. The average annual change explained by the secular trend was -2·3% overall, ranging from -1·4% to -3·3% across regions.

We have also estimated the contribution of changes in income, education, birth numbers, time as a proxy for technological progress, HIV, and other (unobserved) factors to changes in the number of child deaths in each country, comparing 1990 with 2013. At the global level, higher numbers of births in countries with higher under-5 mortality rates contributed to 1·4 million (1·39,1·42) more child deaths in 2013 compared to 1990. Similarly, the HIV/AIDS epidemic has resulted in a 39·3 thousand (36·1,42·6) increase in under-5 deaths from 1990 to 2013. Rising levels of income, on the other hand, particularly after 2000, led to more than three-quarters of a million fewer deaths in 2013 while higher maternal education led to 2·4 (2·2, 2·6) million fewer deaths. The secular trend, which we posit to likely represent technological changes and their diffusion, accounted for 4·1 (3·4,4·8) million fewer deaths in 2013 than in 1990. Changes in other factors not accounted for in this simple model led to an increase of 246·9 (-388·5,870·2) thousand deaths in 2013 compared with 1990. Figure 4 provides the results of the Shapley decomposition of changes in under-5 mortality for the seven GBD super-regions. The largest decrease in the number of under-5 deaths occurred in south Asia where the secular shift contributed the most, followed by maternal education, and then income. Other factors actually led to an increase in the number of child deaths; in other words, overall, south Asia has had less progress than expected in reducing child deaths because of unobserved other factors. Child deaths in south-east Asia, east Asia, and Oceania have also declined, with most factors except HIV making important contributions to observed changes. In sub-Saharan Africa, increasing birth numbers in the absence of other change would have led to an increase in under-5 deaths. The main contributors to lower child mortality were secular factors and maternal education. More detail on the Shapley decomposition of changes in the number of under-5 deaths for the 21 GBD regions is provided in Table 4.

To quantify the potential contribution of global and national action following the Millennium Declaration on trends in under-5 mortality, Figure 5 shows which countries had a significantly faster rate of decline than expected. Expected trends are based on observed income per capita, maternal

education, secular trends, and HIV child deaths in the absence of intervention (what would happen were not for the global effort in scaling up ART and PMTCT). Twelve countries in sub-Saharan Africa (Botswana, Burkina Faso, Burundi, Ethiopia, Liberia, Mozambique, Niger, Rwanda, Senegal, Sao Tome and Principe, South Africa, and Zambia) had faster than expected declines. In Asia, child mortality in China, Cambodia, Maldives, Timor-Leste, and Turkey has declined faster than predicted, as it has in six countries in Latin America (Bolivia, Brazil, El Salvador, Guatemala, Nicaragua, and Peru). Countries with slower than expected declines include five in Africa and four in Central Asia, as well as Pakistan and Malaysia.

World in 2030

Figure 6 shows possible global trends in under-5 mortality through to 2030 based on the four scenarios for change in child mortality defined earlier. Even under the most ambitious scenario for reducing child mortality, the global number of child deaths in 2030 would still be around 2·4 million, about 4 million less than the current number, but still substantial. Continuing current rates of change would lead to an expected 3·8 million deaths in 2030. These scenarios assume the UN Population Division forecasts of fertility; faster rates of fertility decline than projected by the UN, which might be achieved through scale-up of family planning services, are not factored into these scenarios, but would lead to fewer deaths. Figure 7 shows the expected level of child mortality in various countries in 2030 if rates of change continue as currently observed. Several countries, under this scenario of "business as usual", would still be expected to have comparatively high levels of under-5 mortality in 2030. Under-5 mortality rates in excess of 100 per 1000 live births would still prevail in the Central African Republic, Guinea-Bissau, and Chad; those with expected rates above 70 per 1000 include Nigeria, Democratic Republic of the Congo, and Mali. Our projections suggest that the global age composition of under-5 deaths would continue to shift towards a younger structure. In 2013, neonatal deaths account for 41·6% of under-5 deaths globally. Under this scenario of no acceleration in observed rates of decline, this would increase only marginally to 44·7% in 2030, by which time postneonatal deaths and those at ages 1-4 years would account, respectively, for 28·0% and 27·3% of under-5 deaths worldwide.

Discussion

The dominant global health focus on improving child survival over the past four decades or so has been extremely successful, although more remains to be done. Child mortality levels declined, on average, by 2·7% per year from 1970 to 1985, then slowed down for a decade until 1997, began to accelerate, and since 2005, have declined by an average of 3·5% per year. Accelerated declines have occurred in India, nearly all countries in sub-Saharan Africa, and eastern Europe. Conversely, the rate of decline in child mortality has decelerated in many Latin America countries as shown in Web figure 2. As a result, 48 (29 out of which are developing) countries are expected to achieve the MDG 4 target rate of 4·4% per year by 2015. The annual number of under-5 deaths has declined by about two-thirds since 1970, falling below 7 million for the first time in 2010 and, based on patterns of change since 2000, should reach 5 million in 2021 and 4 million in 2029. If current trends persist, more than 120 countries would be expected to have child mortality levels below 20 per 1000 in 2030. By our projection, 18 countries will have under-5 mortality rate that is higher than 50 per 1000 in 2030, and among them, 8 countries

(Central African Republic, Chad, Democratic Republic of the Congo, Guinea-Bissau, Lesotho, Mali, Nigeria, and Somalia) would, however, still have under-5 mortality rates in excess of 70 per 1000. Walker et al[54] have projected under-5 mortality rate to 2035 based on the observed rate of change in the coverage of interventions. Their analysis suggests that 37 countries will likely still have child mortality rates over 50 per 1,000 live births in year 2035 if country level trends in coverage continue unchanged.

Our analysis confirms the findings of previous studies that the majority of countries will not achieve the MDG 4 target. In our view, that ought not to be the standard by which country progress is measured. Indeed, our analysis of observed and expected rates of change since the Millennium Declaration suggests that accelerated declines in child mortality observed since then cannot be explained by income, education, or the secular trend (including technological interventions) alone. In fact, in 23 developing countries, under-5 mortality rates have declined significantly faster than expected, including in a number of southern African countries that experienced increases in the 1990s related to the HIV epidemic and which have subsequently benefited from the scale-up of ART and PMTCT. It is entirely possible that the commendable progress in this group of countries, over and above what might have been expected, is largely attributable to global action following the MDGs that led to increased funding for HIV control programs. In Niger, this has been carefully documented.[31] The case could also be made that accelerated declines in Cambodia, Timor-Leste, Guatemala, and El Salvador post the MDGs are linked both to government policy change and increased development assistance for health.[55] Changes in Turkey and China, both of which have received relatively little development assistance per capita, are more likely related to national policy change and health system strengthening.[56–59] Rudan and colleagues[58] have documented the rapid decline in child mortality in China and analyses by Feng et al[59] have demonstrated the important role that socioeconomic and health system determinants have played in reducing child mortality in China.

The reasons underlying these faster than expected declines in child mortality are undoubtedly multifactorial and complex, and deserve further study, but prominent among them is surely the adoption of national policies that promote development and greater access to essential child care services among the worst off as well as increased investments in health and related sectors. It is also possible that the MDG declaration and subsequent political momentum influenced the health investment landscape, stimulating a more effective and comprehensive response by bilateral donors, GAVI, PEPFAR, GFATM, the World Bank, and other development partners to ensure the more widespread dissemination of new technologies and the remarkable progress against HIV. Indeed, the attention that has been paid to achieving the MDGs more broadly, and not merely those directly concerned with health, has undoubtedly aided progress in reducing child mortality by improving broader development indicators such as education, income and the environment, all of which are likely to lead to improved child survival. In contrast, 17 countries had rates of change in under-5 mortality significantly slower than expected. A more detailed case study analysis of these countries compared to those with faster than expected declines could provide further insights into bottlenecks and circumstances that hinder progress.

Our analysis of long-term trends in child mortality provides some insight into the comparative contribution of different factors. Globally, income growth over the period 1990 to 2013 accounted for only about 14·9% (13·5,16·3) of the change in the number of child deaths. Although correlated (correlation coefficient of 0·72) with income, maternal education had a much larger impact on declines in child mortality (42·3% (39·2,45·1)), a finding that is consistent with previous research, but now provides a quantitative assessment of just how important mothers education is in reducing child mortality.[31,60–65] These findings reinforce the continued importance of investments in primary and secondary schooling for girls in particular. Continued high total fertility rates, especially in sub-Saharan Africa, have led to increased numbers of births, which, all other things being equal, has led to nearly one million more child deaths in 2013 compared to 2000. The renewed focus on contraceptive programs for low-income countries[66–68] is thus very timely and a critical component of national strategies to assist countries in reducing the number of child deaths.

Preston and others[32,69] have noted in a series of analyses spanning four decades that the relationship between life expectancy, income, and education has been shifting upwards over time; that is, the same level of income and education today is associated with much lower levels of age-specific mortality and higher life expectancy than before. They attribute this shift correlated with time to the advancement of technology and the diffusion of such advancement; technology is defined in this case very broadly to encompass both new tools but also new ways in which societies are organised to deliver programs and interventions. We find the same major shift in the relationship in our analysis of child mortality. The way that the secular trend is estimated would also capture systematic improvements in the average efficiency of societies' ability to convert improvements in income and education into child mortality reductions, such as improved efficiency of production. Overall, the secular trend accounts for the largest share (72·1% (60·4%-82·5%)) of the change in child deaths from 1990 with 2013. New drugs, vaccines, diagnostics, procedures, and public health campaigns are part of this shift. In the last 23 years, this would include innovations such as insecticide treated bednets (ITNs), technologies to prevent mother-to-child transmission of HIV (PMTCT), antiretroviral therapy (ART), rotavirus vaccine,[70,71] pneumococcal[72] and other vaccines, and many other life-saving technologies. The dominant role of new technologies and more efficient ways of diffusing them in poor countries emphasises the importance of continued innovation in drugs, vaccines, public health programs, and the delivery of healthcare for continued declines in under-5 mortality. Indeed, our assessment of the comparative role of health technologies in bringing about the massive declines in child mortality over the past few decades provides indirect evidence for donors, researchers, and countries alike of the critical impact that these investments have had.

The variation in child mortality around the income and education curve at a given moment in time has been interpreted as variation in country performance in producing better child health,[31,73,74] a component of which may be related to health systems. In our study, we control for time invariant differences between countries that may be related to the environment or other fixed attributes. We find that unobserved factors beyond income, maternal education, time, HIV, birth and time-invariant country factors account for only about 4·3% (-6·7,15·2) of the global change in under-5 deaths between 1990 and 2013. Although other factors quantitatively have a much greater role in reductions in child

deaths since 1990, understanding the local policy factors correlated with this unobserved change could provide important insights and opportunities for shared learning. Nevertheless, the fact that our model can explain 97·2% of the observed variation in under-5 mortality rates provides strong evidence to support the continued investment in the primary determinants of lower child mortality, namely maternal education, income growth and the development and application of new technologies.

While substantial progress has been made in reducing child mortality worldwide, our scenario analysis of projected under-5 mortality in 2030 provides a sobering reminder about the magnitude of the task ahead. Even if current, relatively rapid declines in mortality in low-income countries of sub-Saharan Africa persist, along with declines observed elsewhere, over 3·8 million children will still die before their fifth birthday in 2030 unless the speed of decline can be accelerated. Progress is being hindered in part by fertility patterns where the fraction of births worldwide is likely to increasingly shift towards sub-Saharan Africa where mortality rates are highest. This shift in the distribution of births means that global progress in reducing child mortality, even if every country maintains the same rate of decline, will slow. The countries that will have the highest rates of child mortality in 2030 based on current trends are concentrated in West and Central Africa. Ambitious goals to reduce under-5 mortality to 20 per 1000 as proposed by the US, Ethiopia, and India, will need to strategically focus on countries in these regions.[1] Anticipating the pace of these declines implies that donors may want to prioritize funding for some countries based on their likely future under-5 mortality rate. Conversely, the pace of child mortality decline in some countries such as India for example, is accelerating, such that by 2030, according to our base scenario, India will have an under-5 mortality rate below 25 per 1000.

Over the past 6 years, multiple studies have been released on country levels and trends in child mortality.[1,13,14,75–83] At the global level, the UN and our (the GBD collaboration) estimates of the number of child deaths have largely converged. Appendix table 3 shows estimates from UNICEF and independent academic studies, including the GBD 2010 and this analysis. In their latest iteration, the UN Inter-agency Group for Child Mortality Estimation (IGME)[84] has modified their methods, resulting in higher mortality estimates for 1990. In some cases, this has substantially changed their estimates of annualised rates of decline. In some cases they now estimate that high-income countries such as Spain are under-reporting child deaths, despite the lack of direct evidence of under-reporting. Overall, the correlation between their estimates of the annualised rate of change from 1990 to 2007, published in 2012 and 2013, is 0·93. Likewise, the GBD effort has modified some methods such that the correlation of the annualised rate of change for the same period is 0·87 between GBD iterations. However, the uncertainty intervals on annualized rates of change between 2000 and 2010 generated as part of the GBD collaboration appear to be relatively robust, not over-lapping in only 8 cases out of 188. Continued improvements in methods and data availability, particularly for recent years, make the assessment of trends comparatively unstable. The correlation between UNICEF annual rates of change from 1990 to 2007 published in 2009 and in 2013 is 0·81. The correlation between this study and Rajaratnam et al.[85] is 0·84. Improvements in methods and data are to be encouraged, but these perhaps surprisingly modest correlations mean that the public health community must be cautious in over-interpreting trends.

This analysis has many limitations. First, in this study we attempt to explicitly model the non-sampling error that affects different surveys in each country. This approach avoids estimating false trends due to

compositional bias in the data available for a given year but depends on the validity of the estimates of non-sampling error. Unfortunately, there is no way to externally validate this process except in countries with complete vital registration systems—but most of these countries do not collect summary or complete birth history data. Second, the trend for the most recent years is a short-term forecast for many countries. Our estimates may be too high or too low in these cases and the GPR process appropriately generates widening uncertainty intervals for them. However, time lags between data collection and inclusion in our synthesis are shortening for many countries. For example, we include results from the Sample Registration System in India and also data for China through to 2012. Third, in our analysis of the factors contributing to under-5 mortality change in each region we include country random effects and fixed effects on year interacted with region. We may be underestimating the contribution of local policy and health system organization if these changes are correlated overtime within a region. Fourth, while we have systematically searched and identified sources of data on under-5 mortality, there are likely data sources that have not been identified. The large set of collaborators from 82 countries involved in this analysis has helped identify new sources and evaluate the quality of existing data, but there is more scope to expand the information base in the future. Fifth, we employed the Shapley decomposition method to parse out the contribution of different factors to changes in under-5 deaths. This method, although computationally intensive, is intuitive. Although other methods have been proposed to decompose impacts of different factors on indicators of interest, Shapley value decomposition, to our knowledge, is most suitable in our application.[86,87]

The vigorous debate on setting development goals for the post-2015 era is predicated on the belief that global goal setting and quantitative monitoring can catalyse change. This may well be the case. The acceleration of declines in under-5 mortality beyond that expected on the basis of income, education and the secular trend, particularly in a number of sub-Saharan African countries, coincides with the MDG era and increased investments in these countries in health and social development programs by a range of donors. As the end of the MDG era rapidly approaches, the global public health community might better serve the needs of countries by focusing on the accelerated declines post-2000 that we have reported here, rather than on which countries will achieve the arbitrary but seemingly useful targets set by the MDGs. Galvanising political commitment to ensuring life-saving technologies are implemented will be critical. The essential health intelligence that comes from large global monitoring efforts such as the GBD study will better focus attention on countries where progress has been disappointing. The consequences of not doing so – more than 3 million avoidable child deaths in 2030 – would be a scathing indictment of the failure of the donor, research, and international development community to collectively build on the impressive reductions in child mortality that we have come to expect.

Research in Context Panel: changes in methodology on mortality estimation for children under age 5

Continuous efforts have been made in improving child mortality estimation since the publication of GBD 2010.[18] In this study, significant improvements have been made on several fronts. First, we employ a

mixed effects model to adjust non-sampling data biases using source-type specific fixed effects across all countries and source-specific random effects within country. One specific data source is selected in each country as the reference source, and the difference in the summed fixed and random effects between other sources and the reference is subtracted from each non-reference source to adjust for data bias. In the case that multiple sources are selected as the reference, we take the average value of the selected sources. Over 200 all-cause mortality experts from around world have contributed to the selection of the reference data sources. Second, we use a nonlinear mixed effects model to more accurately capture the functional form between child mortality rate and other factors including HIV/AIDS. This has significant implications for the estimation of child mortality in the most recent time period where data are sparse and covariates have more pronounced impact on final estimates. Third, we have improved our mortality estimation strategy for neonatal deaths. The new strategy we employ accounts for the fact that few children die from HIV in the neonatal age group, and helps improve our estimated age distribution of deaths in ages under five.

Tables and figures

Figure 1. Child mortality estimation process for the Global Burden of Diseases, Injuries, and Risk Factors 2013 Study

VR = Vital registration. Cov = covariates.

Figure 2a. Global under-5 mortality rate, 1970 - 2013

Figure 2b. Annualised rate of change in global child mortality rate, 1970 – 2013

Table 1a. Global mortality rate (deaths per 1000 livebirths) for early neonatal, late neonatal, postneonatal, child and under 5 for 1970, 1980, 1990, 2000, and 2013.

Table 1.b. Global number of deaths (thousands) for early neonatal, late neonatal, postneonatal, child and under-5 age groups for 1970, 1980, 1990, 2000, and 2013.

Table 2. Early neonatal, late neonatal, postneonatal, childhood and under-5 mortality in 2013 for 188 countries and 21 Global Burden of Disease regions.

Global Burden of Disease regions are sorted alphabetically; countries within a region are sorted from most negative to most positive rate of change 2000-2013

Figure 3. Global annualised rate of change in under-5 mortality rate (%) from 1990-2000 and 2000-2013. Solid line shows the equivalence line between the two periods. Dashed lines show the MDG 4 target rate of 4·4% per year. Figure excludes The Bahamas and North Korea to make the axes more readable.

Solid line shows the equivalence line between the two periods. Dashed lines show the MDG 4 target rate of 4·4% per year. Figure excludes The Bahamas and North Korea to make the axes

more readable. CHN = China. EST = Estonia. IDN = Indonesia. GUY = Guyana. ETH = Ethiopia. TLS = Timor-Leste. IND = India. NER = Niger. PAK = Pakistan. NGA = Nigeria. MNE = Montenegro. ZAF = South Africa. COG = Congo. TON = Tonga. SWZ = Swaziland. BWA = Botswana.

Table 3. Regression models for the log of the under-5 mortality rate for different model specifications for 188 countries 1970-2013.

*Within-between estimator with AR(1) autocorrelation specification

** Within-between estimator without AR(1) autocorrelation specification

†Significant at 0·001 level

Combined GBD super-region and year fixed effects, as well as country level random effects, when included, not shown here

Table 4. Shapley decomposition analysis of the change in the number of deaths comparing 2013 to 1990 related to changes in income per capita, maternal education, HIV child death rate, births, secular shift measured by time, and unobserved factors for the world and 21 GBD regions.

Figure 4. Change in the number of deaths comparing 2013 to 1990 due to income per capita, maternal education, HIV child death rate, shift in secular trend, births and unobserved factors for seven GBD super-regions.

Figure 5. Countries with statistically significant differences between the observed rate of change in under-5 mortality 2000 to 2013 compared with the expected rate of change based on income, education, shift in secular trend and HIV death rates in the absence of intervention.

ATG = Antigua and Barbuda. DMA = Dominica. LCA = Saint Lucia. VCT = Saint Vincent and the Grenadines. GRD = Grenada. TTO = Trinidad and Tobago. BRB = Barbados. MDV = Maldives. TLS = Timor-Leste. COM = Comoros. MUS = Mauritius. SYC = Seychelles. MLT = Malta. SGP = Singapore. MHL = Marshall Islands. SLB = Solomon Islands. VUT = Vanuatu. FJI = Fiji. KIR = Kiribati. FSM = Federated States of Micronesia. WSM = Samoa. TON = Tonga.

Figure 6. Projected global under-5 deaths for four scenarios, 2013-2030. Scenarios have been defined by the distribution of observed rates of change 2000 to 2013.

Figure 7. Projected under-5 mortality rate in 2030 based on the observed rate of change for each country 2000 to 2013.

ATG = Antigua and Barbuda. DMA = Dominica. LCA = Saint Lucia. VCT = Saint Vincent and the Grenadines. GRD = Grenada. TTO = Trinidad and Tobago. BRB = Barbados. MDV = Maldives. TLS = Timor-Leste. COM = Comoros. MUS = Mauritius. SYC = Seychelles. MLT = Malta. SGP =

Singapore. MHL = Marshall Islands. SLB = Solomon Islands. VUT = Vanuatu. FJI = Fiji. KIR = Kiribati. FSM = Federated States of Micronesia. WSM = Samoa. TON = Tonga.

Appendix

Overview of methodology and updates since the GBD 2010 to all-cause mortality estimation

Web table 1. Source types used in child mortality bias correction.

Web table 2a. Under-5 mortality rate for five-year intervals from 1970 to 2013 for 188 countries and 21 Global Burden of Disease regions.

Web table 2b. Numbers of under-5 deaths for five-year intervals from 1970 to 2013 for 188 countries and 21 Global Burden of Disease regions.

Web table 3. Global under-5 mortality rates from several studies.

Web table 4. Data source list of child mortality data sources used in the GBD 2013.

Web table 5. Shapely decomposition analysis of the change in the number of deaths comparing 2013 to 1990 related to changes in income per capita, maternal education, HIV child death rate, births, secular trend, and unexplained factors for 188 GBD countries.

Web table 6. Number of years with data in each decade by country.

Web figure 1. Under-5 mortality rate for 188 countries.

Web figure 2. Regional rate of change in under-5 mortality rate, 1970-2013.

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Figure 1. Child mortality estimation process for the Global Burden of Diseases, Injuries, and Risk Factors 2013 Study

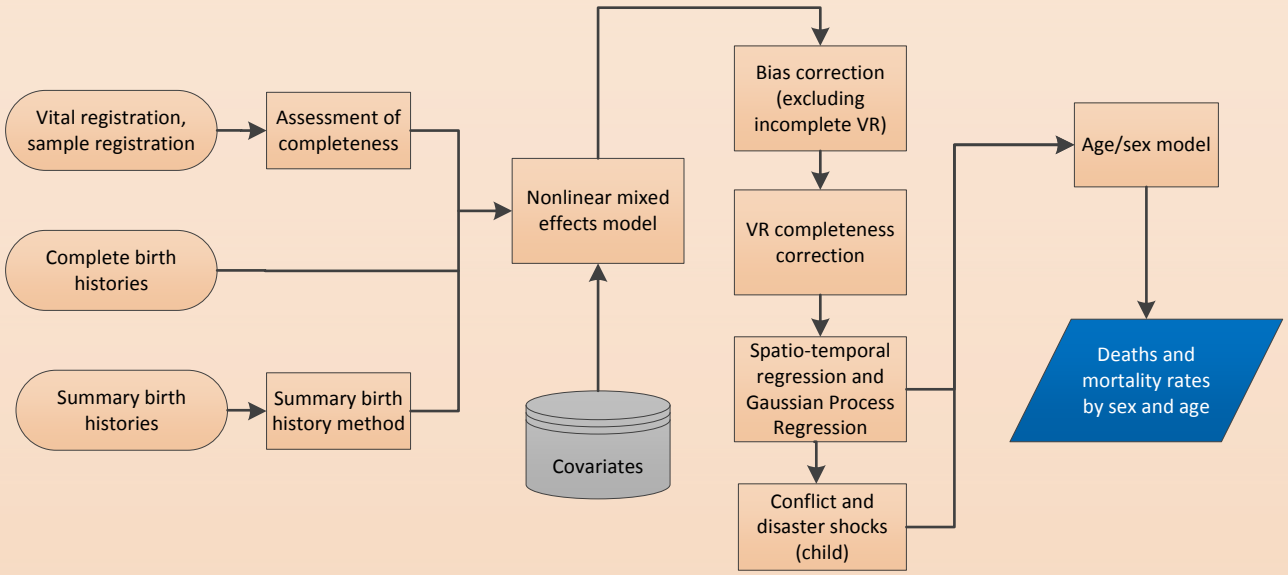

Figure 2a. Global under−5 mortality rate, 1970−2013.

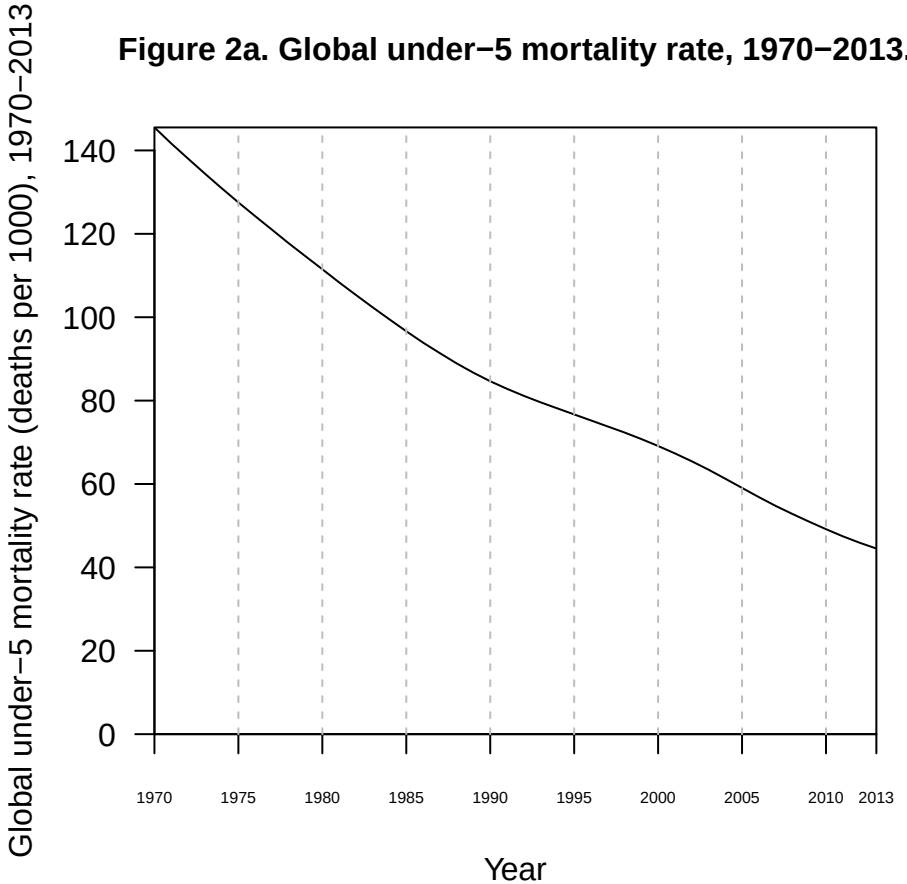

Figure 2b. Annualised rate of change in global under−5 mortality rate, 1970−2013.

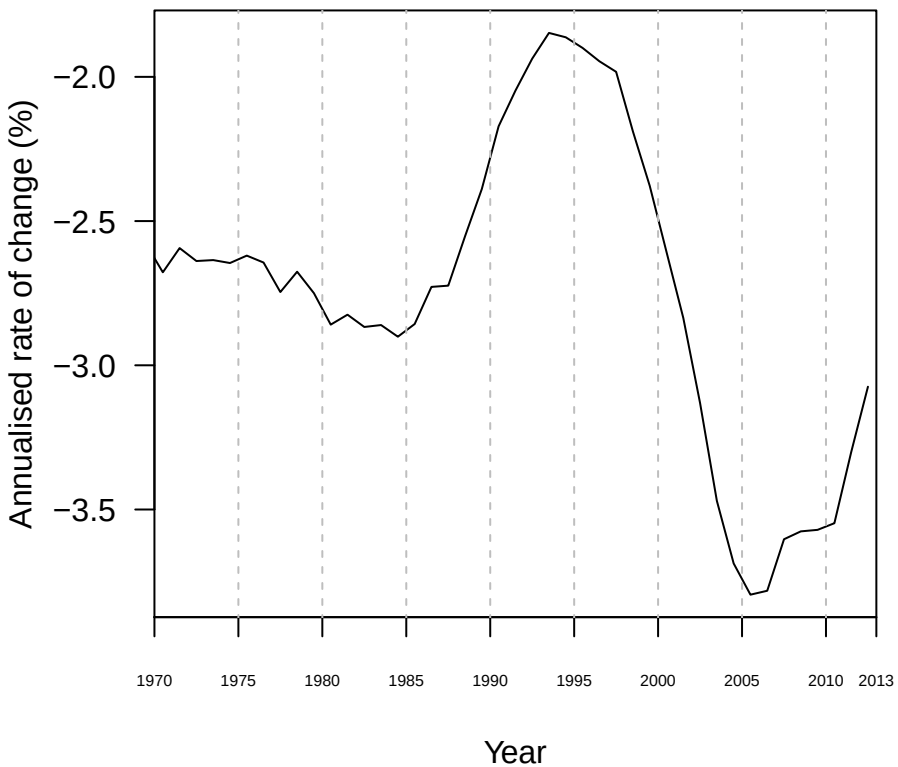

Figure 3. Global annualised rate of change in under−5 mortality rate (%) from 1990−2000 and 2000−2013. Solid line shows the equivalence line between the two periods. Dashed lines show the MDG4 target rate of 4.4% per year. Figure excludes The Bahamas and North Korea to make the axes more readable.

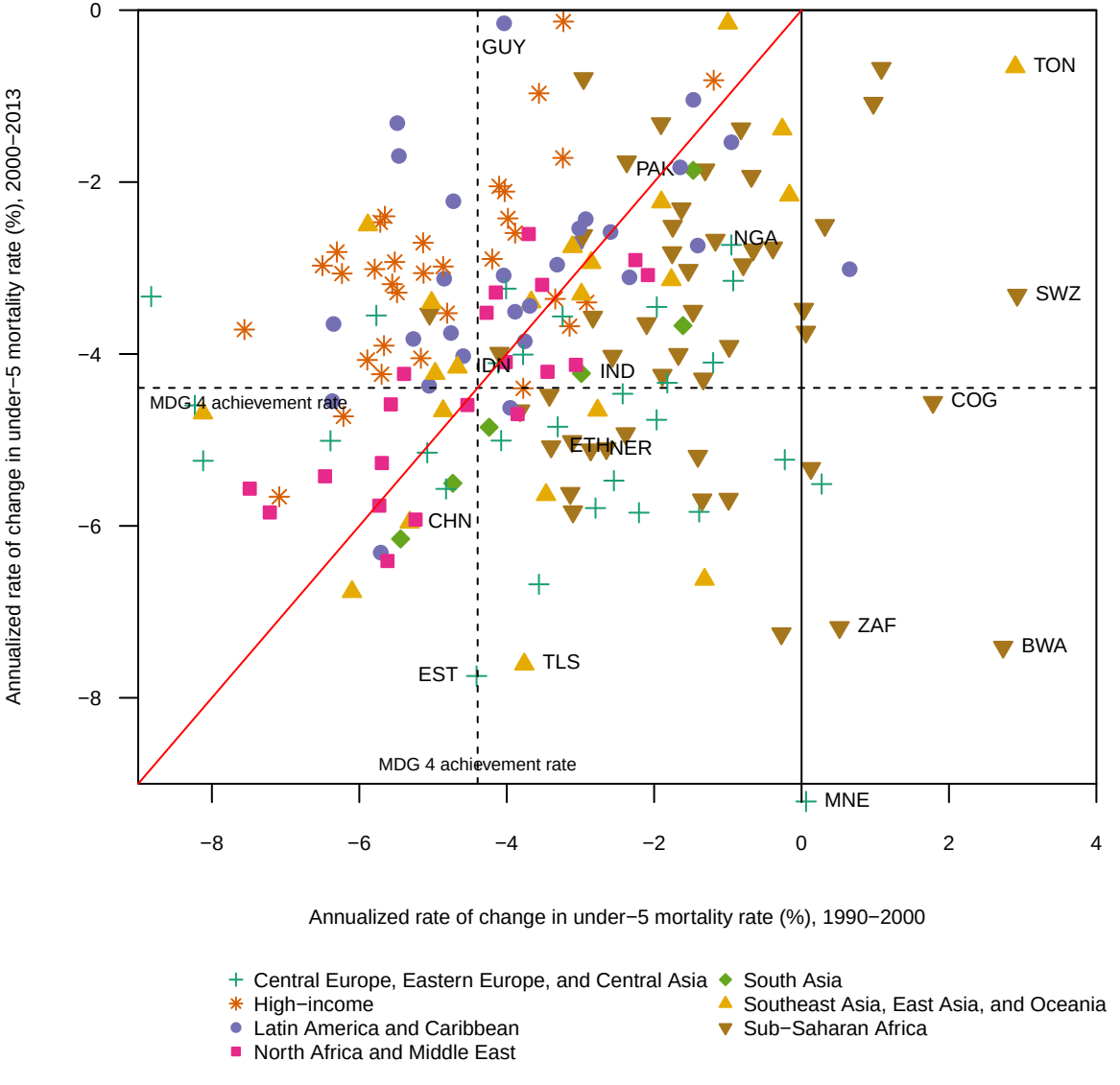

Figure 4.Change in the number of deaths comparing 2013 to 1990 due to income per capita, maternal education, HIV child death rate, shift in secular trend births and unexplained factors for seven GBD super−regions

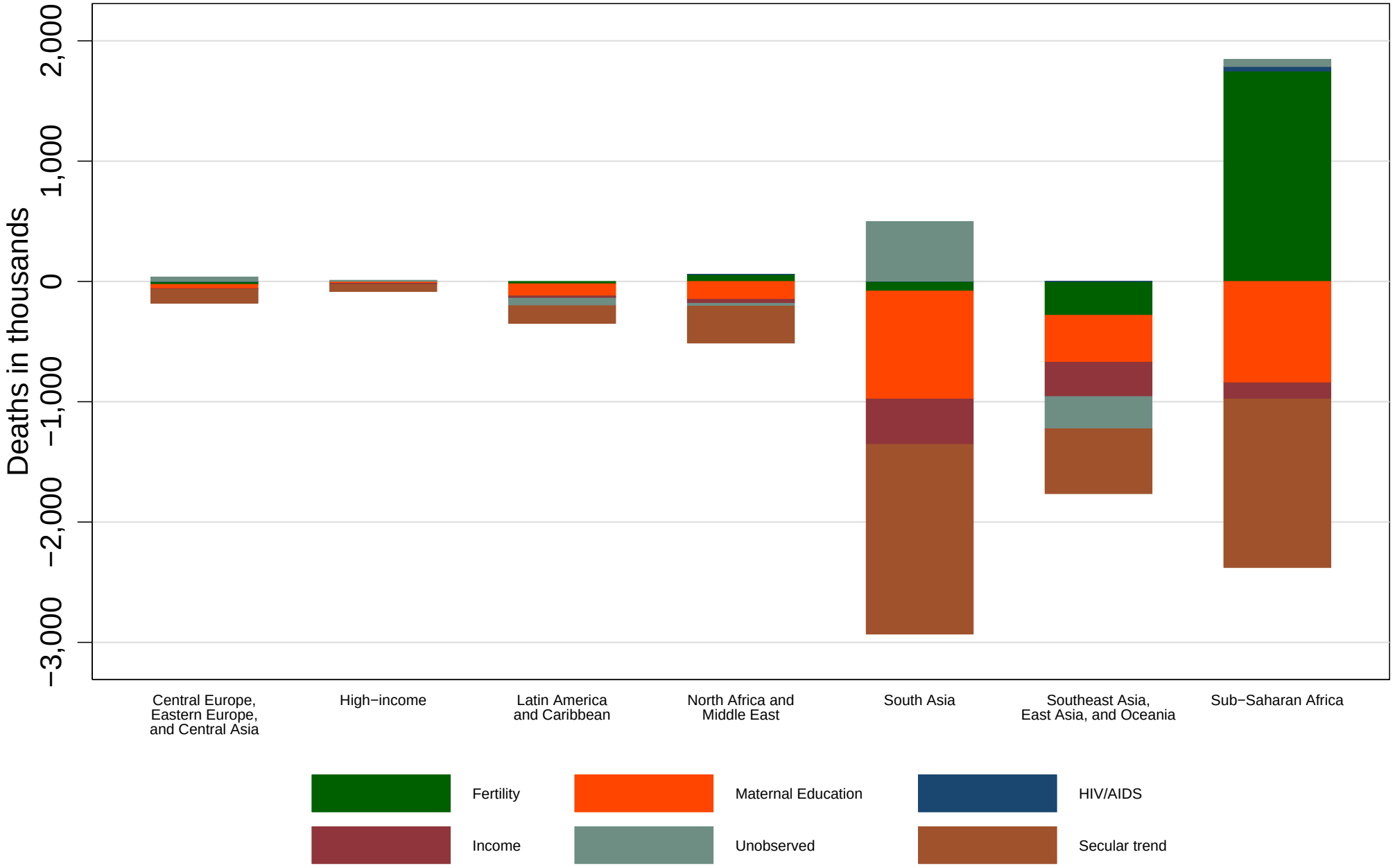

Figure 5. Countries with statistically significant differences between the observed rate of decline in under−5 mortality 2000 to 2013 compared with the expected rate of decline based on income, education, shift in secular trend, and HIV death rates in the absence of intervention.

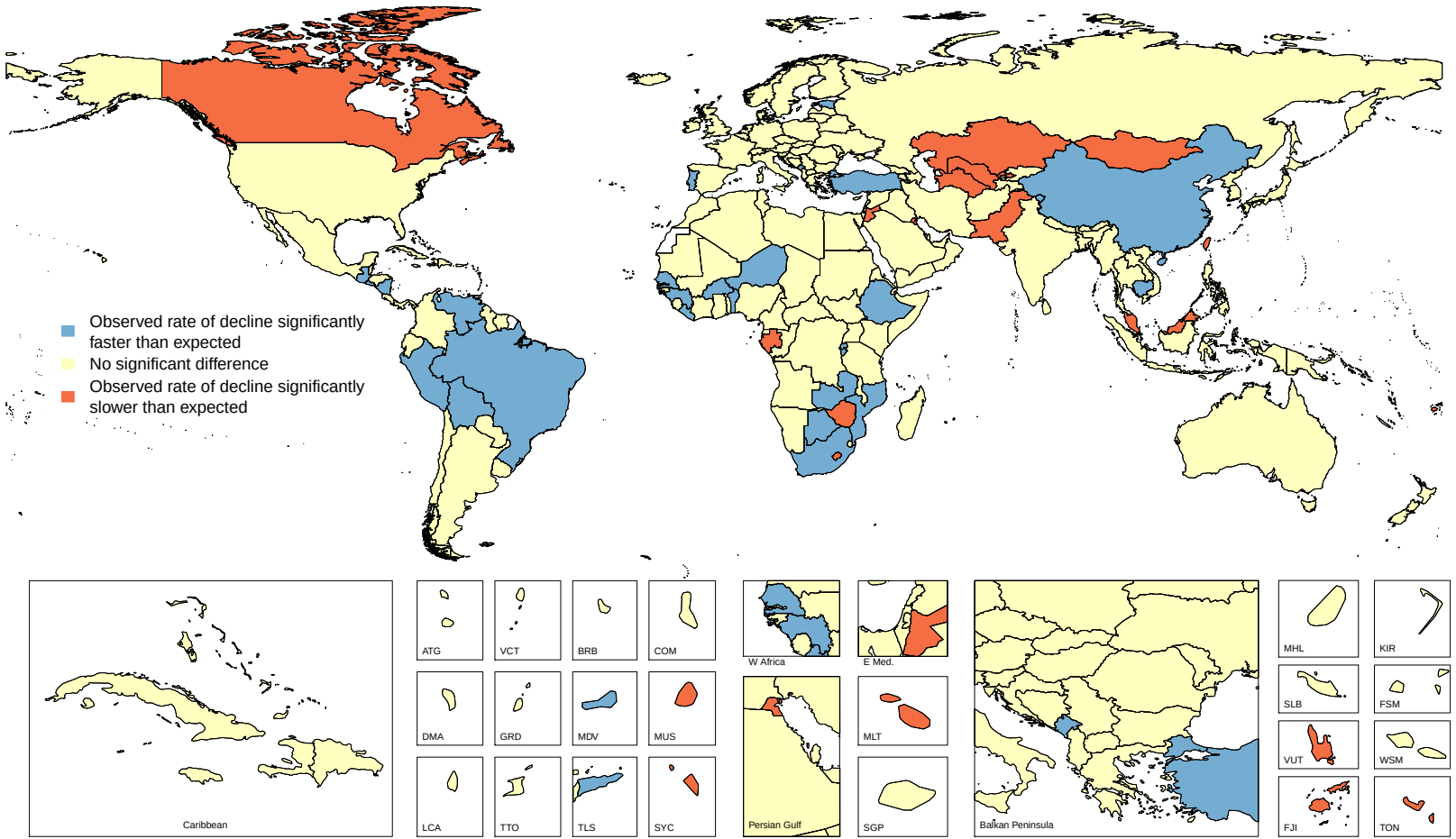

Figure 6. Projected global under−5 deaths for four scenarios, 2013−2030.
Scenarios have been defined by the distribution of observed rates of change 2000 to 2013.

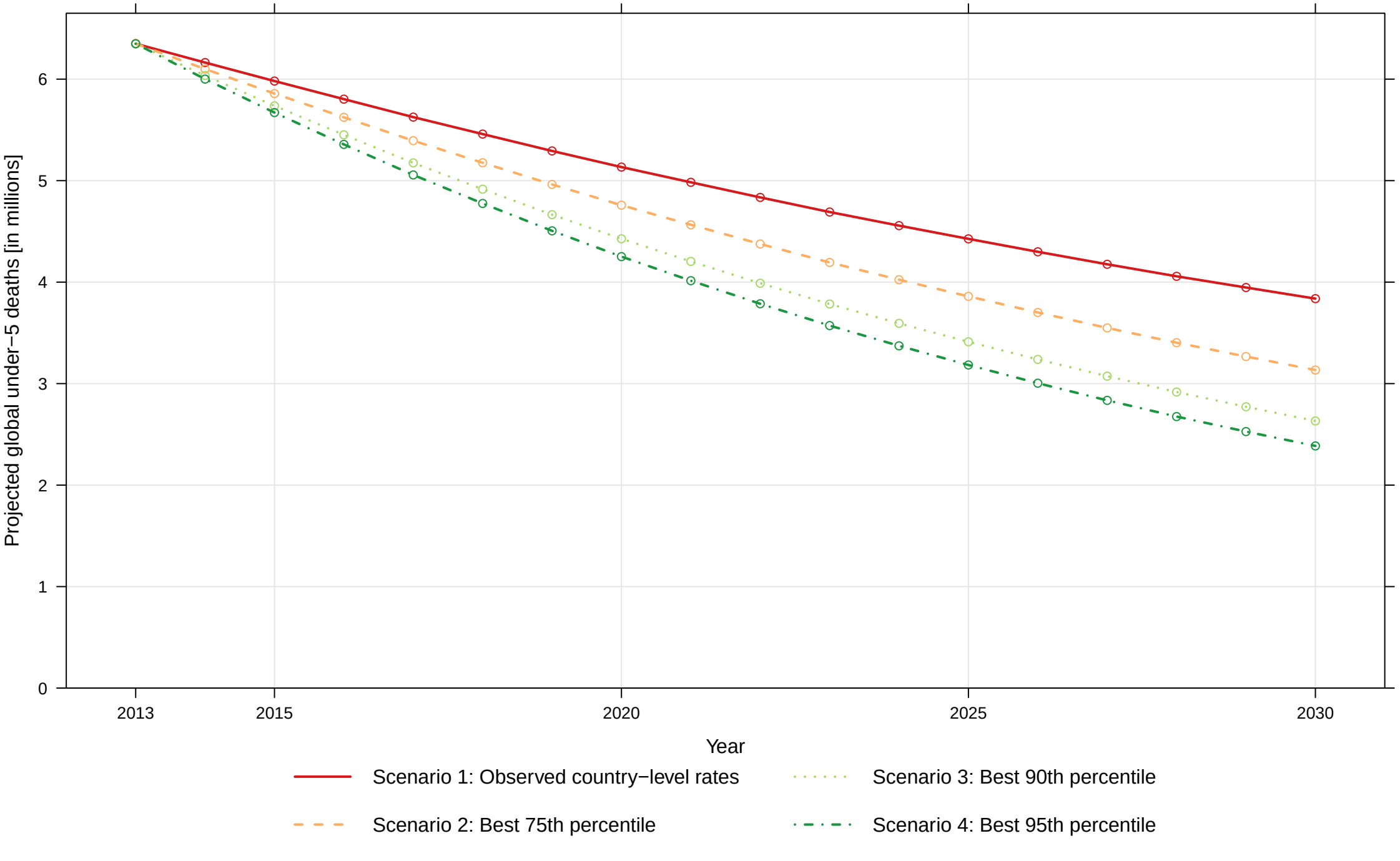

Figure 7. Projected under−5 mortality rate in 2030 based on the observed rate of change for each country 2000 to 2013

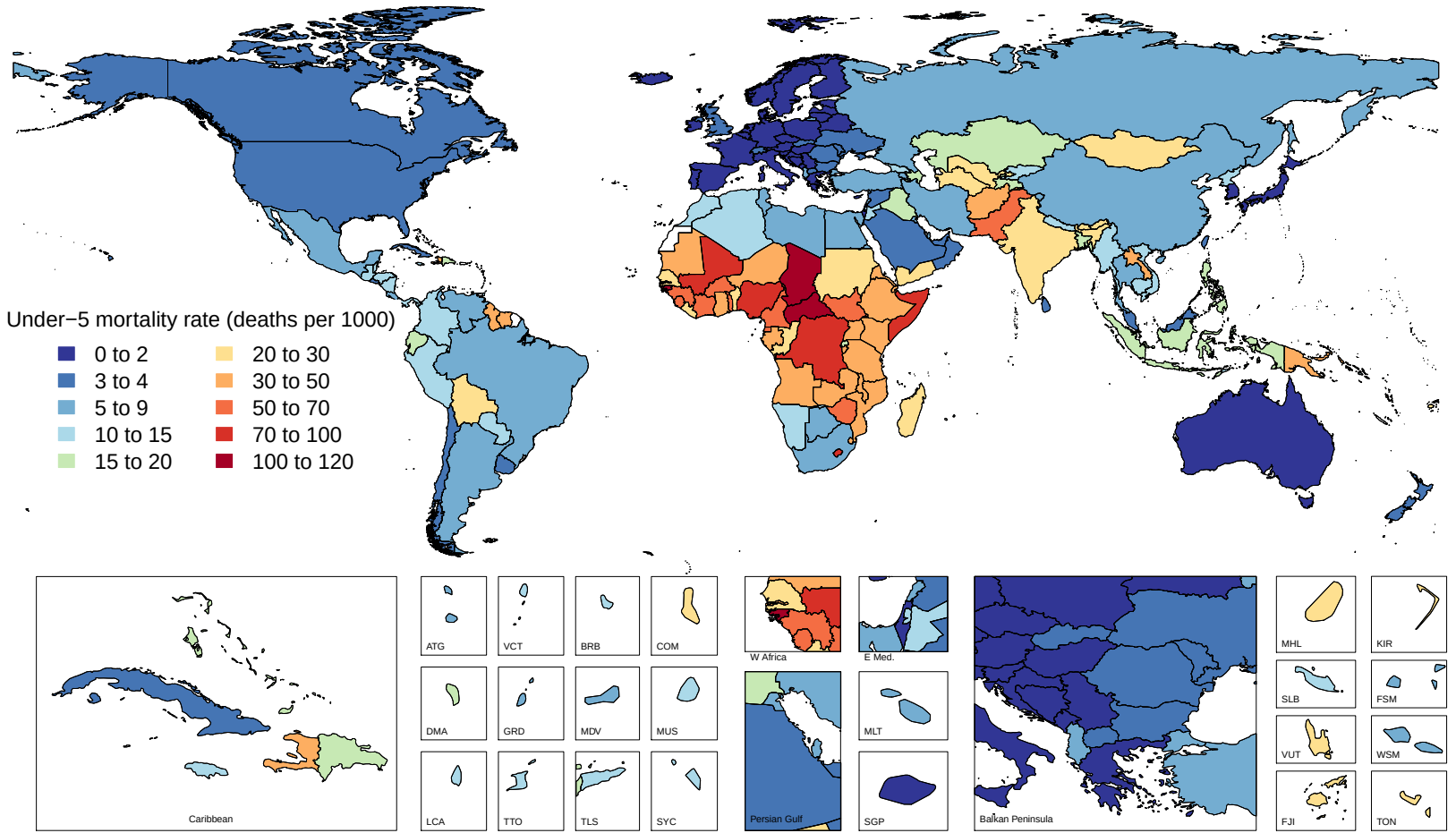

Table 1a. Global mortality rate (deaths per 1000 livebirths) for early neonatal, late neonatal, postneonatal, child and under-5 for 1970, 1980, 1990, 2000, and 2013.

Age	1970	1980	1990	2000	2013
Early neonatal	31·7	26·8	22·5	19·7	14·2
(0-6 days)	(31·0-34·0)	(26·4-28·5)	(22·3-23·8)	(19·6-20·9)	(13·7-15·4)
Late neonatal	17·1	12·9	9·3	7·1	4·4
(7-28 days)	(17·0-18·2)	(12·9-13·6)	(9·3-9·7)	(7·1-7·5)	(4·1-4·9)
Postneonatal	49·5	37·1	27·6	22·0	13·3
(29-364 days)	(47·4-54·4)	(36·1-40·0)	(27·0-29·6)	(21·7-23·5)	(12·3-15·1)
Child	55·9	39·4	27·9	22·0	13·3
(1-4 years)	(53·1-62·4)	(38·0-43·3)	(27·0-30·5)	(21·5-24·0)	(11·9-15·6)
Under 5	146·0	111·7	84·7	69·1	44·5
(0-4 years)	(141·7-150·6)	(109·4-114·0)	(83·3-86·2)	(67·8-70·6)	(40·9-48·7)

Table 1b. Global number of deaths (thousands) for early neonatal, late neonatal, postneonatal, child and under-5 age groups for 1970, 1980, 1990, 2000, and 2013.

Age	1970	1980	1990	2000	2013
Early neonatal	3907·5	3430·5	3246·3	2630·4	2028·2
(0-6 days)	(3722·4-4085·4)	(3294·7-3557·2)	(3131·8-3350·2)	(2549·4-2708·0)	(1911·2-2155·8)
Late neonatal	2048·2	1608·8	1310·0	933·9	615·8
(7-28 days)	(1975·1-2120·9)	(1571·4-1647·3)	(1282·3-1339·1)	(910·7-957·3)	(568·9-670·6)
Postneonatal	5791·9	4534·1	3866·3	2859·9	1859·5
(29-364 days)	(5416·5-6184·1)	(4310·1-4750·1)	(3694·4-4035·3)	(2745·2-2973·0)	(1692·7-2060·2)
Child	6265·9	4640·7	3839·0	2880·1	1847·2
(1-4 years)	(5788·0-6811·8)	(4347·7-4963·5)	(3619·4-4080·8)	(2724·7-3051·7)	(1623·1-2118·2)
Under 5	17999·9	14203·7	12222·8	9304·5	6349·7
(0-4 years)	(17472·0-18559·3)	(13922·0-14496·4)	(12016·8-12435·4)	(9128·8-9490·3)	(5831·6-6947·5)

Table 2. Early neonatal, late neonatal, postneonatal, childhood and under-5 mortality rate and under-5 deaths in 2013, and annualised rates of change in mortality rates for 1990-2000, 2000-2013, and 1990-2013 for 188 countries and 21 Global Burden of Disease regions

	Deaths per 1000 livebirths					Number of under-5 deaths (thousands)	Annualised rate of change		
	Early Neonatal (0-6 days)	Late Neonatal (7-28 days)	Post-Neonatal (29-364 days)	Child (1-4 years)	Under 5 (0-4 years)		1990-2000	2000-2013	1990-2013
Global	14·2	4·4	13·3	13·3	44·5	6349·7	-2·0	-3·3	-2·7
	(13·7-15·4)	(4·1-4·8)	(12·3-15·0)	(11·9-15·6)	(40·9-48·7)	(5831·6-6947·5)	(-1·8--2·1)	(-2·7--3·9)	(-2·4--3·1)
Asia Pacific, High-income	1·0	0·4	0·9	0·8	3·3	5·3	-4·2	-3·8	-4·0
	(0·7-1·5)	(0·3-0·5)	(0·6-1·3)	(0·5-1·2)	(2·3-4·6)	(3·7-7·5)	(-2·4--5·7)	(-1·4--6·1)	(-2·4--5·5)
Brunei	2·6	0·8	2·1	2·4	8·1	0·0	-1·1	-0·8	-0·9
	(2·1-3·4)	(0·7-1·0)	(1·5-2·7)	(1·8-3·3)	(6·7-9·9)	(0·0-0·0)	(-0·0--2·2)	(0·9--2·4)	(-0·0--1·8)
Japan	0·8	0·3	0·9	0·7	2·9	3·1	-2·9	-3·4	-3·1
	(0·6-1·1)	(0·2-0·4)	(0·6-1·1)	(0·5-1·0)	(2·2-3·7)	(2·4-3·9)	(-2·6--3·2)	(-1·4--5·2)	(-2·1--4·2)
Singapore	0·8	0·3	0·5	0·5	2·2	0·0	-7·5	-3·7	-5·3
	(0·6-1·1)	(0·2-0·4)	(0·4-0·7)	(0·3-0·7)	(1·7-2·9)	(0·0-0·1)	(-6·3--8·6)	(-1·6--5·8)	(-4·2--6·4)
South Korea	1·4	0·5	1·1	1·0	4·2	1·9	-5·7	-4·2	-4·8
	(0·7-2·4)	(0·3-0·8)	(0·6-1·9)	(0·5-1·8)	(2·4-7·0)	(1·1-3·2)	(-1·8--9·0)	(-0·3--8·0)	(-2·3--7·2)
Asia, Central	13·3	3·1	11·7	7·5	35·4	64·5	-1·5	-3·4	-2·6
	(12·6-14·1)	(2·9-3·3)	(10·5-13·1)	(6·4-8·7)	(32·9-38·0)	(59·9-69·2)	(-1·1--1·9)	(-2·9--4·1)	(-2·3--3·0)
Armenia	7·2	1·8	4·5	3·2	16·7	0·6	-4·0	-5·0	-4·6
	(6·2-8·3)	(1·6-1·9)	(3·7-5·3)	(2·2-4·4)	(15·1-18·5)	(0·6-0·7)	(-3·0--4·9)	(-4·0--5·9)	(-4·0--5·1)
Azerbaijan	13·9	3·4	12·5	5·0	34·5	5·7	-1·9	-4·7	-3·5
	(12·8-14·9)	(3·0-3·8)	(10·4-14·7)	(3·6-6·7)	(31·2-38·1)	(5·2-6·3)	(-1·0--2·9)	(-3·7--5·6)	(-3·0--4·0)
Georgia	9·3	2·0	5·6	3·9	20·9	1·2	-1·1	-4·1	-2·8
	(8·2-10·4)	(1·8-2·2)	(4·7-6·8)	(2·8-5·5)	(18·9-23·1)	(1·1-1·3)	(0·0--2·3)	(-3·0--5·1)	(-2·2--3·4)
Kazakhstan	13·1	2·8	10·5	6·1	32·3	10·9	-0·9	-3·1	-2·1
	(11·9-14·2)	(2·5-3·2)	(8·6-12·6)	(4·2-8·5)	(29·2-35·7)	(9·8-12·0)	(0·1--1·9)	(-2·1--4·1)	(-1·6--2·6)
Kyrgyzstan	14·3	2·1	8·8	4·0	29·2	4·3	-3·7	-4·0	-3·9
	(13·1-15·4)	(1·9-2·4)	(7·5-10·3)	(3·0-5·4)	(26·7-31·8)	(3·9-4·7)	(-2·8--4·7)	(-3·1--4·9)	(-3·4--4·3)
Mongolia	14·6	3·6	14·6	9·8	42·0	2·6	-4·0	-3·2	-3·5
	(13·3-15·8)	(3·2-4·0)	(12·2-17·2)	(7·3-13·0)	(38·1-46·4)	(2·4-2·9)	(-3·0--4·9)	(-2·2--4·2)	(-3·0--4·0)
Tajikistan	14·0	3·2	16·2	8·5	41·4	11·0	-2·4	-4·4	-3·5
	(12·8-15·1)	(2·9-3·5)	(13·8-18·6)	(6·2-11·2)	(37·9-45·0)	(10·0-12·0)	(-1·5--3·2)	(-3·7--5·3)	(-3·1--4·0)
Turkmenistan	17·0	4·6	19·5	11·1	51·5	5·7	-1·9	-3·4	-2·8
	(15·5-18·6)	(4·1-5·3)	(16·0-23·1)	(7·9-15·4)	(46·5-57·6)	(5·1-6·4)	(-0·6--3·2)	(-2·4--4·4)	(-2·2--3·3)
Uzbekistan	12·9	3·2	10·5	9·1	35·5	22·0	-0·9	-2·7	-1·9
	(11·5-14·3)	(2·9-3·6)	(8·5-12·6)	(6·9-11·6)	(32·1-39·2)	(19·9-24·4)	(0·0--1·8)	(-1·8--3·7)	(-1·4--2·4)
Asia, East	6·4	1·7	4·0	3·9	16·1	305·7	-5·2	-5·8	-5·6
	(5·3-7·7)	(1·5-1·9)	(3·2-4·9)	(2·8-5·2)	(14·1-18·6)	(267·7-353·8)	(-4·5--6·0)	(-4·9--6·7)	(-4·9--6·2)
China	6·4	1·7	4·0	4·0	16·1	297·0	-5·3	-5·9	-5·6
	(5·3-7·7)	(1·5-1·9)	(3·2-4·9)	(2·8-5·2)	(14·1-18·7)	(259·9-344·4)	(-4·5--6·0)	(-5·0--6·8)	(-4·9--6·2)
North Korea	8·8	1·9	5·5	5·2	21·4	7·6	-2·2	-5·2	-3·9
	(6·9-10·8)	(1·7-2·3)	(3·9-7·5)	(3·5-7·3)	(17·5-26·5)	(6·2-9·4)	(-0·9--3·4)	(-4·1--6·4)	(-3·1--4·8)
Taiwan	1·9	0·7	1·5	2·1	6·3	0·9	-0·1	-2·1	-1·2
	(1·7-2·2)	(0·6-0·7)	(1·2-1·8)	(1·6-2·6)	(6·0-6·7)	(0·8-0·9)	(0·1--0·5)	(-1·6--2·6)	(-1·0--1·5)
Asia, South	22·3	6·4	14·4	10·6	52·8	1852·9	-2·9	-3·9	-3·4
	(20·7-24·2)	(5·7-7·2)	(12·6-16·7)	(8·7-13·1)	(48·1-58·6)	(1686·9-2055·3)	(-2·6--3·2)	(-3·0--4·6)	(-3·0--3·9)
Bangladesh	19·1	5·4	9·1	7·7	41·0	129·0	-4·7	-5·5	-5·1
	(17·4-20·9)	(4·8-6·1)	(7·6-10·9)	(5·9-10·1)	(37·5-45·4)	(117·8-142·7)	(-4·3--5·1)	(-4·7--6·2)	(-4·7--5·5)
Bhutan	18·5	5·7	14·4	9·2	47·1	0·6	-4·1	-4·9	-4·5
	(16·5-20·7)	(4·7-6·9)	(10·9-18·5)	(6·2-13·4)	(40·1-56·2)	(0·5-0·8)	(-3·2--5·0)	(-3·7--6·0)	(-3·7--5·3)
India	22·2	5·7	12·2	9·7	49·2	1259·3	-2·9	-4·2	-3·6
	(20·2-24·5)	(5·0-6·6)	(10·2-14·7)	(7·4-12·9)	(44·1-55·4)	(1130·4-1419·9)	(-2·6--3·3)	(-3·2--5·0)	(-3·1--4·1)
Nepal	17·4	4·3	9·2	7·0	37·5	22·1	-5·4	-6·1	-5·8
	(15·9-19·0)	(3·8-4·9)	(7·6-11·2)	(5·1-9·2)	(33·7-41·9)	(19·8-24·7)	(-4·9--5·8)	(-5·2--7·0)	(-5·3--6·3)
Pakistan	26·1	10·2	26·5	14·9	75·7	348·0	-1·4	-1·8	-1·6
	(24·0-28·3)	(9·2-11·2)	(22·8-30·6)	(11·1-19·3)	(70·3-82·2)	(323·2-378·0)	(-1·0--1·8)	(-1·1--2·4)	(-1·3--2·0)
Asia, Southeast	9·6	3·1	7·8	6·7	27·1	320·7	-4·0	-4·0	-4·0
	(8·8-10·5)	(2·9-3·5)	(6·7-9·2)	(5·6-8·0)	(24·3-30·3)	(287·6-357·8)	(-3·6--4·4)	(-3·1--4·9)	(-3·5--4·5)
Burma	13·9	3·8	11·0	8·2	36·5	33·6	-3·4	-5·6	-4·6
	(12·4-15·6)	(3·2-4·6)	(8·2-14·4)	(5·6-11·6)	(30·8-43·1)	(28·3-39·6)	(-1·8--5·4)	(-3·9--7·2)	(-3·8--5·5)
Cambodia	15·3	4·7	15·6	7·8	42·9	16·6	-1·3	-6·6	-4·3
	(13·8-16·9)	(4·1-5·5)	(12·4-19·0)	(5·6-10·5)	(37·0-49·5)	(14·3-19·1)	(-0·5--2·0)	(-5·4--7·8)	(-3·6--4·9)
Indonesia	10·9	3·8	9·9	6·9	31·4	148·1	-4·6	-4·1	-4·3
	(9·8-12·0)	(3·4-4·3)	(8·1-12·1)	(5·2-8·9)	(27·8-35·4)	(131·3-167·4)	(-4·0--5·2)	(-3·1--5·1)	(-3·7--4·9)
Laos	20·7	8·2	25·9	22·5	75·3	13·6	-2·7	-4·6	-3·8
	(18·2-23·3)	(6·9-9·7)	(20·0-32·2)	(15·5-31·2)	(64·6-87·4)	(11·6-15·8)	(-1·1--4·3)	(-3·1--6·1)	(-2·9--4·6)
Malaysia	2·3	1·0	1·6	1·6	6·7	3·4	-5·8	-2·5	-3·9
	(1·9-2·8)	(0·9-1·1)	(1·3-2·1)	(1·2-2·2)	(5·7-7·8)	(2·9-4·0)	(-5·6--6·1)	(-1·3--3·6)	(-3·2--4·6)
Maldives	7·9	1·9	2·8	3·5	16·1	0·1	-6·0	-6·7	-6·4

	(6·4-9·9)	(1·7-2·1)	(2·3-3·4)	(2·6-4·6)	(13·6-19·5)	(0·1-0·1)	(-4·7--7·3)	(-5·2--8·2)	(-5·6--7·2)
Mauritius	6·2	1·8	3·2	2·5	13·8	0·1	-2·3	-1·7	-2·0
	(5·2-7·4)	(1·6-2·1)	(2·7-3·7)	(1·9-3·3)	(12·1-15·9)	(0·1-0·2)	(-1·6--3·1)	(-0·5--2·8)	(-1·3--2·6)
Philippines	9·5	2·3	6·4	8·4	26·6	63·6	-2·8	-2·8	-2·8
	(8·1-10·9)	(2·0-2·7)	(4·9-8·5)	(6·5-10·9)	(22·5-31·5)	(53·7-75·2)	(-1·8--3·7)	(-1·4--4·2)	(-2·0--3·5)
Seychelles	4·4	1·5	2·9	2·6	11·6	0·0	-2·9	-0·7	-1·7
	(3·5-5·4)	(1·3-1·8)	(2·3-3·5)	(1·9-3·6)	(9·9-13·5)	(0·0-0·0)	(-1·1--4·7)	(0·8--2·2)	(-0·8--2·5)
Sri Lanka	3·1	1·2	1·8	2·4	8·7	3·3	-8·0	-4·8	-6·2
	(2·5-3·8)	(1·1-1·4)	(1·4-2·2)	(1·8-3·2)	(7·3-10·3)	(2·8-3·9)	(-7·7--8·4)	(-3·5--6·1)	(-5·5--7·0)
Thailand	4·6	2·0	2·2	2·0	10·9	7·6	-4·9	-4·2	-4·5
	(3·6-5·8)	(1·7-2·4)	(1·8-2·5)	(1·5-2·7)	(9·1-13·0)	(6·3-9·0)	(-3·0--6·9)	(-2·5--5·8)	(-3·5--5·4)
Timor-Leste	13·5	2·3	15·4	7·9	38·8	1·5	-3·3	-7·9	-5·9
	(12·1-14·9)	(2·0-2·8)	(12·1-19·1)	(5·7-10·7)	(33·0-45·4)	(1·3-1·8)	(-2·5--4·0)	(-6·6--9·3)	(-5·1--6·6)
Vietnam	6·9	2·6	3·6	5·4	18·4	26·5	-5·0	-3·4	-4·1
	(5·4-8·5)	(2·3-2·9)	(2·9-4·5)	(4·0-7·1)	(15·5-21·8)	(22·3-31·3)	(-3·7--6·1)	(-1·9--4·9)	(-3·3--4·8)
Australasia	1·8	0·4	1·3	0·8	4·5	1·7	-4·1	-2·8	-3·3
	(1·5-2·1)	(0·4-0·5)	(1·1-1·6)	(0·6-1·1)	(3·8-5·3)	(1·4-2·0)	(-3·7--4·5)	(-1·4--4·0)	(-2·6--4·1)
Australia	1·8	0·4	1·1	0·8	4·3	1·3	-4·1	-2·8	-3·4
	(1·5-2·2)	(0·4-0·5)	(1·0-1·4)	(0·6-1·1)	(3·6-5·0)	(1·1-1·5)	(-3·6--4·7)	(-1·5--4·1)	(-2·7--4·1)
New Zealand	1·8	0·5	2·1	1·1	5·5	0·3	-3·9	-2·4	-3·1
	(1·4-2·1)	(0·4-0·6)	(1·6-2·5)	(0·8-1·5)	(4·6-6·5)	(0·2-0·4)	(-3·1--4·8)	(-0·9--3·8)	(-2·2--3·9)
Caribbean	11·4	4·4	11·7	7·6	34·8	29·2	-3·5	-2·3	-2·8
	(10·2-13·3)	(3·9-5·2)	(10·0-14·3)	(6·1-10·0)	(30·2-40·4)	(25·5-33·7)	(-2·9--4·0)	(-1·1--3·4)	(-2·1--3·4)
Antigua and Barbuda	6·2	1·8	3·3	2·3	13·6	0·0	-1·4	-2·7	-2·1
	(2·6-12·5)	(1·0-2·8)	(1·5-6·4)	(0·9-4·9)	(6·3-26·5)	(0·0-0·0)	(1·7--4·6)	(3·0--8·6)	(1·1--5·5)
Barbados	7·3	2·0	3·8	1·8	15·0	0·0	-5·4	-1·7	-3·3
	(2·9-14·3)	(1·1-3·4)	(1·8-8·1)	(0·8-3·6)	(6·8-29·6)	(0·0-0·1)	(-3·2--7·7)	(4·0--7·4)	(-0·1--6·5)
Belize	8·4	2·2	4·4	3·0	18·0	0·1	-3·7	-3·8	-3·8
	(3·5-15·0)	(1·3-3·6)	(2·2-9·4)	(1·4-5·8)	(8·6-33·9)	(0·0-0·2)	(-1·0--6·6)	(1·5--9·3)	(-0·7--6·8)
Cuba	2·0	0·9	1·6	1·0	5·6	0·6	-4·8	-3·1	-3·8
	(1·6-2·3)	(0·8-1·0)	(1·3-2·0)	(0·7-1·4)	(4·8-6·5)	(0·5-0·7)	(-4·3--5·2)	(-1·9--4·3)	(-3·1--4·5)
Dominica	10·8	2·7	6·0	3·9	23·4	0·0	-0·9	-1·5	-1·2
	(5·1-17·2)	(1·6-4·7)	(2·8-14·0)	(1·8-7·7)	(11·8-42·6)	(0·0-0·0)	(1·5--3·6)	(3·6--6·6)	(1·5--4·1)
Dominican Republic	13·0	3·0	7·1	4·4	27·3	5·9	-4·7	-2·2	-3·3
	(11·1-14·8)	(2·5-3·5)	(5·1-9·5)	(3·0-6·3)	(22·8-32·8)	(4·9-7·1)	(-3·8--5·5)	(-0·6--3·7)	(-2·4--4·1)
Grenada	5·5	1·6	3·0	2·1	12·3	0·0	-6·3	-3·6	-4·8
	(2·5-11·1)	(1·0-2·5)	(1·4-5·5)	(1·0-4·0)	(6·1-22·6)	(0·0-0·0)	(-4·0--8·8)	(1·4--8·6)	(-1·9--7·6)
Guyana	11·7	3·4	13·3	6·9	35·0	0·5	-4·0	-0·1	-1·8
	(6·4-17·3)	(1·9-6·5)	(5·0-27·8)	(2·8-15·9)	(16·6-66·6)	(0·2-1·0)	(-2·0--5·9)	(5·4--5·5)	(1·3--4·7)
Haiti	16·8	8·6	25·1	16·7	65·7	17·3	-4·0	-3·0	-3·5
	(14·8-18·7)	(7·4-10·1)	(20·5-30·5)	(12·0-22·7)	(57·0-76·8)	(15·0-20·2)	(-3·2--4·7)	(-1·8--4·2)	(-2·8--4·1)
Jamaica	7·3	1·9	3·9	4·4	17·5	0·8	-2·9	-2·4	-2·6
	(2·7-13·9)	(1·0-3·5)	(1·7-9·3)	(1·9-9·3)	(7·6-35·6)	(0·3-1·7)	(1·1--7·1)	(3·6--8·6)	(0·8--6·1)
Saint Lucia	7·9	2·1	4·2	2·9	17·1	0·0	-5·4	-1·3	-3·1
	(3·1-14·9)	(1·1-3·6)	(1·9-9·4)	(1·2-6·0)	(7·7-33·7)	(0·0-0·0)	(-3·3--7·5)	(4·5--6·8)	(0·0--6·1)
Saint Vincent and the	10·1	2·5	5·4	3·6	21·5	0·0	-3·0	-2·5	-2·7
Grenadines	(4·8-16·2)	(1·5-4·2)	(2·6-11·9)	(1·7-7·1)	(11·0-38·9)	(0·0-0·0)	(-0·8--5·2)	(2·5--7·3)	(0·1--5·6)
Suriname	16·2	4·1	11·7	6·6	38·3	0·3	-1·4	-1·0	-1·2
	(14·3-18·3)	(3·4-5·1)	(8·6-15·6)	(4·3-9·6)	(31·9-45·9)	(0·3-0·4)	(0·3--3·4)	(0·8--2·9)	(-0·3--2·2)
The Bahamas	12·0	1·0	2·1	2·2	17·3	0·1	-10·2	0·5	-4·1
	(5·0-22·7)	(0·6-1·7)	(1·1-4·9)	(1·0-4·6)	(7·9-33·4)	(0·0-0·1)	(-8·5--11·8)	(6·0--5·0)	(-0·9--7·3)
Trinidad and Tobago	10·7	3·8	3·8	3·1	21·3	0·4	0·6	-3·0	-1·4
	(4·2-19·2)	(2·0-7·2)	(1·7-10·1)	(1·3-6·4)	(9·4-42·7)	(0·1-0·8)	(4·6--3·5)	(2·9--9·1)	(2·1--4·8)
Europe, Central	2·1	1·0	2·2	1·0	6·3	7·9	-4·9	-5·4	-5·2
	(1·5-2·8)	(0·8-1·3)	(1·6-2·9)	(0·7-1·3)	(4·8-8·3)	(6·1-10·5)	(-4·5--5·4)	(-3·2--7·4)	(-4·0--6·4)
Albania	2·7	1·6	7·4	4·8	16·5	0·6	-4·1	-4·1	-4·1
	(1·0-4·8)	(0·9-2·5)	(3·7-14·9)	(2·4-9·1)	(8·4-31·7)	(0·3-1·2)	(-1·9--6·1)	(1·1--8·9)	(-1·0--6·8)
Bosnia and	3·0	0·6	1·0	0·7	5·4	0·1	-5·2	-5·1	-5·2
Herzegovina	(1·9-4·4)	(0·4-0·8)	(0·6-1·5)	(0·4-1·1)	(3·6-7·8)	(0·1-0·2)	(-4·4--6·1)	(-2·2--8·2)	(-3·5--6·9)
Bulgaria	2·4	1·4	3·5	1·6	9·1	0·6	-0·2	-5·2	-3·0
	(1·9-3·1)	(1·2-1·7)	(2·7-4·4)	(1·1-2·2)	(7·3-11·2)	(0·5-0·7)	(0·3--0·8)	(-3·5--6·8)	(-2·0--3·9)
Croatia	2·1	0·7	1·0	0·6	4·5	0·1	-3·3	-4·8	-4·1
	(1·3-3·2)	(0·5-0·9)	(0·7-1·5)	(0·4-1·0)	(3·1-6·6)	(0·1-0·2)	(-2·1--4·4)	(-1·8--7·9)	(-2·4--5·8)
Czech Republic	0·9	0·6	0·9	0·4	2·9	0·3	-8·2	-4·5	-6·1
	(0·6-1·4)	(0·4-0·8)	(0·6-1·2)	(0·3-0·7)	(2·0-4·2)	(0·2-0·4)	(-7·3--9·1)	(-1·7--7·3)	(-4·5--7·7)
Hungary	2·3	0·9	1·2	0·6	5·0	0·4	-4·8	-5·5	-5·2
	(1·7-2·9)	(0·7-1·0)	(1·0-1·6)	(0·4-0·8)	(4·0-6·3)	(0·4-0·6)	(-4·1--5·4)	(-3·8--7·2)	(-4·2--6·1)
Macedonia	3·3	1·3	2·2	0·9	7·9	0·1	-8·1	-5·2	-6·4
	(2·1-5·2)	(1·0-1·8)	(1·4-3·2)	(0·5-1·4)	(5·2-11·5)	(0·1-0·2)	(-7·2--8·9)	(-2·1--8·2)	(-4·7--8·1)
Montenegro	2·3	0·9	1·8	1·0	6·1	0·0	0·0	-9·2	-5·1
	(1·2-3·8)	(0·6-1·4)	(1·0-3·1)	(0·5-1·7)	(3·6-10·0)	(0·0-0·0)	(6·4--6·1)	(-5·1--13·1)	(-1·8--8·4)

Poland	2·1	0·9	1·3	0·6	4·9	2·0	-6·3	-5·0	-5·6
	(1·4-3·0)	(0·6-1·1)	(0·9-1·9)	(0·3-0·9)	(3·4-7·0)	(1·4-2·9)	(-6·0--6·7)	(-2·2--7·7)	(-4·0--7·1)
Romania	2·0	1·5	4·5	1·7	9·8	2·2	-3·5	-6·6	-5·3
	(1·3-3·2)	(1·1-2·1)	(3·0-6·2)	(1·1-2·5)	(6·8-13·9)	(1·5-3·1)	(-3·2--3·8)	(-3·8--9·3)	(-3·7--6·8)
Serbia	2·3	0·7	1·1	0·6	4·8	0·4	-8·8	-3·3	-5·7
	(1·8-2·9)	(0·5-0·8)	(0·9-1·4)	(0·4-0·9)	(3·9-5·9)	(0·3-0·5)	(-3·1--14·3)	(-1·6--5·0)	(-3·1--8·2)
Slovakia	2·2	1·1	2·1	1·0	6·5	0·3	-3·2	-3·5	-3·4
	(1·2-3·6)	(0·7-1·6)	(1·2-3·5)	(0·5-1·7)	(3·9-10·4)	(0·2-0·6)	(-2·3--4·1)	(0·2--7·2)	(-1·2--5·4)
Slovenia	1·4	0·5	0·9	0·5	3·5	0·0	-5·7	-3·5	-4·5
	(0·8-2·5)	(0·3-0·7)	(0·5-1·5)	(0·3-0·9)	(2·1-5·7)	(0·0-0·1)	(-3·9--7·6)	(0·4--7·3)	(-2·1--6·7)
Europe, Eastern	4·5	1·5	3·3	2·2	11·6	28·2	-1·3	-4·6	-3·2
	(3·1-6·2)	(1·2-1·9)	(2·6-4·2)	(1·5-3·1)	(9·0-14·9)	(21·9-36·2)	(1·2--3·7)	(-2·3--7·0)	(-2·0--4·5)
Belarus	2·8	1·1	2·3	1·3	7·6	0·7	-2·2	-5·8	-4·2
	(1·9-3·9)	(0·9-1·4)	(1·5-3·3)	(0·8-2·0)	(5·5-10·4)	(0·5-1·0)	(1·3--5·5)	(-2·8--8·9)	(-2·4--6·1)
Estonia	1·4	0·7	1·1	0·9	4·2	0·0	-4·4	-7·7	-6·2
	(1·0-1·8)	(0·6-0·9)	(0·8-1·4)	(0·6-1·2)	(3·4-5·2)	(0·0-0·0)	(-3·3--5·5)	(-5·9--9·5)	(-5·3--7·2)
Latvia	2·0	1·0	1·8	1·4	6·3	0·1	-2·7	-5·7	-4·4
	(1·6-2·4)	(0·9-1·2)	(1·3-2·2)	(1·0-1·9)	(5·3-7·6)	(0·1-0·1)	(-1·9--3·7)	(-4·2--7·3)	(-3·6--5·3)
Lithuania	1·7	0·8	1·7	1·1	5·4	0·1	-2·5	-5·4	-4·2
	(1·2-2·3)	(0·6-1·0)	(1·2-2·3)	(0·7-1·6)	(4·1-7·1)	(0·1-0·2)	(-1·5--3·5)	(-3·1--7·6)	(-2·9--5·3)
Moldova	5·2	1·4	3·7	2·1	12·5	0·5	-1·3	-5·8	-3·9
	(3·4-7·3)	(1·1-1·8)	(2·9-4·7)	(1·3-3·2)	(9·2-16·5)	(0·3-0·7)	(0·8--3·6)	(-3·3--8·5)	(-2·4--5·3)
Russia	4·8	1·6	3·5	2·4	12·4	20·9	-1·7	-4·3	-3·2
	(3·1-7·1)	(1·2-2·1)	(2·6-4·6)	(1·5-3·6)	(9·0-16·8)	(15·1-28·3)	(1·8--5·0)	(-1·3--7·3)	(-1·6--5·0)
Ukraine	4·0	1·4	3·2	2·0	10·7	5·3	0·2	-5·5	-2·9
	(2·9-5·7)	(1·1-1·8)	(2·4-4·0)	(1·3-2·8)	(8·2-13·9)	(4·0-6·8)	(2·5--2·0)	(-3·0--7·9)	(-1·6--4·2)
Europe, Western	1·5	0·5	1·0	0·6	3·9	18·0	-5·0	-2·9	-3·8
	(1·3-1·9)	(0·5-0·6)	(0·9-1·2)	(0·5-0·7)	(3·2-4·7)	(15·1-21·7)	(-4·8--5·2)	(-1·5--4·2)	(-3·0--4·6)
Andorra	1·0	0·4	0·7	0·4	2·6	0·0	-6·5	-2·9	-4·5
	(0·5-1·7)	(0·2-0·6)	(0·4-1·2)	(0·2-0·7)	(1·5-4·3)	(0·0-0·0)	(-1·3--11·3)	(1·5--7·2)	(-1·6--7·2)
Austria	1·6	0·5	1·1	0·6	4·0	0·3	-5·6	-2·4	-3·8
	(1·2-2·1)	(0·4-0·7)	(0·9-1·4)	(0·4-0·8)	(3·2-5·0)	(0·2-0·4)	(-4·8--6·5)	(-0·5--4·2)	(-2·7--4·7)
Belgium	1·7	0·6	1·1	0·6	4·2	0·5	-5·7	-2·4	-3·8
	(1·4-2·1)	(0·5-0·7)	(0·9-1·3)	(0·5-0·8)	(3·5-4·9)	(0·4-0·6)	(-5·2--6·1)	(-1·2--3·7)	(-3·1--4·5)
Cyprus	1·9	0·6	1·2	0·3	4·1	0·0	-6·3	-2·8	-4·3
	(1·4-2·4)	(0·5-0·8)	(0·9-1·5)	(0·2-0·4)	(3·2-5·1)	(0·0-0·0)	(-5·1--7·4)	(-0·8--4·7)	(-3·3--5·3)
Denmark	1·6	0·5	0·9	0·6	3·7	0·2	-5·1	-3·0	-3·9
	(1·2-2·1)	(0·4-0·6)	(0·7-1·2)	(0·4-0·9)	(2·9-4·7)	(0·1-0·3)	(-4·1--6·0)	(-1·1--4·8)	(-2·8--5·0)
Finland	1·3	0·3	0·6	0·5	2·9	0·1	-5·1	-2·7	-3·7
	(1·0-1·7)	(0·2-0·4)	(0·5-0·8)	(0·3-0·7)	(2·3-3·7)	(0·1-0·2)	(-4·0--6·2)	(-0·7--4·6)	(-2·6--4·8)
France	1·2	0·5	1·2	0·6	3·7	2·9	-4·8	-2·9	-3·8
	(0·9-1·5)	(0·4-0·6)	(0·9-1·5)	(0·4-0·9)	(3·0-4·5)	(2·4-3·6)	(-4·5--5·1)	(-1·4--4·5)	(-2·9--4·6)
Germany	1·5	0·4	0·9	0·6	3·6	2·5	-5·5	-2·9	-4·0
	(1·3-1·8)	(0·4-0·5)	(0·8-1·1)	(0·4-0·7)	(3·1-4·1)	(2·2-2·9)	(-5·1--5·8)	(-1·9--3·9)	(-3·4--4·6)
Greece	1·6	0·8	0·9	0·5	4·0	0·4	-4·8	-3·5	-4·0
	(1·3-1·8)	(0·7-0·9)	(0·8-1·1)	(0·4-0·7)	(3·5-4·5)	(0·3-0·5)	(-4·3--5·2)	(-2·4--4·4)	(-3·4--4·6)
Iceland	0·9	0·3	0·6	0·3	2·3	0·0	-5·6	-3·9	-4·6
	(0·6-1·3)	(0·2-0·5)	(0·4-0·9)	(0·2-0·6)	(1·6-3·3)	(0·0-0·0)	(-3·0--8·2)	(-0·9--6·7)	(-2·9--6·4)
Ireland	1·9	0·5	1·3	0·7	4·5	0·3	-3·3	-3·3	-3·3
	(1·4-2·6)	(0·4-0·6)	(0·9-1·7)	(0·5-1·0)	(3·4-6·0)	(0·2-0·4)	(-2·4--4·3)	(-1·0--5·5)	(-2·0--4·5)
Israel	1·6	0·6	1·2	0·8	4·3	0·6	-5·1	-4·0	-4·5
	(1·3-1·9)	(0·5-0·7)	(1·0-1·4)	(0·6-1·0)	(3·7-5·0)	(0·5-0·7)	(-4·4--5·8)	(-2·8--5·2)	(-3·8--5·2)
Italy	1·7	0·6	0·7	0·5	3·6	2·0	-5·5	-3·1	-4·2
	(1·2-2·2)	(0·5-0·8)	(0·6-1·0)	(0·3-0·7)	(2·7-4·7)	(1·5-2·6)	(-5·1--5·9)	(-1·1--5·1)	(-3·0--5·3)
Luxembourg	1·1	0·4	0·7	0·4	2·7	0·0	-6·2	-4·7	-5·3
	(0·7-1·5)	(0·3-0·5)	(0·5-1·0)	(0·2-0·6)	(1·9-3·8)	(0·0-0·0)	(-3·9--8·4)	(-1·9--7·3)	(-3·7--6·9)
Malta	3·1	0·9	2·0	0·6	6·9	0·0	-3·2	-0·1	-1·4
	(2·2-4·2)	(0·7-1·2)	(1·4-2·9)	(0·4-1·0)	(5·0-9·3)	(0·0-0·0)	(-1·2--5·3)	(2·4--2·7)	(-0·0--2·8)
Netherlands	1·7	0·5	0·9	0·8	4·0	0·7	-3·1	-3·6	-3·4
	(1·3-2·2)	(0·4-0·6)	(0·7-1·1)	(0·6-1·1)	(3·2-5·0)	(0·5-0·9)	(-2·5--3·7)	(-1·9--5·3)	(-2·4--4·3)
Norway	1·1	0·3	0·8	0·6	2·9	0·1	-5·8	-4·0	-4·8
	(0·9-1·4)	(0·3-0·4)	(0·6-1·0)	(0·4-0·7)	(2·4-3·5)	(0·1-0·2)	(-4·9--6·9)	(-2·5--5·4)	(-4·0--5·6)
Portugal	1·2	0·5	0·9	0·6	3·4	0·3	-7·0	-5·6	-6·2
	(1·0-1·4)	(0·4-0·5)	(0·8-1·1)	(0·5-0·8)	(2·9-3·9)	(0·2-0·3)	(-6·6--7·4)	(-4·6--6·6)	(-5·6--6·8)
Spain	1·3	0·6	0·9	0·6	3·5	1·7	-5·4	-3·2	-4·2
	(1·0-1·6)	(0·5-0·7)	(0·8-1·2)	(0·4-0·8)	(2·8-4·3)	(1·4-2·1)	(-5·0--5·9)	(-1·6--4·8)	(-3·3--5·1)
Sweden	1·1	0·3	0·7	0·4	2·6	0·3	-6·2	-3·0	-4·4
	(0·8-1·4)	(0·2-0·4)	(0·5-0·8)	(0·3-0·6)	(2·1-3·3)	(0·2-0·3)	(-5·3--7·1)	(-1·2--4·8)	(-3·3--5·4)
Switzerland	1·9	0·4	1·0	0·8	4·3	0·3	-4·0	-2·1	-2·9
	(1·6-2·2)	(0·4-0·5)	(0·9-1·2)	(0·6-1·0)	(3·7-4·9)	(0·3-0·4)	(-3·5--4·5)	(-1·0--3·1)	(-2·3--3·5)
UK	2·0	0·7	1·3	0·7	4·8	3·7	-4·1	-2·0	-2·9

	(1·6-2·6)	(0·5-0·8)	(1·0-1·7)	(0·5-1·0)	(3·9-5·9)	(3·0-4·6)	(-3·7--4·4)	(-0·4--3·5)	(-2·0--3·8)
Latin America, Andean	8·4	3·1	9·7	6·8	27·8	33·5	-5·0	-3·8	-4·3
	(7·9-8·9)	(3·0-3·3)	(8·8-10·8)	(5·8-7·9)	(26·3-29·4)	(31·7-35·4)	(-4·6--5·4)	(-3·4--4·3)	(-4·1--4·6)
Bolivia	12·7	4·0	15·1	9·7	41·0	11·2	-4·5	-4·0	-4·2
	(11·6-13·8)	(3·6-4·3)	(12·9-17·4)	(7·4-12·7)	(38·0-44·3)	(10·3-12·1)	(-3·9--5·1)	(-3·3--4·7)	(-3·8--4·6)
Ecuador	5·6	3·4	11·7	7·8	28·4	9·2	-3·0	-2·7	-2·8
	(5·0-6·1)	(3·2-3·7)	(10·0-13·6)	(6·0-9·9)	(26·2-30·7)	(8·6-10·0)	(-2·1--3·9)	(-1·9--3·4)	(-2·4--3·2)
Peru	8·0	2·6	6·3	4·9	21·8	13·0	-6·3	-4·5	-5·3
	(7·1-8·8)	(2·5-2·8)	(5·4-7·3)	(3·7-6·3)	(20·3-23·6)	(12·1-14·1)	(-5·7--6·9)	(-3·9--5·2)	(-4·9--5·7)
Latin America, Central	6·0	2·2	5·5	3·9	17·6	85·9	-4·0	-3·6	-3·8
	(5·2-6·8)	(2·1-2·4)	(4·7-6·4)	(3·3-4·4)	(15·8-19·6)	(77·2-95·9)	(-3·4--4·7)	(-2·7--4·5)	(-3·3--4·3)
Colombia	5·2	2·1	5·7	4·8	17·9	16·3	-2·2	-3·1	-2·7
	(4·4-6·1)	(2·0-2·3)	(4·8-6·8)	(3·7-5·9)	(15·9-20·1)	(14·5-18·3)	(-1·4--3·2)	(-2·0--4·2)	(-2·2--3·3)
Costa Rica	3·8	1·2	3·2	1·9	10·3	0·7	-3·3	-2·9	-3·1
	(3·3-4·6)	(1·1-1·4)	(2·8-3·7)	(1·4-2·5)	(9·1-11·6)	(0·6-0·8)	(-1·9--4·7)	(-1·7--4·2)	(-2·4--3·7)
El Salvador	4·6	1·8	4·5	2·4	13·3	1·7	-5·8	-6·3	-6·1
	(3·7-5·6)	(1·6-2·1)	(3·4-5·6)	(1·8-3·1)	(11·8-15·1)	(1·5-1·9)	(-4·5--7·0)	(-5·0--7·5)	(-5·4--6·7)
Guatemala	6·4	2·8	10·3	8·6	27·9	13·2	-3·9	-4·6	-4·3
	(5·8-7·1)	(2·5-3·0)	(8·5-12·5)	(6·9-10·5)	(24·8-31·4)	(11·8-14·9)	(-3·0--4·9)	(-3·5--5·7)	(-3·8--4·9)
Honduras	9·2	2·6	6·2	5·3	23·2	4·8	-3·8	-3·5	-3·6
	(8·1-10·3)	(2·4-2·8)	(5·1-7·3)	(4·1-6·7)	(20·9-25·8)	(4·3-5·3)	(-3·0--4·7)	(-2·6--4·4)	(-3·1--4·2)
Mexico	6·2	2·3	4·7	2·8	16·0	36·3	-4·7	-3·7	-4·1
	(5·2-7·4)	(2·1-2·5)	(3·7-5·9)	(2·1-3·5)	(14·3-18·1)	(32·3-40·9)	(-3·5--6·0)	(-2·5--4·9)	(-3·5--4·8)
Nicaragua	8·9	2·6	8·4	4·1	23·9	3·3	-5·2	-3·8	-4·4
	(7·9-9·9)	(2·4-2·9)	(7·0-10·1)	(3·1-5·1)	(21·3-27·0)	(2·9-3·7)	(-4·3--6·1)	(-2·7--4·8)	(-3·8--5·0)
Panama	5·9	2·2	4·2	6·1	18·4	1·3	-1·6	-1·8	-1·7
	(4·8-7·0)	(2·0-2·3)	(3·4-5·1)	(4·9-7·6)	(16·4-20·8)	(1·2-1·5)	(-0·1--3·0)	(-0·6--3·0)	(-1·0--2·4)
Venezuela	4·7	1·7	3·9	2·8	13·3	7·9	-3·6	-3·4	-3·5
	(4·2-5·3)	(1·6-1·9)	(3·4-4·3)	(2·2-3·5)	(12·3-14·3)	(7·4-8·6)	(-3·4--3·8)	(-2·8--4·0)	(-3·2--3·8)
Latin America, Southern	4·7	1·6	3·8	1·8	12·0	11·9	-4·1	-2·6	-3·3
	(3·3-6·6)	(1·3-2·0)	(2·9-5·0)	(1·2-2·6)	(8·9-16·0)	(8·9-15·9)	(-3·9--4·3)	(-0·3--4·8)	(-2·0--4·5)
Argentina	5·7	1·9	4·2	2·1	13·9	9·6	-3·8	-2·5	-3·1
	(3·9-7·8)	(1·5-2·3)	(3·4-5·4)	(1·4-3·1)	(10·6-18·1)	(7·3-12·6)	(-3·6--4·1)	(-0·4--4·5)	(-1·9--4·2)
Chile	2·5	1·0	2·7	1·0	7·3	1·8	-5·7	-3·0	-4·2
	(1·7-3·7)	(0·7-1·3)	(1·7-3·9)	(0·6-1·6)	(5·0-10·5)	(1·2-2·5)	(-5·4--6·1)	(-0·0--5·8)	(-2·5--5·8)
Uruguay	2·9	1·5	3·6	1·0	9·2	0·4	-3·7	-4·4	-4·1
	(1·8-5·0)	(1·1-2·2)	(2·1-5·2)	(0·6-1·7)	(5·8-14·0)	(0·2-0·6)	(-3·1--4·4)	(-0·9--7·7)	(-2·1--5·9)
Latin America, Tropical	7·7	2·5	5·8	2·0	18·0	57·1	-4·9	-4·2	-4·5
	(6·8-8·6)	(2·3-2·6)	(5·1-6·5)	(1·4-2·7)	(16·6-19·6)	(52·5-62·2)	(-4·1--5·8)	(-3·4--5·0)	(-4·1--5·0)
Brazil	7·6	2·5	5·8	1·9	17·9	53·7	-5·0	-4·3	-4·6
	(6·8-8·5)	(2·3-2·6)	(5·1-6·5)	(1·3-2·7)	(16·4-19·5)	(49·4-58·6)	(-4·2--5·9)	(-3·5--5·1)	(-4·2--5·1)
Paraguay	8·8	2·7	5·5	3·9	20·8	3·3	-2·5	-2·5	-2·5
	(7·8-9·7)	(2·6-2·9)	(4·7-6·3)	(2·8-5·1)	(19·1-22·7)	(3·0-3·6)	(-1·6--3·5)	(-1·6--3·4)	(-2·1--3·0)
North Africa/Middle East	9·0	3·2	7·7	5·4	25·1	291·6	-4·4	-4·4	-4·4
	(8·5-9·7)	(3·0-3·4)	(6·9-8·5)	(4·8-6·1)	(23·3-27·1)	(270·9-314·1)	(-4·0--4·8)	(-3·9--5·0)	(-4·1--4·8)
Afghanistan	20·6	10·5	34·5	26·3	89·0	93·5	-1·5	-3·7	-2·7
	(18·5-22·6)	(9·2-11·8)	(27·7-41·9)	(19·2-34·7)	(80·2-98·7)	(84·3-103·9)	(-0·8--2·3)	(-2·8--4·5)	(-2·2--3·3)
Algeria	9·9	2·9	6·9	4·5	24·2	22·9	-4·2	-3·5	-3·8
	(8·8-11·2)	(2·6-3·3)	(5·6-8·6)	(3·3-5·9)	(21·4-27·8)	(20·2-26·3)	(-3·2--5·2)	(-2·5--4·5)	(-3·2--4·4)
Bahrain	2·5	1·2	2·2	0·9	6·9	0·1	-5·3	-4·1	-4·7
	(2·2-2·8)	(1·1-1·3)	(1·9-2·5)	(0·7-1·2)	(6·4-7·6)	(0·1-0·1)	(-4·7--5·9)	(-3·4--4·9)	(-4·3--5·1)
Egypt	7·3	3·4	6·3	4·7	21·7	41·2	-6·4	-5·3	-5·8
	(6·5-8·2)	(3·2-3·7)	(5·1-7·6)	(3·6-6·0)	(19·5-24·2)	(37·1-45·9)	(-5·9--7·0)	(-4·5--6·2)	(-5·3--6·3)
Iran	7·1	2·4	4·7	3·6	17·8	25·9	-5·5	-5·9	-5·7
	(6·0-8·5)	(2·2-2·6)	(3·8-5·8)	(2·5-4·9)	(15·6-20·6)	(22·7-29·9)	(-4·4--6·4)	(-4·8--6·8)	(-5·0--6·3)
Iraq	11·3	3·4	9·1	5·9	29·6	30·8	-2·1	-3·0	-2·6
	(10·4-12·3)	(3·0-3·8)	(7·2-11·2)	(4·1-8·1)	(26·8-32·6)	(28·0-33·9)	(-1·4--2·8)	(-2·2--3·9)	(-2·1--3·1)
Jordan	6·6	2·2	4·4	5·0	18·2	3·5	-2·2	-2·9	-2·6
	(5·8-7·4)	(2·1-2·4)	(3·7-5·3)	(3·9-6·3)	(16·8-20·1)	(3·2-3·8)	(-1·6--2·8)	(-2·1--3·6)	(-2·2--3·0)
Kuwait	3·1	1·3	2·7	1·8	9·0	0·6	-3·8	-2·6	-3·1
	(2·8-3·4)	(1·2-1·4)	(2·4-3·1)	(1·4-2·2)	(8·5-9·6)	(0·5-0·6)	(-3·4--4·2)	(-2·0--3·1)	(-2·8--3·4)
Lebanon	5·1	2·0	3·7	2·8	13·7	0·8	-6·2	-3·6	-4·7
	(4·3-6·1)	(1·7-2·2)	(3·1-4·4)	(1·9-3·8)	(12·1-15·5)	(0·7-0·9)	(-5·1--7·2)	(-2·6--4·5)	(-4·1--5·3)
Libya	5·2	1·9	4·1	3·2	14·5	1·8	-4·4	-4·4	-4·4
	(4·2-6·3)	(1·7-2·2)	(3·2-5·1)	(2·5-4·1)	(12·7-16·7)	(1·6-2·1)	(-3·3--5·6)	(-3·3--5·4)	(-3·8--5·0)
Morocco	10·4	4·0	7·2	4·5	26·0	19·3	-3·8	-4·7	-4·3
	(9·2-11·6)	(3·6-4·5)	(5·8-8·8)	(3·4-5·9)	(23·0-29·5)	(17·0-21·8)	(-3·1--4·5)	(-3·7--5·6)	(-3·7--4·9)
Oman	2·7	1·3	2·5	2·0	8·6	0·6	-7·2	-5·8	-6·4
	(2·4-3·1)	(1·2-1·4)	(2·0-2·9)	(1·5-2·5)	(7·8-9·5)	(0·5-0·6)	(-6·2--8·1)	(-4·8--6·9)	(-5·8--7·1)
Palestine	7·9	2·5	5·2	4·0	19·6	2·5	-4·0	-3·4	-3·6
	(6·7-9·3)	(2·3-2·8)	(4·2-6·4)	(2·7-5·4)	(17·2-22·8)	(2·2-2·9)	(-2·7--5·2)	(-2·3--4·5)	(-2·8--4·4)

Qatar	3·5	1·5	3·0	2·1	10·2	0·2	-3·5	-3·1	-3·3
	(2·9-4·3)	(1·3-1·7)	(2·4-3·6)	(1·5-2·9)	(9·0-11·8)	(0·2-0·2)	(-2·3--4·7)	(-2·1--4·1)	(-2·5--4·0)
Saudi Arabia	3·7	1·6	3·1	2·2	10·7	6·0	-7·4	-5·5	-6·4
	(3·0-4·5)	(1·4-1·8)	(2·5-3·7)	(1·5-3·0)	(9·3-12·4)	(5·2-7·0)	(-6·3--8·6)	(-4·3--6·6)	(-5·6--7·0)
Sudan	15·1	4·6	14·1	13·3	46·5	58·8	-3·0	-4·1	-3·6
	(13·6-16·8)	(4·0-5·2)	(11·5-17·2)	(10·1-17·1)	(41·1-52·7)	(52·0-66·6)	(-2·1--4·0)	(-3·2--5·1)	(-3·1--4·2)
Syria	7·7	2·3	5·3	5·9	21·2	11·2	-5·7	0·1	-2·3
	(6·9-8·6)	(2·2-2·4)	(4·2-6·5)	(4·7-7·2)	(20·0-22·5)	(10·6-11·9)	(-4·7--6·7)	(0·8--0·5)	(-2·0--2·7)
Tunisia	5·1	2·1	3·9	2·9	14·0	2·6	-5·6	-5·2	-5·4
	(4·3-5·9)	(1·9-2·3)	(3·3-4·5)	(2·2-3·8)	(12·5-15·8)	(2·3-2·9)	(-4·7--6·5)	(-4·2--6·1)	(-4·8--5·9)
Turkey	7·3	2·4	5·3	2·3	17·3	21·9	-5·6	-6·4	-6·0
	(6·3-8·4)	(2·2-2·6)	(4·5-6·1)	(1·7-3·0)	(15·4-19·5)	(19·5-24·6)	(-4·9--6·3)	(-5·5--7·3)	(-5·5--6·6)
United Arab Emirates	2·2	1·1	2·0	1·4	6·9	0·8	-5·5	-4·5	-5·0
	(1·9-2·6)	(1·0-1·2)	(1·5-2·4)	(1·0-2·0)	(6·1-7·7)	(0·7-1·0)	(-4·5--6·6)	(-3·4--5·7)	(-4·3--5·8)
Yemen	15·0	5·7	20·8	9·6	50·4	38·0	-3·4	-4·1	-3·8
	(12·9-17·3)	(4·8-6·7)	(16·4-25·8)	(7·2-12·8)	(44·9-57·3)	(33·8-43·2)	(-2·8--4·0)	(-3·2--5·0)	(-3·2--4·3)
North America,	2·8	0·7	1·8	1·0	6·4	29·9	-3·2	-1·6	-2·3
High-income	(2·3-3·4)	(0·6-0·8)	(1·4-2·3)	(0·7-1·4)	(5·3-7·8)	(24·6-36·2)	(-3·1--3·3)	(-0·2--3·1)	(-1·5--3·1)
Canada	2·4	0·5	1·4	0·9	5·3	2·1	-3·5	-0·9	-2·0
	(1·9-3·0)	(0·4-0·6)	(1·1-1·8)	(0·6-1·2)	(4·4-6·5)	(1·7-2·5)	(-3·0--4·0)	(0·5--2·4)	(-1·2--2·9)
USA	2·8	0·7	1·8	1·0	6·5	27·8	-3·2	-1·7	-2·3
	(2·3-3·4)	(0·6-0·8)	(1·4-2·3)	(0·7-1·5)	(5·4-7·9)	(22·9-33·7)	(-3·1--3·3)	(-0·2--3·1)	(-1·5--3·1)
Oceania	15·1	4·4	16·3	12·0	47·1	13·2	-1·4	-2·8	-2·2
	(12·5-18·2)	(3·2-6·0)	(11·1-22·9)	(7·1-19·1)	(35·2-62·6)	(9·8-17·5)	(0·0--2·9)	(-0·9--4·6)	(-0·9--3·4)
Federated States of	5·1	1·5	3·4	3·0	13·1	0·0	-4·8	-4·6	-4·7
Micronesia	(3·3-7·4)	(1·1-2·0)	(2·5-4·5)	(1·9-4·5)	(9·8-17·9)	(0·0-0·0)	(-3·0--6·6)	(-2·4--6·6)	(-3·1--6·1)
Fiji	11·6	2·7	8·5	6·9	29·4	0·5	-0·9	-0·1	-0·5
	(9·0-14·2)	(2·1-3·5)	(5·3-13·2)	(4·4-10·2)	(21·8-39·4)	(0·3-0·7)	(0·9--2·9)	(2·0--2·1)	(1·0--2·0)
Kiribati	13·7	3·4	12·3	8·6	37·7	0·0	-3·6	-3·4	-3·5
	(11·2-16·6)	(2·5-4·7)	(7·6-18·8)	(5·2-13·7)	(27·7-50·6)	(0·0-0·1)	(-1·7--5·4)	(-1·4--5·3)	(-2·0--4·9)
Marshall Islands	11·9	2·8	8·9	6·7	30·1	0·0	-1·9	-2·2	-2·0
	(9·1-14·7)	(2·1-3·9)	(5·5-14·4)	(4·0-10·8)	(21·9-42·1)	(0·0-0·0)	(0·1--3·8)	(-0·1--4·2)	(-0·4--3·6)
Papua New Guinea	16·6	5·0	18·9	13·8	53·4	11·2	-1·7	-3·1	-2·5
	(13·8-19·8)	(3·6-6·8)	(12·8-26·4)	(7·9-22·4)	(39·8-70·8)	(8·3-14·8)	(-0·1--3·4)	(-1·1--5·0)	(-1·2--3·8)
Samoa	4·1	1·3	3·0	2·8	11·3	0·0	-3·1	-2·7	-2·9
	(2·6-6·5)	(0·9-1·8)	(2·0-4·0)	(1·8-4·3)	(7·8-16·1)	(0·0-0·0)	(-0·9--5·3)	(-0·4--5·1)	(-1·0--4·7)
Solomon Islands	8·6	2·1	5·3	4·6	20·6	0·3	-2·9	-3·2	-3·1
	(5·8-11·8)	(1·7-2·7)	(3·5-8·5)	(2·8-6·8)	(14·7-28·5)	(0·2-0·4)	(-0·8--5·0)	(-1·2--5·2)	(-1·5--4·7)
Tonga	12·4	3·0	9·8	7·2	32·2	0·0	2·8	-0·6	0·8
	(9·4-15·5)	(2·1-4·2)	(5·5-16·0)	(4·1-12·0)	(22·3-45·5)	(0·0-0·1)	(5·1-0·7)	(1·4--2·7)	(2·4--0·6)
Vanuatu	12·2	2·8	9·3	6·9	30·9	0·2	-0·2	-1·3	-0·8
	(9·8-14·5)	(2·2-3·7)	(6·0-13·8)	(4·3-10·7)	(23·7-40·2)	(0·1-0·2)	(1·4--1·9)	(0·5--3·2)	(0·5--2·2)
sub-Saharan Africa,	22·4	7·6	39·7	44·8	110·2	460·0	-0·6	-3·0	-2·0
Central	(19·5-25·8)	(6·1-9·4)	(31·1-49·7)	(31·7-62·0)	(89·1-135·6)	(371·7-567·1)	(-0·0--1·2)	(-1·4--4·6)	(-1·0--2·9)
Angola	16·4	8·3	28·6	37·5	88·2	82·1	-1·9	-4·2	-3·2
	(13·8-19·2)	(6·7-10·1)	(21·8-36·9)	(26·1-52·5)	(71·4-108·0)	(66·5-100·6)	(-0·9--2·8)	(-2·5--5·9)	(-2·3--4·1)
Central African Republic	29·7	11·6	50·6	52·2	137·2	21·4	-0·8	-1·3	-1·1
	(25·0-35·7)	(9·1-15·2)	(38·7-65·6)	(35·5-73·6)	(109·2-174·5)	(17·0-27·3)	(0·0--1·6)	(0·5--3·1)	(-0·0--2·1)
Congo	17·6	4·7	21·8	17·9	61·0	10·0	1·8	-4·5	-1·8
	(15·4-19·8)	(4·0-5·6)	(16·7-26·9)	(12·2-24·5)	(52·3-70·7)	(8·5-11·6)	(2·6-0·9)	(-3·4--5·8)	(-1·1--2·5)
Democratic Republic of th	24·3	7·4	44·3	49·3	120·3	340·4	-0·3	-2·7	-1·7
	(20·5-28·6)	(5·8-9·4)	(33·3-57·1)	(32·8-70·5)	(95·3-149·8)	(269·9-424·2)	(0·2--1·0)	(-0·9--4·5)	(-0·7--2·7)
Equatorial Guinea	23·7	8·3	40·1	40·0	107·8	2·8	0·0	-3·4	-1·9
	(19·6-28·1)	(5·9-11·2)	(27·9-55·5)	(23·9-62·3)	(80·3-141·8)	(2·1-3·7)	(1·5--1·5)	(-1·1--5·8)	(-0·6--3·2)
Gabon	18·6	3·9	20·5	17·9	59·8	3·1	-1·9	-1·3	-1·5
	(16·2-21·0)	(3·2-4·5)	(16·4-25·0)	(12·9-23·8)	(51·0-69·7)	(2·6-3·6)	(-1·0--2·8)	(-0·0--2·5)	(-0·8--2·3)
sub-Saharan Africa,	19·6	6·2	26·5	25·9	76·3	1003·7	-2·4	-4·4	-3·5
Eastern	(18·1-21·1)	(5·4-7·1)	(22·8-30·5)	(21·1-32·1)	(66·8-87·2)	(877·7-1148·2)	(-2·1--2·6)	(-3·3--5·4)	(-2·9--4·1)
Burundi	19·4	7·2	28·5	36·8	89·1	39·3	0·1	-5·3	-2·9
	(16·7-22·1)	(6·0-8·5)	(22·7-34·7)	(27·2-49·1)	(75·2-105·0)	(33·1-46·3)	(0·9--0·5)	(-4·0--6·7)	(-2·1--3·7)
Comoros	18·1	6·2	13·6	8·5	45·8	1·1	-3·8	-4·6	-4·2
	(14·9-22·0)	(4·5-8·8)	(8·9-20·0)	(5·4-13·6)	(34·1-62·5)	(0·8-1·6)	(-1·9--5·6)	(-2·1--6·8)	(-2·9--5·5)
Djibouti	17·3	5·2	21·2	19·1	61·6	1·4	-0·9	-3·9	-2·6
	(14·5-20·4)	(3·8-6·8)	(14·6-29·1)	(11·8-29·9)	(46·6-80·1)	(1·1-1·9)	(0·4--2·3)	(-1·6--6·0)	(-1·4--3·8)
Eritrea	16·0	3·9	16·8	22·7	58·3	13·3	-2·9	-5·1	-4·1
	(13·4-19·0)	(2·9-5·4)	(11·8-23·5)	(14·4-35·4)	(43·4-79·6)	(9·9-18·2)	(-2·1--3·7)	(-2·7--7·2)	(-2·8--5·4)
Ethiopia	22·8	7·0	23·1	23·1	74·0	228·5	-3·4	-5·1	-4·4
	(20·0-25·9)	(5·7-8·4)	(18·1-28·7)	(16·5-32·0)	(62·0-87·9)	(191·3-271·4)	(-2·8--4·1)	(-3·7--6·4)	(-3·6--5·2)
Kenya	17·7	4·2	21·2	17·0	59·1	90·7	0·0	-3·7	-2·0
	(15·2-20·8)	(3·3-5·4)	(15·9-27·8)	(11·4-24·7)	(46·9-74·1)	(72·0-113·9)	(0·7--0·6)	(-1·9--5·4)	(-1·0--3·0)
Madagascar	14·3	5·2	21·5	18·1	58·0	45·3	-4·0	-3·9	-4·0

	(12·4-16·7)	(4·1-6·5)	(16·1-28·1)	(12·0-25·8)	(46·0-72·7)	(35·9-56·9)	(-3·4--4·7)	(-2·2--5·7)	(-3·0--5·0)
Malawi	19·1	6·3	28·9	35·0	86·8	55·2	-3·1	-5·0	-4·1
	(16·4-21·7)	(5·4-7·4)	(23·2-35·3)	(25·3-46·2)	(73·7-101·8)	(46·7-64·8)	(-2·5--3·6)	(-3·6--6·2)	(-3·4--4·9)
Mozambique	20·9	7·4	30·8	31·0	87·4	86·9	-3·4	-4·4	-4·0
	(18·2-23·5)	(6·3-8·6)	(23·9-37·9)	(21·4-41·4)	(75·6-100·7)	(74·9-100·2)	(-2·9--4·0)	(-3·3--5·7)	(-3·3--4·6)
Rwanda	17·4	5·3	21·4	19·1	61·9	25·3	-0·3	-7·2	-4·2
	(15·1-20·0)	(4·2-6·6)	(16·0-27·6)	(12·6-27·4)	(51·3-75·8)	(21·0-31·1)	(0·2--0·9)	(-5·5--8·6)	(-3·3--5·0)
Somalia	23·7	10·0	39·5	45·8	114·3	51·6	-1·8	-2·5	-2·2
	(19·8-27·9)	(7·6-13·0)	(27·6-53·1)	(29·4-67·7)	(88·8-144·8)	(40·0-65·3)	(-0·7--2·9)	(-0·4--4·4)	(-1·1--3·3)
South Sudan	22·9	9·0	37·2	41·5	106·4	41·9	-2·9	-2·6	-2·7
	(19·2-26·9)	(6·7-11·7)	(26·6-49·7)	(25·2-62·7)	(81·7-136·3)	(32·3-53·8)	(-0·9--5·0)	(-0·3--4·8)	(-1·5--4·0)
Tanzania	18·1	5·7	29·8	24·7	76·3	144·8	-2·1	-3·6	-2·9
	(16·0-20·5)	(4·7-6·9)	(23·6-37·4)	(17·5-33·8)	(63·0-91·7)	(119·6-174·4)	(-1·5--2·6)	(-2·1--5·0)	(-2·1--3·7)
Uganda	20·5	5·6	29·3	28·9	82·1	130·5	-1·6	-4·0	-2·9
	(18·1-22·9)	(4·8-6·6)	(24·0-35·2)	(21·2-37·6)	(70·7-94·9)	(112·3-151·2)	(-1·0--2·2)	(-2·8--5·1)	(-2·3--3·6)
Zambia	14·9	6·7	28·3	29·8	77·6	47·0	-1·4	-5·1	-3·5
	(12·8-17·1)	(5·3-8·3)	(21·8-36·1)	(20·5-42·0)	(62·5-97·9)	(37·8-59·2)	(-0·7--2·0)	(-3·4--6·8)	(-2·5--4·4)
sub-Saharan Africa,	12·9	3·7	14·8	11·2	42·1	74·7	0·6	-4·8	-2·4
Southern	(11·6-14·6)	(3·2-4·4)	(11·8-19·2)	(8·7-14·4)	(35·5-50·6)	(63·1-89·8)	(1·7--0·2)	(-3·3--6·2)	(-1·6--3·1)
Botswana	11·4	2·3	8·3	6·0	27·9	1·3	2·6	-7·4	-3·0
	(8·2-14·6)	(1·8-3·3)	(4·8-13·9)	(3·5-9·8)	(19·1-39·9)	(0·9-1·9)	(4·7-0·7)	(-4·4--10·2)	(-1·3--4·7)
Lesotho	32·6	7·3	37·2	20·3	94·3	5·3	1·0	-0·6	0·0
	(28·0-38·0)	(5·7-9·5)	(28·2-49·1)	(13·0-29·3)	(76·0-118·7)	(4·3-6·7)	(1·9-0·3)	(1·1--2·4)	(1·1--0·8)
Namibia	12·8	2·2	7·9	8·0	30·8	1·8	-0·9	-5·7	-3·6
	(10·0-15·9)	(1·6-3·1)	(4·8-12·8)	(5·1-12·4)	(22·4-43·0)	(1·3-2·5)	(-0·0--1·8)	(-3·0--8·2)	(-2·2--4·9)
South Africa	10·5	2·6	11·3	7·2	31·4	34·5	0·5	-7·1	-3·8
	(8·3-12·4)	(2·1-3·4)	(7·2-16·8)	(4·8-10·7)	(23·3-41·6)	(25·6-45·7)	(2·0--0·9)	(-4·9--9·6)	(-2·5--5·1)
Swaziland	15·5	4·5	29·9	17·0	65·5	2·4	2·9	-3·3	-0·6
	(13·4-17·9)	(3·5-5·7)	(23·2-38·6)	(11·3-24·6)	(52·7-82·8)	(1·9-3·0)	(3·8-2·0)	(-1·4--5·0)	(0·4--1·5)
Zimbabwe	16·9	6·1	21·7	21·4	64·7	28·3	0·9	-1·0	-0·1
	(14·6-19·5)	(5·0-7·6)	(17·0-27·5)	(14·9-29·4)	(53·4-79·5)	(23·4-34·9)	(1·6-0·2)	(0·5--2·5)	(0·6--1·0)
sub-Saharan Africa,	25·8	8·6	32·6	53·0	115·3	1661·8	-1·3	-3·0	-2·2
Western	(23·7-28·1)	(7·8-9·6)	(28·7-37·0)	(45·4-62·4)	(105·0-126·8)	(1512·6-1829·3)	(-1·0--1·5)	(-2·2--3·7)	(-1·8--2·6)
Benin	17·9	3·6	19·0	21·1	60·4	22·4	-3·1	-5·8	-4·6
	(16·0-19·9)	(3·2-4·0)	(15·9-22·3)	(16·4-27·0)	(54·1-67·4)	(20·0-24·9)	(-2·5--3·6)	(-4·9--6·7)	(-4·1--5·1)
Burkina Faso	20·1	8·7	32·4	46·9	104·3	70·8	-1·3	-4·2	-3·0
	(17·6-22·8)	(7·7-9·7)	(26·8-38·6)	(36·9-57·2)	(92·9-116·9)	(63·0-79·6)	(-0·8--1·8)	(-3·3--5·2)	(-2·4--3·5)
Cameroon	25·2	7·4	30·5	41·7	101·1	82·7	0·3	-2·5	-1·2
	(22·1-28·3)	(6·7-8·4)	(25·3-35·7)	(33·2-52·2)	(91·0-113·7)	(74·5-93·1)	(0·8--0·2)	(-1·5--3·4)	(-0·7--1·7)
Cape Verde	8·7	2·2	6·6	5·1	22·6	0·2	-2·6	-5·0	-4·0
	(7·1-10·4)	(2·0-2·6)	(5·1-8·6)	(3·8-6·7)	(18·7-27·3)	(0·1-0·2)	(-1·1--4·1)	(-3·4--6·7)	(-3·1--4·8)
Chad	29·5	12·0	46·3	67·1	147·1	84·7	-0·7	-1·9	-1·4
	(25·1-34·2)	(9·9-14·3)	(35·0-59·4)	(49·5-86·0)	(127·3-169·2)	(73·3-97·7)	(-0·1--1·2)	(-0·8--3·1)	(-0·7--2·0)
Côte d'Ivoire	26·7	9·3	31·8	31·5	96·0	70·1	-0·7	-2·9	-2·0
	(23·8-29·8)	(8·3-10·5)	(26·6-37·8)	(24·3-40·0)	(86·2-108·1)	(63·0-79·1)	(-0·1--1·4)	(-2·0--3·8)	(-1·4--2·4)
Ghana	22·3	5·6	17·8	26·8	70·8	56·1	-1·7	-2·8	-2·3
	(19·5-25·2)	(4·9-6·6)	(14·5-21·5)	(21·2-33·3)	(62·6-81·3)	(49·6-64·5)	(-1·2--2·2)	(-1·8--3·8)	(-1·7--2·9)
Guinea	26·0	8·5	33·4	45·0	108·6	46·3	-2·8	-3·5	-3·2
	(23·1-29·1)	(7·7-9·3)	(28·0-39·0)	(36·3-53·8)	(99·7-118·2)	(42·5-50·5)	(-2·2--3·3)	(-2·8--4·2)	(-2·8--3·6)
Guinea-Bissau	30·2	12·2	48·2	69·9	152·0	9·5	-1·3	-1·8	-1·6
	(25·4-35·2)	(10·0-14·7)	(36·6-61·5)	(50·4-92·2)	(129·9-176·9)	(8·1-11·1)	(-0·2--2·3)	(-0·5--3·1)	(-0·8--2·3)
Liberia	20·4	5·8	32·3	20·6	77·1	11·5	-3·3	-5·6	-4·6
	(18·2-22·6)	(4·9-6·9)	(26·7-39·0)	(15·0-27·5)	(66·7-90·4)	(10·0-13·5)	(-2·7--3·9)	(-4·3--6·7)	(-3·9--5·3)
Mali	31·2	11·4	38·8	74·7	148·3	103·8	-1·5	-3·0	-2·3
	(26·2-36·5)	(9·6-13·7)	(30·6-48·5)	(58·7-94·0)	(127·6-174·6)	(89·2-122·2)	(-1·0--2·0)	(-1·7--4·1)	(-1·7--3·0)
Mauritania	26·6	6·5	15·8	21·3	68·6	8·9	-0·6	-2·7	-1·8
	(23·1-30·3)	(5·3-7·8)	(12·4-20·2)	(15·5-28·2)	(57·8-81·3)	(7·5-10·6)	(0·1--1·5)	(-1·3--4·1)	(-1·1--2·6)
Niger	17·6	8·2	31·3	62·8	115·6	98·0	-2·8	-5·1	-4·1
	(15·0-20·4)	(7·3-9·2)	(25·6-37·6)	(51·6-75·2)	(104·7-127·5)	(88·6-108·1)	(-2·3--3·3)	(-4·2--5·9)	(-3·6--4·5)
Nigeria	28·1	9·2	35·3	63·4	130·0	907·7	-1·1	-2·6	-2·0
	(24·2-32·2)	(8·0-10·5)	(28·4-42·4)	(50·8-78·6)	(115·2-146·4)	(803·4-1026·3)	(-0·6--1·6)	(-1·7--3·6)	(-1·4--2·5)
Sao Tome and Principe	14·8	3·1	11·5	11·2	40·2	0·2	-2·3	-4·9	-3·8
	(13·0-16·6)	(2·6-3·8)	(8·5-14·9)	(7·8-15·4)	(34·0-47·4)	(0·2-0·3)	(-1·5--3·3)	(-3·5--6·1)	(-3·0--4·5)
Senegal	18·1	5·4	15·1	23·6	61·0	31·9	-1·3	-5·6	-3·8
	(15·7-20·4)	(4·7-6·3)	(12·3-18·6)	(18·1-29·8)	(53·7-70·2)	(28·0-36·6)	(-0·7--1·9)	(-4·6--6·7)	(-3·1--4·3)
Sierra Leone	27·3	9·7	48·5	46·2	126·0	27·9	-1·4	-3·5	-2·6
	(24·0-31·0)	(8·3-11·4)	(39·7-58·0)	(34·7-59·6)	(110·0-146·1)	(24·3-32·4)	(-0·8--2·0)	(-2·3--4·5)	(-1·9--3·2)
The Gambia	20·7	6·0	23·2	26·3	74·3	5·7	-2·5	-4·0	-3·3
	(18·1-23·6)	(4·9-7·3)	(18·0-29·6)	(18·2-36·3)	(62·9-89·1)	(4·8-6·8)	(-1·3--3·6)	(-2·5--5·4)	(-2·5--4·1)
Togo	25·1	5·9	25·8	38·1	92·1	22·4	-1·6	-2·3	-2·0
	(21·9-28·5)	(5·1-7·1)	(20·6-31·6)	(28·6-49·1)	(79·1-108·7)	(19·2-26·4)	(-0·7--2·5)	(-0·9--3·5)	(-1·3--2·6)

Table 3. Regression models for the log of the under-5 mortality rate for different model specifications for 188 countries 1970-2013

Variable	Model	Coefficient	Std. Error	95% Conf. Interval
Lagged distributed income (logarithmic scale)	Mixed effects regression	-0·15†	0·008	(-0·17, -0·14)
	Within-between regression*	-0·14†	0·014	(-0·17, -0·11)
	Generalized linear model	-0·14†	0·007	(-0·16, -0·13)
	Within-between regression**	-0·14†	0·008	(-0·16, -0·13)
Maternal education	Mixed effects regression	-0·09†	0·004	(-0·10, -0·08)
	Within-between regression*	-0·09†	0·009	(-0·11, -0·08)
	Generalized linear model	-0·09†	0·004	(-0·10, -0·08)
	Within-between regression**	-0·09†	0·004	(-0·10, -0·08)
Crude death rate from HIV	Mixed effects regression	99.46†	4.253	(91.12, 107.80)
	Within-between regression*	68.17†	4·978	(58.41, 77.92)
	Generalized linear model	98·20†	4.214	(89.94, 106.45)
	Within-between regression**	98·20†	4.263	(89·84, 106.55)

*Within-between estimator with AR(1) autocorrelation specification

** Within-between estimator without AR(1) autocorrelation specification

†Significant at 0.001 level

Combined GBD Super-region and year fixed effects, as well as country level random effects, when included, not shown here

Table 4. Shapley decomposition analysis of the change in the number of deaths comparing 2013 to 1990 related to changes in income per capita, maternal education, HIV child death rate, births, secular trend, and unexplained factors for the world and 21 GBD regions

	Changes in under-5 deaths (thousands)						
Region	Fertility	Maternal Education	HIV/AIDS	Income	Unexplained	Secular Trend	Total
Global	1401·9	-2430	39·3	-858·5	246·9	-4145·1	-5745·4
	(1390·6,1415·3)	(-2616·4,-2239·1)	(36·1,42·6)	(-945·1,-772·8)	(-388·5,870·2)	(-4785·2,-3449·4)	(-5800·4,-5709·4)
Asia Pacific, High-income	-2·6	-2	0	-1	0	-5·8	-11·3
	(-2·6,-2·6)	(-2·1,-1·8)	(0,0)	(-1·1,-·9)	(-·6,·8)	(-6·6,-5·1)	(-11·4,-11·3)
Asia, Central	-6·6	-22·3	0	-2·8	32·4	-68·9	-68·2
	(-6·8,-6·4)	(-24·1,-20·7)	(0,0)	(-3·1,-2·5)	(24·1,41·4)	(-78·1,-61)	(-69,-67·6)
Asia, East	-265·7	-231·8	·4	-216·4	-205	-310·7	-1229·3
	(-267,-264·8)	(-249·8,-215)	(·3,·4)	(-237·9,-195·2)	(-264·4,-142·7)	(-374·5,-248·5)	(-1232·2,-1227·7)
Asia, South	-79·5	-897·5	2·1	-377·5	496·4	-1576·9	-2432·9
	(-83·6,-76·6)	(-974·1,-820·7)	(1·9,2·3)	(-420·7,-338·3)	(-51,1067·7)	(-2139·1,-1034)	(-2487·6,-2396·6)
Asia, Southeast	-20	-154	·7	-68·6	-65·7	-222·6	-530·2
	(-20·1,-20)	(-165·9,-142·7)	(·6,·7)	(-75·4,-61·8)	(-109·2,-22·6)	(-269·2,-177·5)	(-531·9,-529·1)
Australasia	·4	-·4	0	-·2	·1	-1·4	-1·4
	(·4,·4)	(-·4,-·3)	(0,0)	(-·2,-·1)	(-·1,·3)	(-1·6,-1·2)	(-1·4,-1·4)
Caribbean	-1·2	-13·5	-1·9	-·5	2·2	-17·3	-32·3
	(-1·2,-1·2)	(-14·5,-12·5)	(-2·1,-1·8)	(-·5,-·4)	(-1,5·4)	(-20·6,-13·9)	(-32·5,-32·2)
Europe, Central	-6·9	-3·7	0	-1·2	-3·4	-12·9	-28·1
	(-7,-6·9)	(-4,-3·4)	(0,0)	(-1·4,-1·1)	(-4·9,-1·8)	(-14·4,-11·5)	(-28·3,-28)
Europe, Eastern	-10·8	-8·9	0	-·7	8	-33·6	-46
	(-11,-10·7)	(-9·7,-8·3)	(0,0)	(-·8,-·6)	(4·1,12·3)	(-37·9,-29·8)	(-46·4,-45·7)
Europe, Western	·3	-5·7	0	-1·6	-·7	-16·9	-24·7
	(·3,·3)	(-6·2,-5·3)	(0,0)	(-1·8,-1·4)	(-2·6,1·5)	(-19·2,-14·8)	(-24·8,-24·6)
Latin America, Andean	·5	-17·7	0	-3·5	-12·9	-24·4	-58
	(·5,·5)	(-19,-16·4)	(0,0)	(-3·9,-3·2)	(-17·2,-8·5)	(-28·9,-19·7)	(-58·1,-58)
Latin America, Central	·9	-37·9	-·1	-6	-21·4	-58·6	-123·1
	(·9,·9)	(-40·8,-35·1)	(-·1,-·1)	(-6·6,-5·4)	(-31·9,-10·8)	(-69·5,-47·2)	(-123·4,-122·9)
Latin America, Southern	-1·2	-4·7	0	-1·8	3·4	-11·2	-15·5
	(-1·2,-1·2)	(-5·1,-4·4)	(0,0)	(-2,-1·6)	(2·1,4·9)	(-12·7,-9·8)	(-15·6,-15·4)
Latin America, Tropical	-19·4	-33·5	-·2	-4·8	-30·1	-46·5	-134·5
	(-19·4,-19·3)	(-36,-31)	(-·2,-·2)	(-5·3,-4·3)	(-38·3,-21·8)	(-55,-37·6)	(-134·7,-134·3)
North Africa/Middle East	58·8	-147·7	·3	-33·7	-24	-307	-453·2
	(57·7,60·1)	(-158·9,-136·2)	(·3,·4)	(-37·2,-30·4)	(-70,21·2)	(-353·8,-260·8)	(-454·5,-452·2)
North America, High-income	1·8	-2·2	-·1	-2·2	7·1	-23·6	-19·1
	(1·8,1·8)	(-2·3,-2)	(-·1,-·1)	(-2·4,-1·9)	(4·2,10·2)	(-26·8,-20·6)	(-19·2,-19·1)
Oceania	4·9	-4·3	0	-·6	2·9	-6·2	-3·3
	(4·8,4·9)	(-4·6,-3·9)	(0,0)	(-·7,-·6)	(1·7,4·2)	(-7·6,-4·9)	(-3·4,-3·3)
sub-Saharan Africa, Central	244·6	-107·6	4·7	29·5	38·1	-182·3	27
	(243,246·6)	(-115·8,-99·4)	(4·3,5·1)	(26·5,32·4)	(5·8,70·6)	(-214·1,-149·9)	(25·9,28·4)
sub-Saharan Africa, Eastern	559·5	-260·5	-31·7	-72·6	-181·4	-487·6	-474·3
	(557·4,562·4)	(-280·5,-240·7)	(-34·4,-29·2)	(-79·8,-65·3)	(-262·4,-99·3)	(-570·7,-402·2)	(-474·9,-473·4)
sub-Saharan Africa, Southern	5·4	-31·4	2·5	-1·1	14	-37·1	-47·6
	(5·3,5·5)	(-33·8,-29)	(2·3,2·7)	(-1·2,-1)	(7·5,20·8)	(-43·7,-30·5)	(-47·8,-47·5)
sub-Saharan Africa, Western	938·8	-442·9	62·6	-91·2	186·9	-693·6	-39·3
	(932·4,946·7)	(-477·2,-409·1)	(57·5,67·9)	(-100·2,-82)	(68·6,310·7)	(-815·4,-570·5)	(-41·9,-36)

Web Appendix to Global, regional, and national levels of neonatal, infant and under-5 mortality 1990-2013: a systematic analysis

Authors
Global Burden of Disease 2013 Child Mortality Collaboration

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Appendix

In analyzing child mortality rates for the Global Burden of Diseases, Injuries, and Risk Factors Study 2013 (GBD 2013) we employ a methodology based on that of Rajaratnam et al.,[1] Lozano et al.,[2] and Wang et al.[3] We have made the following important improvements:

1. Incorporation of data bias adjustment into the modeling process. We estimate source specific bias based on data type specific fixed effects and random effects by source as explained in detail below. By estimating and removing such biases from raw child mortality data, we are able to avoid implausible estimated levels and trends due to sources for different periods with different levels of non-sampling variance.
2. Improvement in estimating the empirical relationships between child mortality rate, income, maternal education and HIV/AIDS. The empirical relationship between child mortality rate and other covariates is a crucial component in generating the mean trend, or prior, for the Gaussian process regression (GPR). In GBD 2013, we employ a nonlinear hierarchical mixed effects model that reflects the theoretical and demographic relationship between child mortality and other covariates, especially the crude death rate from HIV/AIDS in children under-5.
3. Improving estimates of child mortality rate in neonatal periods under the impact of HIV/AIDS. As HIV/AIDS has little impact on the child mortality rate in early neonatal and late neonatal age groups, we improve on the methodology used by GBD 2010 to reflect the changing fraction of under-5 mortality occurring in the neonatal age group.

The steps in generating mortality rate and numbers of death by child age groups are illustrated in Figure 1. We provide a short description here regarding data synthesis using raw child mortality rate estimates from censuses, vital registration systems, sample registration systems, complete and summary birth histories from survey sources and the age and sex model where we estimate mortality rate for early neonatal, late neonatal, postneonatal, and childhood mortality rates using the estimated child mortality rate from data synthesis step.

1. Data synthesis for child mortality rate analysis: completeness assessment, non-linear hierarchical mixed effects model, spatial-temporal regression and Gaussian Process regression

1.1 Under-5 vital registration completeness assessment

Vital registration (VR) systems often do not capture all deaths in a country. We use a simple linear regression of $\log_{10}({}_5q_0)$ on year, with a binary indicator variable for ${}_5q_0$ estimates derived from VR systems (as described in Equation 1) to assess whether a vital registration system is significantly different from estimates provided by survey sources. If the coefficient for the VR indicator variable is statistically significant at the .05 α-level, we deem the VR system to be biased. Biased VR systems are adjusted upward in a later step.

$$\log_{10}({}_5q_0)_t = \alpha + \beta_1 \cdot t + \beta_2 \cdot I_{VR} + \xi_t \qquad 1$$

where: t is time (a continuous variable);

I_{VR} is an indicator for child mortality rate (${}_5q_0$)estimates derived from VR systems;
ξ_t is an error term.

1.2 First stage – Nonlinear hierarchical mixed effects model

In this stage, we use a nonlinear mixed effects regression to estimate data bias of non-VR child mortality data and provide first stage predictions.

The nonlinear mixed effects regression model is

$$ {}_5m_{0cys} = \exp[(\beta_1 + \gamma_{1c}) * \log(LDI_{cy}) + (\beta_2 + \gamma_{2c}) * education_{cy} + \gamma_c + \gamma_{cs} + \alpha_t] + \beta_3 * HIV_{cy} + \varepsilon_{cys} \quad 2 $$

where *c* is country, *y* is year, *s* is source, and *t* is source type; each source was categorized into one of 16 source types across all countries, as listed in Table 1. This formulation is used because the relationship between ${}_5m_{0cys}$ and income and education is linear in log space but linear with HIV mortality in normal space.

Additionally,

${}_5m_0$ is central mortality rate in the under-5 age group
LDI is lagged distributed income per capita
education is mean years of education for women of reproductive age (15-49 years)
HIV is the estimated death rate due to HIV in age group 0-4
γ_{1c} and γ_{2c} are random slope by country
γ_c is a random effect by country
γ_{cs} is a random effect by source nested within country
α is a source type fixed effects across countries
β_i is a fixed covariate coefficient
ε is the residual

Web table 1. Source types used in child mortality bias correction

Data Source Type
Complete Birth History-Demographic and Health Survey
Complete Birth History-AIDS Indicator Survey and Malaria Indicators Survey
Complete Birth History-World Fertility Survey
Complete Birth History-Multiple Indicator Cluster Survey
Complete Birth History-Other survey Series
Summary Birth History-Demographic and Health Survey
Summary Birth History-Multiple Indicator Cluster Survey
Summary Birth History-Other survey series
Summary Birth History-AIDS Indicator Survey and Malaria Indicators Survey
Summary Birth History-Census
Summary Birth History-World Fertility Survey
Vital Registration/Sample Registration/Surveillance- complete
Vital Registration/Sample Registration/Surveillance- incomplete
Household Death Recall-Other survey series
Household Death Recall-Census

For each country, we choose a source, or combination of sources, which are believed to be the least biased. If a country has a complete vital registration system, this is the reference source. If a country does not have complete vital registration, but has Demographic and Health Surveys (DHS) estimates from complete birth histories, these are chosen as the reference source. If a country has neither of these types of data, or DHS surveys are unreliable based on published assessments, we assign the surveys conducted after 1980, in combination, as the reference (incomplete vital registration data is not included). Additionally, in some countries we choose other surveys as the reference. In certain cases, in-country all-cause mortality experts draw from their familiarity with data quality to help us to choose the reference category. The broad set of collaborators in this study contributed local knowledge to the selection of the least biased survey or set of surveys.

1.3 Data adjustment:

Each data source has an associated random effect as well as a source type fixed effect. The sum of these random and fixed effects for the reference sources is the estimated true deviation from the baseline modelled mortality level. In countries with multiple high-quality sources, the mean of the random and fixed effects from these sources is taken as this true deviation. We adjusted all other sources by including these reference values for the random and fixed effects values instead of those estimated for each individual source, as shown below.

$$adjusted_5m_{0,cys} = \exp[(\beta_1 + \gamma_{1c}) * \log(LDI_{cy}) + (\beta_2 + \gamma_{2c}) * education_{cy} + \gamma_c + \gamma_{ref,c} + \alpha_{ref,c}] + \beta_3 * HIV_{cy} + \varepsilon_{cys} \quad (3)$$

The exception to the above adjustment is incomplete vital registration data, which is adjusted upwards using a five year rolling mean of the difference between incomplete vital regression and a LOESS of the already-adjusted survey data.

1.4 Spatial-temporal regression for residual smoothing:

The spatial-temporal stage captures the correlation structure in the residuals over time and across countries in the same GBD region. As described by equations 4 and 5 below, these residuals are computed based on the adjusted data from the previous steps and the predicted child mortality. The predicted time series was obtained from the equation below; no random effects or survey type fixed effects are included. This computation is done in logit($_5q_0$) space.

$$predicted_5m_{0,cy} = \exp[\beta_1 * \log(LDI_{cy}) + \beta_2 * education_{cy} + \alpha_{intercept}] + \beta_3 * HIV_{cy} \quad 4$$

$$residual = logit(\ adjusted_5q_{0,cys}) - \ logit(predicted_5q_{0,cy}) \quad 5$$

For this spatial-temporal component, residuals are weighted based on their proximity to the prediction year in space and time. Ninety-nine percent of the weight is on in-country residuals; one percent is on other residuals in the same GBD region. A modified tricube kernel is used to give more weight to data points closer in time. To capture rapid change in countries with major accelerations or decelerations, we compute the spatial-temporal component two ways.

First, we estimate the smoothed residuals using a linear fit to this weighted data in every country-year; this is similar to a LOESS fit to the spatial and temporal residuals. Second, we compute the smoothed residuals using only the space and time weights applied to the residuals. A combination of these two estimates series gives a final estimate of the smoothed residuals. Equation 6 shows that more weight was given to the local linear fit in data-dense countries while in data sparse countries, more weight was given to the weighted average.

$$final\ smoothed\ residual = k * linear\ estimate + (1-k) * weighted\ average \quad 6$$

$$\text{where } k = \frac{number\ of\ in\ country\ data\ points}{number\ of\ in\ country\ data\ points + number\ of\ country\ years\ with\ no\ data}$$

The effect of this weighting function is to follow the data much more closely including accelerations and decelerations when the data is dense.

Finally, the smoothed residuals are added back to predictions using the non-linear mixed effects model without random effects as discussed in the earlier section.

In Web Table 6, we list by country the number of years within each decade for which we have empirical estimates of under-5 mortality rates. The impact of spatio-temporal regression is most pronounced in places where there is no empirical data for an extend time period. In such situation, results from spatio-temporal regression largely determine our final estimates of under-5 mortality for the period.

1.5 Gaussian Process Regression

The output of the spatial-temporal step is used as the mean function, or prior, for the Gaussian process regression (GPR), which produces a final time series of point estimates, as well as uncertainty intervals.

1.5a. Mean, Covariance, and Likelihood

The model for the Gaussian process regression is shown below, where μ_t is the true ${}_5q_0$ at time t, f(t) is the baseline mortality risk, in logit space, and S_t captures excess mortality due to war and disasters. S_t is estimated independently of f(t). M and C describe the Gaussian process, giving the mean and covariance, respectively.

$$\mu_t = \text{logit}^{-1}f(t) + S_t \qquad 7$$
$$f(t) \sim GP(M, C)$$

The prior distribution of f(t) can be described in terms of the mean prior—the prior for M—and the covariance prior—the prior for C. We utilize the second stage predictions as the mean prior and used a Matern function to describe the covariance prior. The Matern covariance function is uniquely flexible; its equation is

$$M(t,t') = \sigma^2 \frac{2^{1-\nu}}{\Gamma(\nu)} \left(\frac{d(t,t')\sqrt{2\nu}}{l} \right)^{\nu} K_\nu \left(\frac{d(t,t')\sqrt{2\nu}}{l} \right) \qquad 8$$

where t is time, $d(\cdot,\cdot)$ is a distance function, and σ^2, ν, l, and K_ν are hyperparameters that allow the covariance to model trends with a variety of smoothness characteristics. ν is the differentiability of the estimates, l corresponds to how correlated the estimates are over time, K_ν is the Bessel function, and σ^2 is the marginal variance. In this application, we set ν to 2 for most countries, and to 0.8 for countries with only vital registration data that are not in the Caribbean or Oceania. We use cross-validation, described in detail below, to choose values of σ^2 and l specific to each region.

The likelihood describes the probability of observing the data given a particular set of parameters. As shown in equation 8, we use a normal model for describing the probability of observing a particular value of $\text{logit}({}_5q_0)$ where the mean is given by f(t) and the variance by V_t, the data variance.

$$\text{logit}({}_5q_{0_t}) \sim \text{Normal}(f(t), V_t) \qquad 9$$

1.5b. Hyperparameter selection through cross-validation

For cross-validation to select GPR hyperparameters σ^2 and l, data are divided as follows: for each region, a number X between 10 and 20 was sampled and the most recent X years of data in that region are assigned to the testing set. Then a number X between 5 and 10 is sampled, a country from within the region is sampled, and a year where there is data in that country is sampled. All data within X years of the selected year in the selected country are assigned to the testing set. This is repeated as many times as there are countries in the region; because iterations of this procedure are independent, the data selected for the testing set may overlap. Any data that are not selected for the testing set are included in the training set.

For each testing and training division, the second stage model is fit on the bias-adjusted training data. Then, the third stage model is also fit on the bias-adjusted training data using each combination of scale and squared amplitude values tested for a total of 25 sets of predictions. The testing data are matched to the predictions in the

corresponding country and year for each of the 25 sets of predictions. For each match we calculate the absolute relative error of the prediction compared to the empirical estimate in the testing set. We also classify each bias-adjusted estimate in the testing set as being covered or not covered by each corresponding prediction uncertainty interval.

Once this procedure has been carried out for all 100 testing and training divisions of the data we calculate the mean absolute relative error and the mean coverage for each combination of GPR parameters across all 100 sets of predictions. The ideal set of parameters would produce estimates with low mean absolute relative error and mean coverage close to 0.95. We use the function described in equation 8 to calculate a loss metric which incorporates both the coverage and the absolute relative error into a single measure to assess performance. Parameter combinations with lower values of this loss metric are considered preferable.

$$\text{Loss} = \begin{cases} \text{if coverage} \leq 0.95\text{:} & (0.95 - \text{coverage})/5 + (\text{absolute relative error}) \\ \text{if coverage} > 0.95\text{:} & (\text{coverage} - 0.95)/1 + (\text{absolute relative error}) \end{cases} \qquad 10$$

The optimal parameters may differ from country to country. To allow for this, we calculated the loss function described in equation 8 separately for each of the 21 GBD geographic regions.

1.5c. Final estimates and confidence intervals

Given the mean, covariance, and likelihood above, we use GPR to obtain a posterior distribution of the time series of logit($_5q_0$) for each country. We draw 1000 samples from this distribution, and take the mean, 2.5th, and 97.5th percentile as our best estimate, upper, and lower confidence intervals, respectively. The Gaussian process regression is implemented in Python's PyMC package.

1.6 Variance calculations

As mentioned in the previous section, data variance is a key factor in generating the uncertainty interval of child mortality rate. Data variance is calculated for each empirical observation of $_5q_0$ and incorporated both sampling and non-sampling biases. The method for calculating the data variance depends on the type of data:

1. For estimates derived from complete vital registration data we assume that there is no non-sampling variance and include only sampling variance as computed from a binomial model. We set N equal to the national population aged 0 to 5 years and p equal to the mortality rate, $_5m_0$. We calculate the variance of $_5m_0$ from p(1-p)/N and then transform this to the variance of $\log_{10}(_5q_0)$ using the delta method.[4]
2. For estimates derived from incomplete vital registration data, we want to include not only sampling variance but also the non-sampling variance that arises from uncertainty in the completeness estimate. For these data, the total data variance is given by the sum of the sampling variance (calculated as for complete vital registration data) and the variance of the completeness estimate;
3. For estimates derived from complete birth histories we generate 1000 simulations of $_5q_0$, convert these estimates into $\log_{10}$ space and calculate the sampling variance from these 1,000 simulations;
4. For estimates derived from summary birth histories, we use the standard error from the mean residuals;
5. For estimates not covered under the above four calculations the missing data variance is determined as the maximum standard error from non-VR points in the country, if the data variance is still missing it is calculated as the maximum standard error from non-VR data in the GBD region.

6. Finally, for each source type, we calculate the within-source-type variance of the source-specific random effect. This additional non-sampling variance is then converted to $\log_{10}$ space and added to the variance as calculated above for all data points not classified as complete vital registration.

1.7. Shocks

We compile a database of child deaths due to conflict and natural disaster from three sources: the Uppsala Conflict Data Program (UCDP), the International Institute for Strategic Studies (IISS), and the EM-DAT database published by The Center for Research on the Epidemiology of Disasters. The conflicts we analyze include both domestic and international as largely defined by the two main data sources we are using: UCDP and IISS. For natural disasters, we include major forces of nature: earthquake, hurricane, and flood.

After compiling a database of all-age war and disaster deaths, we use the methods described by Lozano et al.[4] to split deaths into age groups, creating 1000 simulations. For countries with shocks, the calculated shocks under-five mortality rate are added to the GPR estimates, which are "shock-free" by definition, at the simulation level. Here we employ the simple mathematical relationship between all-cause mortality rate and cause specific mortality rate, that is, the sum of mortality rate due to shocks and from non-shock causes are all-cause mortality rate. The mean, 2.5th, and 97.5th percentiles of the simulations are then used as final estimates and confidence intervals. In countries without shocks, GPR results are presented as final estimates.

2. Age and sex model to generate mortality

The process used to break down under-5 mortality into age- and sex- specific groups has been previously described.[2] The current process is largely similar but has been modified to improve the accuracy of predictions for countries affected by HIV/AIDS. As pointed out by Bradshaw et al., neonatal mortality tends to be overestimated if the all-cause child mortality rate is used as the only predictor.[5] We use a two-stage modeling process to generate sex-specific estimates of early neonatal (days 0 to 6), late neonatal (days 7 to 27), post-neonatal (the remainder of the first year), and childhood (ages 1 to 4) mortality. First, the ratio of male to female under-5 probability of death is estimated, then age- and sex-specific mortality estimates are generated using this ratio. To fit models to obtain estimates, data from vital registration, sample vital registration, and complete birth histories are converted to mortality risks for specific age groups. Sources have differing levels of age specificity and at least include infant (composed of early neonatal, late neonatal, and post-neonatal) and child mortality, but can include all 4 smaller age groups. The two models – first the sex model, then the age-specific and sex specific model – are fit on the data.

The sex model predicts the ratio of male probability of death under age 5 ($_5q_0$) to female $_5q_0$ for each country *i* in region *j* in year *t*. The data are ordered by observed $_5q_0$, and categorized into 20 evenly sized bins. Then, the model is fit to the data as described in the equation below.

$$\left(\frac{\text{Male } {}_5q_0}{\text{Female } {}_5q_0}\right)_{\text{jit}} = \beta + \gamma_{{}_5q_0 \text{ bin}} + \gamma_{\text{j}} + \gamma_{\text{i}} + \varepsilon_{\text{jit}} \qquad 9$$

The ratio is predicted by nested country and region random effects γ_i and γ_j, a random effect on the $_5q_0$ bin, and an intercept term, β. A Loess regression is then used to smooth the estimated $\gamma_{{}_5q_0 \text{ bin}}$ on $_5q_0$, creating a continuous $\gamma'_{{}_5q_0 \text{ bin}}$. Then, the equation below is used to predict the ratio of male to female $_5q_0$:

$$\left(\frac{\text{Male }{}_5q_0}{\text{Female }{}_5q_0}\right)_{\text{jit}} = \hat{\beta} + \gamma'_{{}_5q_0\,\text{bin}}\left({}_5q_{0_{\text{jit}}}\right) + \hat{\gamma}_{\text{j}} + \hat{\gamma}_{\text{i}} \qquad 10$$

The male and female ${}_5q_0$ values are found using the system of equations that includes the model above and equation below, where r_{birth} is the sex-ratio at birth.

$${}_5q_0 = \left(\frac{1}{1+r_{\text{birth}}}\right) * (\text{female}_5q_0) + \left(\frac{r_{\text{birth}}}{1+r_{\text{birth}}}\right) * (\text{male}_5q_0) \qquad 11$$

Age-specific models are then fit for each age group on sex-specific data. A separate model is fit for each age group yielding five models for each sex: early neonatal, late neonatal, postneonatal, infant, and child. The log of the probability that an under-5 death occurs in a given age group is modeled instead of the mortality risk, simplifying the scaling process and restricting risks to be between 0 and 1. Because evidence suggests HIV has differential effects on different under-5 age groups,[5,6] the crude death rates from HIV/AIDS in the under-5 age group were included in the model. We used crude death rates due to HIV based on the 2013 UNAIDS estimates,[7] updated using Spectrum software.[8] The inclusion of this covariate improves both the fit and prediction of the model in countries with HIV. The functional form of the model is below.

$$\log(\Pr(\text{death at age y}|\text{u5 death})_{\text{jit}}) = \beta_1 + \beta_2 * HIV_{it} + \gamma_{{}_5q_0\,\text{bin}} + \gamma_{\text{j}} + \gamma_{\text{i}} + \varepsilon_{\text{jit}} \qquad 12$$

Similar to the sex model, the sex-specific age prediction uses ${}_5q_0$ bins and smoothes the random effect on the bin using ${}_5q_0$. The prediction equation for age *y* in country in region *j* at time *t* is seen below, with nested random effects on country ($\hat{\gamma}_{\text{i}}$) and region ($\hat{\gamma}_{\text{j}}$), an intercept term ($\hat{\beta}_1$), a smoothed random effect on ${}_5q_0$ bin ($\hat{\gamma}'_{{}_5q_0\,\text{bin}}({}_5q_{0_{\text{jit}}})$), and a coefficient on the under-5 crude death rate from HIV ($\hat{\beta}_2$):

$$\log(\Pr(\text{death at age y}|\text{u5 death})_{\text{jit}}) = \hat{\beta}_1 + \hat{\beta}_2 * HIV_{it} + \hat{\gamma}'_{{}_5q_0\,\text{bin}}({}_5q_{0_{\text{jit}}}) + \hat{\gamma}_{\text{j}} + \hat{\gamma}_{\text{i}} \qquad 13$$

Once the sex and age models are fit, they are applied to the ${}_5q_0$ estimates derived from our ${}_5q_0$ modeling process to estimate death risks for each age and sex. Uncertainty is accounted for in two ways. Uncertainty in ${}_5q_0$ is carried through from the GPR process by making predictions on the 1000 simulations produced by GPR for each country-year. Further, the predictions are made by simulations of this model which are generated using uncertainty around each term of the sex and age models.

The predictions of the log of the conditional probability of death are then transformed to mortality risks and scaled to create consistency between the age and sex predictions and the ${}_5q_0$ predictions from GPR.

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4. Additional tables and figures

Web table 2a. Under-5 mortality rate for five-year intervals from 1970 to 2013 for 188 countries and 21 Global Burden of Disease regions.

Web table 2a. Under-5 mortality rate for five-year intervals from 1970 to 2013 for 188 countries and 21 Global Burden of Disease regions

	Under 5 Deaths per 1000 live births				
	1970	1980	1990	2000	2013
Global	146·0 (141·7-150·6)	111·7 (109·4-114·0)	84·7 (83·3-86·2)	69·1 (67·8-70·6)	44·5 (40·9-48·7)
Asia Pacific, High-income	29·2 (27·7-30·8)	14·8 (13·0-16·8)	8·2 (7·1-9·9)	5·4 (4·5-6·6)	3·3 (2·3-4·6)
Brunei	54·6 (51·9-57·2)	19·3 (17·7-21·0)	10·2 (9·3-11·0)	9·0 (8·3-9·8)	8·1 (6·7-9·9)
Japan	17·3 (17·1-17·5)	9·7 (9·6-9·9)	6·0 (5·9-6·1)	4·5 (4·4-4·6)	2·9 (2·2-3·7)
Singapore	26·9 (25·7-28·2)	14·7 (13·9-15·6)	7·7 (7·2-8·3)	3·6 (3·3-4·0)	2·2 (1·7-2·9)
South Korea	51·4 (46·8-56·0)	25·2 (19·9-31·5)	12·7 (9·1-18·1)	7·2 (4·6-11·0)	4·2 (2·4-7·0)
Asia, Central	119·4 (113·4-126·1)	86·1 (82·1-89·8)	65·2 (63·1-67·4)	55·6 (53·7-57·6)	35·4 (32·9-38·0)
Armenia	115·1 (105·2-125·5)	71·1 (66·2-76·2)	48·1 (45·2-51·2)	32·0 (29·8-34·6)	16·7 (15·1-18·5)
Azerbaijan	133·3 (121·1-145·6)	95·2 (87·2-103·3)	78·0 (73·3-83·1)	64·1 (59·6-68·4)	34·5 (31·2-38·1)
Georgia	86·6 (78·7-95·6)	53·4 (48·7-58·5)	40·1 (36·9-43·4)	35·6 (32·8-38·7)	20·9 (18·9-23·1)
Kazakhstan	85·9 (78·7-93·7)	67·8 (63·4-72·3)	53·3 (49·9-56·8)	48·6 (45·0-52·9)	32·3 (29·2-35·7)
Kyrgyzstan	149·1 (136·7-160·9)	104·4 (98·0-111·1)	71·7 (67·9-75·9)	49·1 (45·9-52·6)	29·2 (26·7-31·8)
Mongolia	157·1 (144·6-170·4)	122·1 (113·0-131·4)	95·6 (89·9-102·0)	64·0 (59·7-68·9)	42·0 (38·1-46·4)
Tajikistan	180·1 (164·8-195·9)	125·8 (116·7-135·1)	94·3 (89·1-99·7)	74·0 (70·2-78·5)	41·4 (37·9-45·0)
Turkmenistan	222·9 (206·4-242·1)	140·5 (128·5-153·7)	98·1 (90·0-106·9)	80·6 (73·4-88·8)	51·5 (46·5-57·6)
Uzbekistan	106·3 (96·9-116·6)	77·0 (72·2-82·0)	55·6 (52·6-59·0)	50·6 (47·1-54·2)	35·5 (32·1-39·2)
Asia, East	148·7 (137·7-159·7)	94·1 (87·9-100·4)	58·7 (54·2-63·1)	34·6 (31·8-37·5)	16·1 (14·1-18·6)
China	150·0 (138·7-161·2)	95·8 (89·5-102·3)	59·5 (55·1-64·0)	35·0 (32·1-38·0)	16·1 (14·1-18·7)
North Korea	208·0 (174·7-243·8)	103·2 (85·5-123·4)	53·3 (43·2-65·7)	42·5 (35·4-51·0)	21·4 (17·5-26·5)
Taiwan	27·0 (26·6-27·3)	14·9 (14·7-15·2)	8·5 (8·3-8·7)	8·4 (8·2-8·6)	6·3 (6·0-6·7)
Asia, South	205·1 (200·0-210·0)	158·0 (154·2-161·7)	117·8 (115·1-120·6)	87·8 (85·6-90·1)	52·8 (48·1-58·6)
Bangladesh	238·9 (232·4-245·9)	189·7 (185·7-193·6)	134·7 (131·7-137·8)	83·9 (81·6-86·3)	41·0 (37·5-45·4)
Bhutan	229·7 (198·6-262·3)	193·2 (175·0-212·8)	135·0 (124·7-145·4)	89·2 (82·6-96·3)	47·1 (40·1-56·2)
India	201·1 (195·0-207·2)	153·2 (149·4-157·1)	114·7 (111·8-117·7)	85·1 (82·5-87·8)	49·2 (44·1-55·4)
Nepal	272·2 (262·6-281·9)	220·9 (214·8-227·3)	143·7 (139·7-148·0)	83·5 (80·7-86·3)	37·5 (33·7-41·9)
Pakistan	167·8 (161·9-173·9)	135·5 (131·1-139·8)	111·6 (108·4-115·1)	96·4 (93·4-99·5)	75·7 (70·3-82·2)
Asia, Southeast	135·1 (130·5-140·1)	97·8 (95·0-100·7)	68·8 (66·8-70·9)	45·9 (44·3-47·5)	27·1 (24·3-30·3)
Burma	191·4	134·3	107·5	76·0	36·5

	(166·7-215·8)	(118·0-151·3)	(95·0-121·1)	(66·0-86·8)	(30·8-43·1)
Cambodia	187·5	154·8	115·7	101·4	42·9
	(168·6-208·2)	(142·4-168·7)	(110·0-121·8)	(95·7-107·1)	(37·0-49·5)
Indonesia	168·4	124·0	85·8	53·8	31·4
	(161·4-175·7)	(119·3-129·0)	(82·2-89·2)	(51·2-56·3)	(27·8-35·4)
Laos	277·4	233·3	181·8	137·8	75·3
	(243·0-313·3)	(208·3-260·3)	(161·4-203·6)	(122·5-152·7)	(64·6-87·4)
Malaysia	55·6	29·6	16·7	9·3	6·7
	(55·0-56·3)	(27·2-32·4)	(16·4-17·1)	(9·1-9·5)	(5·7-7·8)
Maldives	202·8	128·7	71·5	38·9	16·1
	(180·3-227·9)	(116·2-141·1)	(65·5-77·6)	(35·3-43·1)	(13·6-19·5)
Mauritius	71·7	43·2	22·0	17·4	13·8
	(69·5-73·8)	(41·5-44·9)	(20·9-23·3)	(16·5-18·4)	(12·1-15·9)
Philippines	83·2	76·9	51·5	38·7	26·6
	(78·4-88·4)	(72·4-81·2)	(48·7-54·3)	(35·9-41·9)	(22·5-31·5)
Seychelles	71·3	33·6	17·2	12·8	11·6
	(66·0-76·9)	(30·5-37·0)	(15·3-19·3)	(11·1-14·7)	(9·9-13·5)
Sri Lanka	67·4	45·8	36·9	16·4	8·7
	(66·7-68·1)	(45·2-46·3)	(36·0-37·8)	(16·1-16·7)	(7·3-10·3)
Thailand	88·4	51·8	31·1	18·9	10·9
	(82·6-93·9)	(47·7-56·3)	(26·8-35·4)	(16·2-22·2)	(9·1-13·0)
Timor-Leste	285·8	235·0	151·5	104·0	38·8
	(259·0-311·0)	(219·8-251·2)	(143·8-159·8)	(98·1-110·5)	(33·0-45·4)
Vietnam	113·5	68·1	47·3	28·7	18·4
	(101·2-128·0)	(62·9-74·0)	(44·2-50·7)	(25·9-31·6)	(15·5-21·8)
Australasia	21·6	13·2	9·8	6·5	4·5
	(21·2-22·1)	(12·9-13·6)	(9·5-10·1)	(6·2-6·7)	(3·8-5·3)
Australia	21·9	12·8	9·5	6·2	4·3
	(21·4-22·5)	(12·4-13·2)	(9·2-9·8)	(6·0-6·5)	(3·6-5·0)
New Zealand	20·4	15·2	11·2	7·5	5·5
	(19·5-21·3)	(14·4-16·0)	(10·6-11·9)	(7·0-8·0)	(4·6-6·5)
Caribbean	99·2	84·3	66·3	46·6	34·8
	(96·0-102·7)	(81·2-87·4)	(63·6-69·1)	(44·6-48·6)	(30·2-40·4)
Antigua and Barbuda	31·5	32·5	21·1	18·3	13·6
	(26·8-37·0)	(21·1-51·0)	(16·7-26·4)	(14·7-22·8)	(6·3-26·5)
Barbados	57·8	34·7	30·1	17·5	15·0
	(53·4-62·8)	(31·2-38·9)	(26·8-33·8)	(14·3-21·1)	(6·8-29·6)
Belize	96·6	65·5	40·8	28·2	18·0
	(78·8-118·6)	(54·1-78·0)	(33·8-48·3)	(22·4-35·1)	(8·6-33·9)
Cuba	42·0	20·1	13·7	8·4	5·6
	(41·4-42·6)	(19·6-20·6)	(13·3-14·1)	(8·1-8·7)	(4·8-6·5)
Dominica	135·6	24·5	29·9	27·2	23·4
	(124·0-147·6)	(20·8-28·7)	(25·1-35·5)	(22·2-33·0)	(11·8-42·6)
Dominican Republic	118·1	85·5	58·4	36·4	27·3
	(111·2-125·1)	(80·9-90·0)	(54·9-61·8)	(34·0-38·9)	(22·8-32·8)
Grenada	66·3	60·8	35·4	18·8	12·3
	(51·0-84·9)	(40·2-91·2)	(30·8-40·3)	(15·3-22·4)	(6·1-22·6)
Guyana	73·8	58·0	50·4	33·7	35·0
	(63·5-85·1)	(45·7-71·7)	(43·8-58·0)	(29·1-38·7)	(16·6-66·6)
Haiti	245·9	200·3	146·7	97·9	65·7
	(230·8-261·6)	(189·7-210·9)	(139·6-154·6)	(92·2-104·0)	(57·0-76·8)
Jamaica	65·9	37·2	30·2	22·6	17·5
	(56·3-76·6)	(27·5-47·8)	(22·8-39·3)	(16·4-30·6)	(7·6-35·6)
Saint Lucia	88·9	44·9	32·8	18·9	17·1
	(66·7-115·1)	(40·6-49·6)	(29·3-37·0)	(16·0-22·2)	(7·7-33·7)
Saint Vincent and the Grenadines	89·3	77·5	38·6	28·5	21·5
	(80·9-97·8)	(70·2-85·6)	(32·9-45·1)	(24·1-32·7)	(11·0-38·9)
Suriname	63·6	58·0	50·7	43·8	38·3
	(53·4-76·0)	(50·1-66·8)	(44·5-57·7)	(37·8-50·2)	(31·9-45·9)
The Bahamas	59·7	53·2	42·3	15·2	17·3
	(52·0-68·5)	(48·5-58·2)	(38·6-46·2)	(13·2-17·4)	(7·9-33·4)
Trinidad and Tobago	51·9	38·5	27·9	29·6	21·3
	(44·2-60·6)	(31·8-45·5)	(20·2-37·8)	(22·6-37·7)	(9·4-42·7)
Europe, Central	48·4	29·5	21·1	12·9	6·3
	(42·9-56·3)	(27·0-32·5)	(20·4-22·2)	(12·6-13·2)	(4·8-8·3)

Albania	96·9 (51·4-162·7)	60·1 (41·9-83·2)	40·4 (35·1-46·0)	26·8 (22·6-31·5)	16·5 (8·4-31·7)
Bosnia and Herzegovina	59·4 (30·3-102·0)	36·7 (19·4-62·2)	17·7 (16·8-18·6)	10·4 (9·7-11·2)	5·4 (3·6-7·8)
Bulgaria	32·8 (32·0-33·7)	23·5 (22·8-24·2)	18·2 (17·5-18·9)	17·8 (17·0-18·6)	9·1 (7·3-11·2)
Croatia	52·0 (27·1-90·3)	25·8 (13·1-45·0)	11·7 (10·9-12·6)	8·4 (7·6-9·1)	4·5 (3·1-6·6)
Czech Republic	22·7 (21·9-23·5)	18·0 (17·4-18·6)	12·0 (11·5-12·6)	5·3 (4·8-5·7)	2·9 (2·0-4·2)
Hungary	39·2 (38·3-40·2)	24·4 (23·7-25·1)	16·9 (16·2-17·5)	10·4 (9·9-10·9)	5·0 (4·0-6·3)
Macedonia	102·4 (53·7-173·6)	57·3 (38·1-83·7)	34·4 (32·9-36·2)	15·3 (14·2-16·5)	7·9 (5·2-11·5)
Montenegro	56·2 (29·4-98·1)	33·9 (17·3-59·1)	20·5 (10·6-35·8)	19·8 (17·4-22·3)	6·1 (3·6-10·0)
Poland	37·3 (36·8-37·8)	24·3 (23·9-24·6)	17·7 (17·4-18·0)	9·3 (9·1-9·6)	4·9 (3·4-7·0)
Romania	57·8 (57·1-58·5)	36·0 (35·5-36·6)	32·9 (32·3-33·5)	23·0 (22·5-23·6)	9·8 (6·8-13·9)
Serbia	77·6 (40·3-141·3)	39·1 (20·1-67·1)	18·7 (10·2-31·1)	7·4 (7·0-7·9)	4·8 (3·9-5·9)
Slovakia	29·5 (28·4-30·7)	23·4 (22·5-24·4)	13·8 (13·0-14·6)	10·0 (9·2-10·7)	6·5 (3·9-10·4)
Slovenia	49·8 (25·1-87·5)	19·6 (11·6-30·7)	9·7 (8·7-10·9)	5·5 (4·6-6·3)	3·5 (2·1-5·7)
Europe, Eastern	38·0 (32·2-44·7)	32·4 (27·4-38·5)	24·5 (20·9-29·2)	21·3 (17·8-25·6)	11·6 (9·0-14·9)
Belarus	33·9 (26·4-43·5)	26·0 (20·4-32·8)	20·2 (15·5-26·1)	16·2 (12·8-20·4)	7·6 (5·5-10·4)
Estonia	22·2 (20·9-23·7)	22·4 (21·1-23·7)	17·8 (16·8-19·1)	11·5 (10·4-12·5)	4·2 (3·4-5·2)
Latvia	22·8 (21·6-24·0)	21·3 (20·3-22·4)	17·8 (16·9-18·7)	13·5 (12·5-14·5)	6·3 (5·3-7·6)
Lithuania	23·4 (22·2-24·6)	18·8 (17·8-19·8)	14·2 (13·3-15·1)	11·0 (10·1-11·9)	5·4 (4·1-7·1)
Moldova	78·3 (59·6-101·2)	56·9 (48·1-67·1)	30·5 (26·0-35·7)	26·6 (22·4-31·1)	12·5 (9·2-16·5)
Russia	37·2 (29·2-46·2)	33·0 (25·7-42·1)	26·0 (20·7-32·9)	21·8 (16·9-28·0)	12·4 (9·0-16·8)
Ukraine	39·5 (29·8-51·2)	31·1 (25·8-37·4)	21·3 (18·1-25·0)	21·9 (18·7-25·7)	10·7 (8·2-13·9)
Europe, Western	26·0 (25·7-26·2)	14·9 (14·8-15·1)	9·4 (9·2-9·5)	5·7 (5·6-5·7)	3·9 (3·2-4·7)
Andorra	17·5 (10·1-29·8)	11·2 (6·0-18·6)	7·3 (4·5-11·2)	3·8 (2·4-5·7)	2·6 (1·5-4·3)
Austria	28·8 (28·0-29·6)	17·0 (16·2-17·6)	9·6 (9·1-10·2)	5·5 (5·1-5·8)	4·0 (3·2-5·0)
Belgium	24·3 (23·9-24·8)	14·7 (14·3-15·0)	10·2 (9·9-10·5)	5·7 (5·5-5·9)	4·2 (3·5-4·9)
Cyprus	36·1 (30·4-42·2)	18·5 (17·6-19·6)	11·1 (10·4-11·9)	5·9 (5·4-6·5)	4·1 (3·2-5·1)
Denmark	16·0 (15·3-16·8)	10·2 (9·6-10·8)	9·2 (8·7-9·8)	5·5 (5·2-5·9)	3·7 (2·9-4·7)
Finland	15·6 (14·9-16·4)	8·7 (8·1-9·2)	6·9 (6·5-7·4)	4·1 (3·8-4·5)	2·9 (2·3-3·7)
France	18·1 (17·8-18·3)	12·7 (12·5-13·0)	8·8 (8·6-9·0)	5·4 (5·3-5·6)	3·7 (3·0-4·5)
Germany	24·9 (24·6-25·1)	15·4 (15·2-15·7)	9·2 (9·0-9·4)	5·3 (5·1-5·4)	3·6 (3·1-4·1)
Greece	33·7 (33·2-34·3)	19·9 (19·5-20·3)	10·3 (10·0-10·6)	6·3 (6·1-6·5)	4·0 (3·5-4·5)
Iceland	15·1 (13·4-17·1)	9·4 (8·1-10·8)	6·9 (5·8-8·0)	3·9 (3·2-4·7)	2·3 (1·6-3·3)
Ireland	22·6	14·5	9·7	6·9	4·5

	(21·7-23·6)	(13·7-15·2)	(9·1-10·2)	(6·4-7·4)	(3·4-6·0)
Israel	27·9	18·4	12·2	7·3	4·3
	(26·8-28·9)	(17·7-19·2)	(11·6-12·8)	(6·9-7·7)	(3·7-5·0)
Italy	32·5	15·7	9·5	5·4	3·6
	(32·1-32·8)	(15·4-16·0)	(9·2-9·7)	(5·2-5·6)	(2·7-4·7)
Luxembourg	23·4	13·9	9·3	5·0	2·7
	(21·0-25·7)	(12·2-15·8)	(8·1-10·7)	(4·2-5·9)	(1·9-3·8)
Malta	30·2	14·9	9·6	6·9	6·9
	(27·6-33·0)	(13·2-16·7)	(8·4-10·8)	(5·9-8·1)	(5·0-9·3)
Netherlands	16·6	11·1	8·8	6·4	4·0
	(16·1-17·0)	(10·6-11·5)	(8·5-9·2)	(6·2-6·8)	(3·2-5·0)
Norway	16·7	9·9	8·9	4·9	2·9
	(15·9-17·6)	(9·2-10·5)	(8·4-9·5)	(4·6-5·3)	(2·4-3·5)
Portugal	64·5	28·1	14·4	7·1	3·4
	(63·8-65·2)	(27·6-28·6)	(14·1-14·8)	(6·8-7·3)	(2·9-3·9)
Spain	31·9	14·6	9·3	5·4	3·5
	(31·5-32·3)	(14·3-14·9)	(9·0-9·6)	(5·2-5·6)	(2·8-4·3)
Sweden	12·7	8·6	7·4	3·9	2·6
	(12·2-13·3)	(8·1-9·0)	(7·0-7·8)	(3·6-4·2)	(2·1-3·3)
Switzerland	18·1	10·1	8·4	5·6	4·3
	(17·7-18·5)	(9·8-10·5)	(8·1-8·7)	(5·4-5·8)	(3·7-4·9)
UK	22·3	15·2	9·5	6·3	4·8
	(22·0-22·6)	(14·9-15·5)	(9·3-9·7)	(6·1-6·4)	(3·9-5·9)
Latin America, Andean	169·6	115·0	76·4	46·0	27·8
	(165·1-174·1)	(112·1-117·9)	(73·9-78·8)	(44·7-47·3)	(26·3-29·4)
Bolivia	225·2	157·5	109·5	69·2	41·0
	(217·0-234·7)	(152·1-163·5)	(105·2-113·2)	(66·0-72·1)	(38·0-44·3)
Ecuador	136·8	84·6	54·8	40·4	28·4
	(131·1-143·1)	(81·0-88·3)	(51·9-57·8)	(37·8-43·1)	(26·2-30·7)
Peru	166·9	114·7	74·6	39·4	21·8
	(160·5-173·3)	(110·5-118·9)	(71·7-77·6)	(37·6-41·2)	(20·3-23·6)
Latin America, Central	105·3	69·1	42·5	28·3	17·6
	(101·6-109·2)	(66·3-72·0)	(40·5-44·5)	(26·8-29·9)	(15·8-19·6)
Colombia	86·8	52·7	33·9	26·9	17·9
	(82·1-91·8)	(49·8-55·6)	(31·9-36·0)	(25·1-28·8)	(15·9-20·1)
Costa Rica	68·1	31·8	21·1	15·1	10·3
	(63·6-72·8)	(29·0-34·8)	(19·0-23·1)	(13·5-16·9)	(9·1-11·6)
El Salvador	152·0	94·7	54·4	30·4	13·3
	(141·9-162·2)	(88·9-100·7)	(50·5-58·8)	(27·7-33·4)	(11·8-15·1)
Guatemala	175·8	124·9	75·9	51·0	27·9
	(166·6-185·0)	(118·9-130·8)	(72·1-79·8)	(47·0-55·2)	(24·8-31·4)
Honduras	139·4	92·8	54·0	36·6	23·2
	(129·5-150·4)	(87·5-98·5)	(51·2-57·2)	(34·5-38·8)	(20·9-25·8)
Mexico	106·5	70·7	42·1	26·1	16·0
	(100·8-112·3)	(66·3-75·2)	(38·4-46·1)	(23·6-28·9)	(14·3-18·1)
Nicaragua	181·5	106·3	66·7	39·4	23·9
	(170·9-192·1)	(101·0-111·5)	(63·1-70·2)	(36·7-42·2)	(21·3-27·0)
Panama	58·3	36·7	27·6	23·4	18·4
	(54·0-63·1)	(33·3-40·5)	(25·0-30·3)	(21·0-26·2)	(16·4-20·8)
Venezuela	66·8	41·0	30·0	20·8	13·3
	(66·2-67·4)	(40·5-41·5)	(29·7-30·4)	(20·5-21·1)	(12·3-14·3)
Latin America, Southern	74·6	38·8	25·5	16·8	12·0
	(74·1-75·2)	(38·5-39·2)	(25·2-25·8)	(16·6-17·1)	(8·9-16·0)
Argentina	71·1	39·5	28·5	19·3	13·9
	(70·5-71·8)	(39·1-40·0)	(28·1-28·9)	(19·0-19·6)	(10·6-18·1)
Chile	85·7	36·7	19·0	10·6	7·3
	(84·7-86·6)	(36·0-37·4)	(18·5-19·4)	(10·3-11·0)	(5·0-10·5)
Uruguay	52·6	39·8	23·1	15·8	9·2
	(51·1-54·2)	(38·5-41·1)	(22·2-24·2)	(15·1-16·7)	(5·8-14·0)
Latin America, Tropical	116·3	83·1	51·8	31·5	18·0
	(110·7-122·2)	(79·4-86·9)	(49·2-54·6)	(29·4-33·7)	(16·6-19·6)
Brazil	117·5	83·9	52·3	31·6	17·9
	(111·8-123·4)	(80·1-87·8)	(49·6-55·2)	(29·5-33·8)	(16·4-19·5)
Paraguay	76·6	56·6	37·7	29·1	20·8
	(72·0-81·1)	(53·6-60·0)	(35·3-40·1)	(27·2-31·3)	(19·1-22·7)

North Africa/Middle East	190·3 (185·1-195·6)	118·6 (115·5-122·0)	70·2 (68·2-72·1)	45·0 (43·0-47·0)	25·1 (23·3-27·1)
Afghanistan	297·3 (271·6-327·0)	234·7 (215·7-254·8)	168·8 (158·4-179·7)	144·0 (135·3-152·2)	89·0 (80·2-98·7)
Algeria	190·2 (177·8-203·2)	111·6 (104·9-118·6)	58·7 (54·8-62·6)	38·4 (35·1-42·0)	24·2 (21·4-27·8)
Bahrain	84·5 (76·5-93·6)	28·0 (26·4-29·7)	20·6 (19·8-21·4)	12·0 (11·4-12·6)	6·9 (6·4-7·6)
Egypt	241·1 (235·0-247·5)	158·0 (153·7-162·6)	83·4 (80·7-86·1)	43·7 (41·8-45·5)	21·7 (19·5-24·2)
Iran	210·3 (195·8-226·6)	114·0 (107·2-121·4)	66·9 (62·8-71·3)	38·6 (35·3-42·1)	17·8 (15·6-20·6)
Iraq	114·5 (105·3-123·5)	74·0 (70·2-78·0)	54·6 (52·0-57·2)	44·2 (41·9-46·5)	29·6 (26·8-32·6)
Jordan	90·0 (85·7-94·5)	53·6 (51·5-55·9)	33·4 (32·0-34·8)	26·6 (25·4-27·9)	18·2 (16·8-20·1)
Kuwait	50·0 (48·9-51·0)	31·0 (30·4-31·6)	18·6 (18·1-19·2)	12·7 (12·3-13·1)	9·0 (8·5-9·6)
Lebanon	62·3 (56·5-68·3)	59·7 (56·1-63·5)	40·7 (38·2-43·4)	21·9 (19·7-24·1)	13·7 (12·1-15·5)
Libya	118·2 (109·0-127·9)	62·5 (57·6-67·5)	40·3 (37·0-44·1)	25·7 (23·0-28·9)	14·5 (12·7-16·7)
Morocco	176·3 (171·0-181·9)	120·0 (116·3-123·9)	70·5 (67·8-73·2)	47·9 (45·2-50·9)	26·0 (23·0-29·5)
Oman	228·3 (212·0-245·4)	100·6 (92·3-109·6)	37·9 (34·0-42·9)	18·4 (16·9-20·0)	8·6 (7·8-9·5)
Palestine	130·2 (115·6-146·3)	70·5 (62·3-79·3)	46·0 (41·1-51·4)	30·8 (27·1-35·0)	19·6 (17·2-22·8)
Qatar	65·7 (58·1-74·2)	32·9 (29·1-37·0)	22·1 (19·5-24·9)	15·5 (13·6-17·5)	10·2 (9·0-11·8)
Saudi Arabia	166·7 (149·9-184·2)	94·7 (85·2-104·7)	46·7 (41·1-52·6)	22·1 (19·5-25·2)	10·7 (9·3-12·4)
Sudan	155·0 (148·8-161·6)	139·6 (134·8-145·1)	108·7 (103·0-114·7)	79·9 (72·7-87·6)	46·5 (41·1-52·7)
Syria	93·3 (88·3-98·6)	54·5 (51·1-57·8)	36·8 (34·2-39·5)	20·7 (18·7-22·9)	21·2 (20·0-22·5)
Tunisia	160·5 (153·9-167·1)	85·9 (82·5-89·6)	49·0 (46·3-51·7)	27·7 (25·6-30·0)	14·0 (12·5-15·8)
Turkey	197·4 (190·4-204·3)	122·7 (118·6-127·2)	69·8 (67·2-72·5)	39·8 (37·5-42·1)	17·3 (15·4-19·5)
United Arab Emirates	113·4 (102·6-124·7)	48·7 (43·1-54·9)	21·8 (19·2-24·9)	12·5 (11·4-13·6)	6·9 (6·1-7·7)
Yemen	320·3 (309·5-330·4)	195·9 (189·5-202·5)	122·2 (117·7-126·8)	86·6 (82·1-91·1)	50·4 (44·9-57·3)
North America, High-income	24·0 (23·8-24·2)	15·3 (15·2-15·5)	11·0 (10·9-11·1)	8·0 (7·9-8·0)	6·4 (5·3-7·8)
Canada	22·5 (22·0-22·9)	12·9 (12·5-13·2)	8·6 (8·3-8·9)	6·0 (5·8-6·2)	5·3 (4·4-6·5)
USA	24·2 (24·0-24·3)	15·6 (15·4-15·7)	11·3 (11·2-11·4)	8·1 (8·0-8·2)	6·5 (5·4-7·9)
Oceania	105·3 (91·6-120·1)	87·8 (78·5-97·5)	78·1 (69·7-87·7)	67·7 (56·4-80·2)	47·1 (35·2-62·6)
Federated States of Micronesia	79·1 (63·9-95·9)	52·4 (41·7-64·9)	38·9 (31·2-47·1)	23·9 (19·5-28·5)	13·1 (9·8-17·9)
Fiji	55·7 (51·0-60·3)	42·5 (35·9-50·4)	33·0 (26·3-42·3)	29·9 (23·3-37·3)	29·4 (21·8-39·4)
Kiribati	153·9 (132·5-176·3)	104·7 (85·0-127·5)	83·9 (69·3-99·3)	58·2 (48·6-69·3)	37·7 (27·7-50·6)
Marshall Islands	105·9 (76·3-143·6)	63·8 (47·6-82·5)	48·4 (39·3-58·3)	40·0 (31·7-49·4)	30·1 (21·9-42·1)
Papua New Guinea	119·3 (102·5-137·0)	103·6 (91·4-116·3)	95·0 (84·0-107·3)	79·7 (66·4-94·2)	53·4 (39·8-70·8)
Samoa	61·5 (51·9-72·4)	33·1 (25·4-42·1)	22·2 (16·0-30·8)	16·2 (11·5-22·2)	11·3 (7·8-16·1)
Solomon Islands	119·6	64·6	42·3	31·4	20·6

	(99·8-140·7)	(50·8-80·6)	(32·4-53·3)	(24·0-40·0)	(14·7-28·5)
Tonga	36·6	29·4	26·2	35·0	32·2
	(29·1-45·4)	(22·0-38·1)	(18·6-35·6)	(24·5-49·0)	(22·3-45·5)
Vanuatu	88·4	54·6	37·8	36·8	30·9
	(71·3-108·7)	(44·1-67·0)	(31·4-44·9)	(31·4-42·7)	(23·7-40·2)
sub-Saharan Africa, Central	228·4	197·5	174·5	163·3	110·2
	(194·1-264·9)	(186·2-209·4)	(166·2-182·5)	(157·5-169·0)	(89·1-135·6)
Angola	218·9	194·3	185·0	152·7	88·2
	(165·3-281·2)	(174·0-215·5)	(172·9-196·5)	(142·5-163·4)	(71·4-108·0)
Central African Republic	210·0	188·7	177·1	163·2	137·2
	(194·6-225·2)	(178·8-198·6)	(169·1-184·9)	(151·2-175·4)	(109·2-174·5)
Congo	148·9	116·4	92·1	110·6	61·0
	(118·4-186·8)	(101·5-131·4)	(86·6-97·7)	(104·4-116·8)	(52·3-70·7)
Democratic Republic of the Congo	240·5	206·8	178·0	171·4	120·3
	(207·1-274·9)	(193·7-220·3)	(169·4-186·5)	(164·0-179·2)	(95·3-149·8)
Equatorial Guinea	223·6	173·4	167·4	168·0	107·8
	(169·4-286·6)	(152·6-196·6)	(151·0-185·6)	(147·5-188·4)	(80·3-141·8)
Gabon	160·0	117·7	85·6	70·8	59·8
	(131·1-195·7)	(109·0-126·6)	(80·6-91·0)	(66·6-75·5)	(51·0-69·7)
sub-Saharan Africa, Eastern	215·1	194·6	171·5	134·9	76·3
	(204·9-225·6)	(188·9-200·2)	(167·7-176·0)	(131·7-138·1)	(66·8-87·2)
Burundi	238·9	214·2	175·4	178·6	89·1
	(225·0-253·3)	(203·4-225·1)	(165·5-185·5)	(169·9-187·8)	(75·2-105·0)
Comoros	200·2	167·3	121·8	83·4	45·8
	(175·7-227·4)	(156·2-179·4)	(114·3-129·9)	(69·8-99·8)	(34·1-62·5)
Djibouti	120·1	112·2	112·1	101·6	61·6
	(91·8-154·9)	(95·9-130·3)	(101·3-122·9)	(91·8-112·3)	(46·6-80·1)
Eritrea	224·6	185·5	151·4	112·9	58·3
	(201·8-247·5)	(175·2-194·8)	(143·6-159·7)	(106·0-119·8)	(43·4-79·6)
Ethiopia	240·8	240·2	204·0	144·1	74·0
	(219·6-263·1)	(229·1-251·8)	(195·5-212·9)	(137·5-151·0)	(62·0-87·9)
Kenya	137·7	103·7	94·9	95·5	59·1
	(131·0-144·3)	(98·9-108·9)	(90·6-99·7)	(90·5-100·8)	(46·9-74·1)
Madagascar	169·6	167·6	145·8	96·8	58·0
	(159·4-181·8)	(160·0-175·1)	(140·0-152·4)	(91·8-101·5)	(46·0-72·7)
Malawi	351·5	261·8	226·8	166·2	86·8
	(334·3-368·6)	(250·9-272·5)	(218·8-235·5)	(159·0-172·8)	(73·7-101·8)
Mozambique	245·6	223·2	220·3	156·3	87·4
	(213·0-279·0)	(212·9-233·1)	(212·2-229·3)	(149·8-162·6)	(75·6-100·7)
Rwanda	234·2	209·5	163·8	158·3	61·9
	(221·9-247·0)	(201·3-218·0)	(157·1-170·7)	(151·2-165·2)	(51·3-75·8)
Somalia	203·0	191·5	188·7	157·4	114·3
	(156·8-258·3)	(162·6-223·4)	(175·2-203·2)	(146·0-171·0)	(88·8-144·8)
South Sudan	255·2	229·6	200·1	148·7	106·4
	(200·5-322·2)	(185·5-279·1)	(173·5-230·6)	(128·5-172·7)	(81·7-136·3)
Tanzania	217·2	169·4	150·6	122·0	76·3
	(206·5-228·6)	(162·5-176·8)	(144·8-156·8)	(117·1-127·0)	(63·0-91·7)
Uganda	179·1	194·9	163·0	137·9	82·1
	(168·8-189·8)	(186·6-203·1)	(156·8-169·9)	(132·2-144·1)	(70·7-94·9)
Zambia	185·8	161·2	174·5	151·6	77·6
	(174·9-197·0)	(153·7-169·4)	(167·6-182·2)	(144·5-159·0)	(62·5-97·9)
sub-Saharan Africa, Southern	139·3	105·7	73·2	78·6	42·1
	(126·0-153·7)	(101·4-110·5)	(70·0-76·6)	(71·8-86·5)	(35·5-50·6)
Botswana	103·9	66·8	54·9	72·1	27·9
	(95·5-113·0)	(62·1-72·0)	(49·0-61·3)	(60·6-85·0)	(19·1-39·9)
Lesotho	129·1	109·5	91·9	102·4	94·3
	(119·3-139·3)	(101·2-118·8)	(86·5-97·5)	(97·2-107·7)	(76·0-118·7)
Namibia	105·1	98·2	70·3	63·9	30·8
	(94·6-116·0)	(92·3-103·8)	(66·8-74·2)	(59·8-68·2)	(22·4-43·0)
South Africa	151·9	110·2	75·3	79·4	31·4
	(134·6-171·2)	(103·6-117·3)	(71·0-80·3)	(68·9-91·6)	(23·3-41·6)
Swaziland	144·8	116·4	74·9	100·3	65·5
	(120·0-171·3)	(104·2-128·2)	(69·3-80·1)	(94·8-106·3)	(52·7-82·8)
Zimbabwe	106·6	97·0	67·3	74·1	64·7
	(99·9-114·0)	(92·3-102·2)	(64·1-70·6)	(70·6-78·0)	(53·4-79·5)

sub-Saharan Africa, Western	266·6 (256·0-276·4)	216·0 (209·8-222·2)	194·5 (190·5-198·4)	170·6 (167·2-174·4)	115·3 (105·0-126·8)
Benin	292·0 (277·9-306·4)	218·8 (210·3-228·5)	175·7 (169·2-182·2)	128·9 (123·7-134·0)	60·4 (54·1-67·4)
Burkina Faso	324·0 (308·7-339·4)	254·5 (245·4-264·1)	207·8 (201·5-215·1)	181·9 (175·1-188·7)	104·3 (92·9-116·9)
Cameroon	212·1 (202·1-223·0)	175·9 (168·4-183·2)	135·5 (130·4-140·7)	139·9 (134·0-145·6)	101·1 (91·0-113·7)
Cape Verde	148·6 (145·2-152·2)	69·2 (66·5-71·8)	57·0 (54·5-59·7)	43·8 (38·0-50·4)	22·6 (18·7-27·3)
Chad	240·0 (218·8-262·0)	238·9 (228·8-248·9)	203·1 (195·2-211·2)	189·0 (181·4-196·9)	147·1 (127·3-169·2)
Côte d'Ivoire	234·8 (224·4-246·1)	166·6 (159·8-173·5)	152·5 (146·8-158·6)	140·9 (134·6-147·1)	96·0 (86·2-108·1)
Ghana	178·9 (170·8-187·3)	154·9 (149·0-160·5)	121·7 (117·4-126·1)	102·1 (98·4-105·9)	70·8 (62·6-81·3)
Guinea	305·3 (279·5-332·4)	278·2 (267·0-289·8)	229·2 (221·1-238·2)	172·9 (166·0-179·6)	108·6 (99·7-118·2)
Guinea-Bissau	281·4 (246·9-318·5)	246·2 (226·0-267·1)	220·0 (204·6-236·2)	193·1 (178·7-208·6)	152·0 (129·9-176·9)
Liberia	293·2 (279·2-307·3)	237·9 (228·8-247·8)	224·1 (214·1-234·2)	159·8 (152·9-166·6)	77·1 (66·7-90·4)
Mali	374·5 (360·5-388·5)	307·4 (297·4-317·2)	255·8 (247·2-264·3)	219·3 (210·9-227·6)	148·3 (127·6-174·6)
Mauritania	169·6 (159·1-179·4)	142·7 (135·3-150·4)	104·9 (99·7-110·7)	98·2 (91·3-105·5)	68·6 (57·8-81·3)
Niger	332·4 (317·5-347·0)	314·0 (303·0-324·6)	298·9 (289·9-308·9)	224·5 (216·2-232·9)	115·6 (104·7-127·5)
Nigeria	268·3 (255·2-280·6)	211·7 (203·4-220·1)	206·6 (199·0-213·8)	183·9 (177·7-190·3)	130·0 (115·2-146·4)
Sao Tome and Principe	150·4 (144·1-157·1)	110·0 (103·6-116·5)	96·5 (90·4-103·2)	76·0 (70·5-81·1)	40·2 (34·0-47·4)
Senegal	293·5 (283·5-304·3)	211·7 (204·2-219·5)	146·2 (140·6-151·8)	127·7 (122·8-132·7)	61·0 (53·7-70·2)
Sierra Leone	275·0 (247·1-304·9)	263·9 (247·5-281·6)	229·6 (219·8-239·3)	198·6 (190·9-207·0)	126·0 (110·0-146·1)
The Gambia	241·4 (214·6-269·2)	195·3 (179·3-212·7)	161·6 (149·7-173·7)	125·0 (115·2-135·4)	74·3 (62·9-89·1)
Togo	224·7 (212·7-236·7)	173·9 (166·1-181·9)	146·0 (139·7-152·7)	124·0 (115·1-133·3)	92·1 (79·1-108·7)

Web table 2b. Numbers of under-5 deaths for five-year intervals from 1970 to 2013 for 188 countries and 21 Global Burden of Disease regions.

Web table 2b. Numbers of under-5 deaths for five-year intervals from 1970 to 2013 for 188 countries and 21 Global Burden of Disease regions

	Under 5 Deaths per 1000 live births				
	1970	1980	1990	2000	2013
Global	17999·9 (17472·0-18559·3)	14203·7 (13922·0-14496·4)	12222·8 (12016·8-12435·4)	9304·5 (9128·8-9490·3)	6349·7 (5831·6-6947·5)
Asia Pacific, High-income	86·0 (81·5-90·7)	37·6 (33·2-42·8)	16·9 (14·5-20·4)	9·7 (8·2-11·8)	5·3 (3·7-7·5)
Brunei	0·2 (0·2-0·2)	0·1 (0·1-0·1)	0·0 (0·0-0·0)	0·0 (0·0-0·0)	0·0 (0·0-0·0)
Japan	33·1 (32·7-33·5)	16·1 (15·8-16·3)	7·9 (7·7-8·0)	5·2 (5·1-5·3)	3·1 (2·4-3·9)
Singapore	1·2 (1·1-1·3)	0·6 (0·5-0·6)	0·3 (0·3-0·4)	0·1 (0·1-0·1)	0·0 (0·0-0·1)
South Korea	51·4 (46·8-56·0)	20·7 (16·4-25·9)	8·5 (6·1-12·1)	4·0 (2·6-6·2)	1·9 (1·1-3·2)
Asia, Central	174·4 (165·7-184·1)	144·1 (137·4-150·5)	131·5 (127·3-135·9)	85·3 (82·4-88·4)	64·5 (59·9-69·2)
Armenia	6·7 (6·1-7·3)	4·8 (4·5-5·1)	3·6 (3·4-3·8)	1·3 (1·2-1·4)	0·6 (0·6-0·7)
Azerbaijan	20·3 (18·4-22·2)	14·5 (13·3-15·8)	15·2 (14·3-16·2)	9·3 (8·6-9·9)	5·7 (5·2-6·3)
Georgia	7·8 (7·0-8·6)	5·0 (4·6-5·5)	3·7 (3·4-4·0)	2·0 (1·9-2·2)	1·2 (1·1-1·3)
Kazakhstan	27·6 (25·3-30·1)	23·8 (22·3-25·4)	20·3 (19·0-21·6)	11·5 (10·6-12·5)	10·9 (9·8-12·0)
Kyrgyzstan	13·4 (12·3-14·5)	10·9 (10·2-11·6)	9·7 (9·2-10·3)	5·3 (5·0-5·7)	4·3 (3·9-4·7)
Mongolia	8·6 (8·0-9·4)	7·8 (7·2-8·4)	6·7 (6·3-7·2)	3·0 (2·8-3·2)	2·6 (2·4-2·9)
Tajikistan	21·2 (19·3-23·1)	18·7 (17·4-20·1)	19·7 (18·6-20·8)	14·1 (13·3-15·0)	11·0 (10·0-12·0)
Turkmenistan	17·8 (16·5-19·4)	13·5 (12·3-14·8)	12·6 (11·5-13·7)	8·6 (7·9-9·5)	5·7 (5·1-6·4)
Uzbekistan	48·4 (44·1-53·1)	43·5 (40·8-46·4)	38·7 (36·6-41·1)	29·8 (27·7-31·9)	22·0 (19·9-24·4)
Asia, East	4375·0 (4055·1-4690·6)	2063·3 (1929·0-2200·5)	1678·5 (1551·4-1806·4)	596·6 (548·8-648·3)	305·7 (267·7-353·8)
China	4254·4 (3936·6-4569·9)	2019·9 (1886·3-2155·4)	1598·9 (1479·4-1721·1)	576·2 (529·5-626·7)	297·0 (259·9-344·4)
North Korea	107·9 (90·7-126·2)	36·0 (29·8-43·0)	22·1 (18·0-27·3)	17·6 (14·6-21·1)	7·6 (6·2-9·4)
Taiwan	10·6 (10·4-10·7)	6·1 (6·0-6·2)	2·8 (2·7-2·8)	2·5 (2·4-2·5)	0·9 (0·8-0·9)
Asia, South	5770·0 (5626·9-5911·4)	5132·5 (5010·9-5250·6)	4259·2 (4160·1-4360·4)	3217·0 (3137·6-3301·7)	1852·9 (1686·9-2055·3)
Afghanistan	170·4 (155·8-187·7)	154·6 (142·2-167·6)	104·9 (98·7-111·8)	146·2 (137·3-154·7)	93·5 (84·3-103·9)
Bangladesh	724·3 (704·4-745·8)	665·3 (651·6-679·1)	505·9 (494·8-517·7)	301·0 (292·7-309·7)	129·0 (117·8-142·7)
Bhutan	3·2 (2·7-3·6)	3·4 (3·1-3·8)	2·6 (2·4-2·8)	1·4 (1·3-1·5)	0·6 (0·5-0·8)
India	4232·1 (4104·5-4360·8)	3703·4 (3611·4-3797·2)	3047·9 (2969·6-3127·7)	2271·9 (2202·5-2343·7)	1259·3 (1130·4-1419·9)
Nepal	130·8 (126·2-135·4)	127·5 (123·9-131·2)	97·6 (94·8-100·5)	63·1 (61·0-65·2)	22·1 (19·8-24·7)
Pakistan	417·2 (402·3-432·1)	449·9 (435·1-464·3)	493·4 (479·0-508·7)	433·1 (419·6-447·4)	348·0 (323·2-378·0)
Asia, Southeast	1528·7 (1475·8-1586·6)	1195·3 (1160·2-1231·5)	859·3 (833·6-885·8)	537·9 (518·5-556·9)	320·7 (287·6-357·8)
Burma	203·3 (176·9-229·7)	164·7 (144·4-185·5)	123·2 (108·8-138·9)	77·5 (67·2-88·7)	33·6 (28·3-39·6)

Cambodia	57·0 (51·2-63·5)	47·2 (43·4-51·4)	44·6 (42·4-47·0)	34·2 (32·3-36·2)	16·6 (14·3-19·1)
Indonesia	757·8 (725·8-791·5)	599·2 (576·3-624·4)	398·6 (381·8-415·0)	240·8 (229·4-252·4)	148·1 (131·3-167·4)
Laos	31·2 (27·3-35·4)	32·0 (28·4-35·8)	32·2 (28·6-36·2)	23·3 (20·7-26·0)	13·6 (11·6-15·8)
Malaysia	19·7 (19·5-19·9)	11·8 (10·9-13·0)	8·4 (8·3-8·6)	4·9 (4·8-5·0)	3·4 (2·9-4·0)
Maldives	1·1 (1·0-1·3)	0·8 (0·7-0·9)	0·6 (0·5-0·6)	0·2 (0·2-0·2)	0·1 (0·1-0·1)
Philippines	114·7 (108·0-121·9)	130·6 (123·3-138·1)	103·6 (98·0-109·3)	88·0 (81·7-95·3)	63·6 (53·7-75·2)
Sri Lanka	25·6 (25·3-25·9)	18·4 (18·2-18·6)	13·3 (12·9-13·6)	5·7 (5·6-5·8)	3·3 (2·8-3·9)
Thailand	122·6 (114·4-130·4)	65·7 (60·5-71·4)	33·8 (29·1-38·5)	17·4 (14·8-20·4)	7·6 (6·3-9·0)
Timor-Leste	7·3 (6·6-7·9)	5·2 (4·9-5·6)	4·7 (4·5-5·0)	4·1 (3·9-4·3)	1·5 (1·3-1·8)
Vietnam	177·9 (158·6-200·8)	119·1 (110·0-129·7)	93·5 (87·3-100·2)	41·2 (37·1-45·4)	26·5 (22·3-31·3)
Australasia	6·9 (6·8-7·0)	3·7 (3·6-3·8)	3·1 (3·0-3·2)	2·0 (1·9-2·1)	1·7 (1·4-2·0)
Australia	5·5 (5·3-5·6)	2·9 (2·8-3·0)	2·4 (2·3-2·5)	1·5 (1·5-1·6)	1·3 (1·1-1·5)
New Zealand	1·2 (1·2-1·3)	0·7 (0·7-0·8)	0·6 (0·6-0·6)	0·4 (0·3-0·4)	0·3 (0·2-0·4)
Caribbean	99·0 (95·5-102·9)	80·8 (77·5-84·0)	65·2 (62·4-68·1)	42·7 (40·8-44·6)	29·2 (25·5-33·7)
Antigua and Barbuda	0·0 (0·0-0·0)	0·0 (0·0-0·0)	0·0 (0·0-0·0)	0·0 (0·0-0·0)	0·0 (0·0-0·0)
Barbados	0·3 (0·2-0·3)	0·1 (0·1-0·1)	0·1 (0·1-0·1)	0·0 (0·0-0·0)	0·0 (0·0-0·1)
Belize	0·4 (0·3-0·5)	0·3 (0·3-0·4)	0·2 (0·2-0·3)	0·1 (0·1-0·2)	0·1 (0·0-0·2)
Cuba	10·9 (10·7-11·0)	3·2 (3·1-3·3)	2·4 (2·3-2·5)	1·2 (1·2-1·2)	0·6 (0·5-0·7)
Dominica	0·2 (0·2-0·2)	0·0 (0·0-0·0)	0·0 (0·0-0·0)	0·0 (0·0-0·0)	0·0 (0·0-0·0)
Dominican Republic	22·1 (20·8-23·4)	16·9 (16·0-17·8)	12·6 (11·8-13·3)	7·8 (7·3-8·4)	5·9 (4·9-7·1)
Grenada	0·1 (0·1-0·2)	0·1 (0·1-0·2)	0·1 (0·0-0·1)	0·0 (0·0-0·0)	0·0 (0·0-0·0)
Guyana	1·7 (1·5-2·0)	1·3 (1·0-1·6)	0·8 (0·7-0·9)	0·5 (0·4-0·6)	0·5 (0·2-1·0)
Haiti	44·9 (42·0-47·8)	46·1 (43·5-48·6)	38·8 (36·8-40·9)	26·0 (24·5-27·7)	17·3 (15·0-20·2)
Jamaica	4·5 (3·8-5·2)	2·3 (1·7-2·9)	1·8 (1·4-2·4)	1·2 (0·9-1·7)	0·8 (0·3-1·7)
Saint Lucia	0·3 (0·2-0·4)	0·1 (0·1-0·2)	0·1 (0·1-0·1)	0·0 (0·0-0·0)	0·0 (0·0-0·0)
Saint Vincent and the Grenadines	0·3 (0·2-0·3)	0·2 (0·2-0·2)	0·1 (0·0-0·1)	0·0 (0·0-0·0)	0·0 (0·0-0·0)
Suriname	0·8 (0·7-1·0)	0·6 (0·5-0·7)	0·4 (0·4-0·5)	0·4 (0·3-0·5)	0·3 (0·3-0·4)
The Bahamas	0·2 (0·2-0·3)	0·2 (0·2-0·3)	0·2 (0·2-0·2)	0·0 (0·0-0·0)	0·1 (0·0-0·1)
Trinidad and Tobago	1·3 (1·1-1·5)	1·1 (0·9-1·4)	0·7 (0·5-0·9)	0·5 (0·4-0·7)	0·4 (0·1-0·8)
Europe, Central	95·7 (84·9-111·2)	63·7 (58·3-70·3)	37·5 (36·1-39·4)	16·0 (15·6-16·4)	7·9 (6·1-10·5)
Albania	6·9 (3·7-11·8)	4·7 (3·3-6·6)	3·4 (2·9-3·9)	1·7 (1·4-2·0)	0·6 (0·3-1·2)
Bosnia and Herzegovina	5·1	2·8	1·1	0·4	0·1

	(2·6-8·8)	(1·5-4·8)	(1·1-1·2)	(0·3-0·4)	(0·1-0·2)
Bulgaria	4·4	3·1	1·9	1·1	0·6
	(4·3-4·5)	(3·0-3·2)	(1·8-2·0)	(1·1-1·2)	(0·5-0·7)
Croatia	3·3	1·7	0·6	0·3	0·1
	(1·7-5·8)	(0·8-3·0)	(0·6-0·7)	(0·3-0·4)	(0·1-0·2)
Czech Republic	3·4	2·9	1·5	0·4	0·3
	(3·3-3·5)	(2·8-3·0)	(1·4-1·6)	(0·4-0·5)	(0·2-0·4)
Hungary	6·0	3·8	2·1	1·0	0·4
	(5·9-6·2)	(3·6-3·9)	(2·0-2·2)	(0·9-1·0)	(0·4-0·6)
Macedonia	4·2	2·3	1·2	0·3	0·1
	(2·1-7·1)	(1·5-3·4)	(1·1-1·2)	(0·3-0·4)	(0·1-0·2)
Montenegro	0·6	0·3	0·1	0·1	0·0
	(0·3-1·0)	(0·1-0·6)	(0·0-0·3)	(0·1-0·1)	(0·0-0·0)
Poland	20·3	16·8	10·0	3·5	2·0
	(20·0-20·5)	(16·5-17·0)	(9·8-10·1)	(3·4-3·6)	(1·4-2·9)
Romania	24·7	14·2	10·9	5·1	2·2
	(24·4-25·0)	(14·0-14·4)	(10·8-11·1)	(5·0-5·2)	(1·5-3·1)
Serbia	11·5	6·6	2·7	0·9	0·4
	(6·0-21·1)	(3·4-11·4)	(1·5-4·6)	(0·8-0·9)	(0·3-0·5)
Slovakia	2·4	2·2	1·1	0·5	0·3
	(2·3-2·5)	(2·1-2·3)	(1·0-1·1)	(0·5-0·5)	(0·2-0·6)
Slovenia	1·4	0·5	0·2	0·0	0·0
	(0·7-2·5)	(0·3-0·9)	(0·2-0·2)	(0·0-0·1)	(0·0-0·1)
Europe, Eastern	113·5	110·0	78·8	41·6	28·2
	(96·1-133·5)	(93·1-130·8)	(67·0-94·2)	(34·7-50·1)	(21·9-36·2)
Belarus	5·0	4·0	2·9	1·4	0·7
	(3·9-6·4)	(3·1-5·0)	(2·2-3·8)	(1·1-1·8)	(0·5-1·0)
Estonia	0·4	0·4	0·3	0·1	0·0
	(0·4-0·4)	(0·4-0·5)	(0·3-0·4)	(0·1-0·1)	(0·0-0·0)
Latvia	0·7	0·7	0·6	0·2	0·1
	(0·7-0·7)	(0·7-0·8)	(0·6-0·6)	(0·2-0·2)	(0·1-0·1)
Lithuania	1·2	0·9	0·7	0·3	0·1
	(1·2-1·3)	(0·9-1·0)	(0·7-0·8)	(0·3-0·4)	(0·1-0·2)
Moldova	5·5	4·7	2·5	1·3	0·5
	(4·2-7·1)	(4·0-5·6)	(2·1-2·9)	(1·1-1·5)	(0·3-0·7)
Russia	72·3	74·4	54·1	29·1	20·9
	(56·8-89·8)	(58·0-94·8)	(43·0-68·6)	(22·5-37·3)	(15·1-28·3)
Ukraine	28·1	23·5	14·6	8·9	5·3
	(21·2-36·5)	(19·5-28·3)	(12·5-17·2)	(7·6-10·5)	(4·0-6·8)
Europe, Western	154·0	71·3	42·9	24·6	18·0
	(152·5-155·3)	(70·6-71·9)	(42·2-43·5)	(24·3-25·0)	(15·1-21·7)
Andorra	0·0	0·0	0·0	0·0	0·0
	(0·0-0·0)	(0·0-0·0)	(0·0-0·0)	(0·0-0·0)	(0·0-0·0)
Austria	3·3	1·5	0·8	0·4	0·3
	(3·2-3·4)	(1·4-1·5)	(0·8-0·9)	(0·4-0·4)	(0·2-0·4)
Belgium	3·4	1·7	1·2	0·6	0·5
	(3·3-3·5)	(1·7-1·8)	(1·1-1·2)	(0·6-0·6)	(0·4-0·6)
Cyprus	0·5	0·2	0·1	0·0	0·0
	(0·4-0·5)	(0·2-0·2)	(0·1-0·1)	(0·0-0·0)	(0·0-0·0)
Denmark	1·2	0·5	0·5	0·3	0·2
	(1·1-1·2)	(0·5-0·6)	(0·5-0·6)	(0·3-0·3)	(0·1-0·3)
Finland	1·0	0·5	0·4	0·2	0·1
	(1·0-1·1)	(0·5-0·5)	(0·4-0·4)	(0·2-0·2)	(0·1-0·2)
France	15·4	9·6	6·7	4·1	2·9
	(15·2-15·6)	(9·4-9·8)	(6·5-6·9)	(4·0-4·2)	(2·4-3·6)
Germany	27·6	12·7	7·8	4·1	2·5
	(27·3-27·9)	(12·5-13·0)	(7·6-7·9)	(4·0-4·2)	(2·2-2·9)
Greece	4·9	2·8	1·0	0·6	0·4
	(4·8-5·0)	(2·8-2·9)	(1·0-1·1)	(0·6-0·6)	(0·3-0·5)
Iceland	0·0	0·0	0·0	0·0	0·0
	(0·0-0·0)	(0·0-0·0)	(0·0-0·0)	(0·0-0·0)	(0·0-0·0)
Ireland	1·4	1·0	0·5	0·3	0·3
	(1·4-1·5)	(0·9-1·0)	(0·4-0·5)	(0·3-0·4)	(0·2-0·4)
Israel	2·0	1·7	1·2	0·9	0·6
	(2·0-2·1)	(1·6-1·7)	(1·1-1·2)	(0·8-0·9)	(0·5-0·7)

Italy	30·2 (29·8-30·5)	10·7 (10·6-10·9)	5·2 (5·1-5·4)	2·8 (2·7-2·9)	2·0 (1·5-2·6)
Luxembourg	0·1 (0·0-0·1)	0·0 (0·0-0·0)	0·0 (0·0-0·0)	0·0 (0·0-0·0)	0·0 (0·0-0·0)
Malta	0·1 (0·1-0·1)	0·0 (0·0-0·1)	0·0 (0·0-0·0)	0·0 (0·0-0·0)	0·0 (0·0-0·0)
Netherlands	3·7 (3·6-3·8)	1·9 (1·8-1·9)	1·6 (1·6-1·7)	1·2 (1·2-1·3)	0·7 (0·5-0·9)
Norway	1·0 (1·0-1·1)	0·5 (0·4-0·5)	0·5 (0·4-0·5)	0·2 (0·2-0·3)	0·1 (0·1-0·2)
Portugal	12·1 (11·9-12·2)	4·5 (4·4-4·6)	1·6 (1·6-1·7)	0·8 (0·7-0·8)	0·3 (0·2-0·3)
Spain	21·1 (20·8-21·3)	8·6 (8·4-8·7)	3·7 (3·6-3·8)	2·1 (2·0-2·2)	1·7 (1·4-2·1)
Sweden	1·4 (1·4-1·5)	0·8 (0·7-0·8)	0·8 (0·8-0·8)	0·3 (0·3-0·3)	0·3 (0·2-0·3)
Switzerland	1·8 (1·7-1·8)	0·7 (0·7-0·7)	0·6 (0·6-0·7)	0·4 (0·4-0·4)	0·3 (0·3-0·4)
UK	19·2 (18·9-19·4)	10·4 (10·2-10·6)	7·4 (7·2-7·5)	4·4 (4·3-4·5)	3·7 (3·0-4·6)
Latin America, Andean	166·7 (162·2-171·1)	126·9 (123·7-130·1)	91·7 (88·7-94·6)	55·9 (54·3-57·5)	33·5 (31·7-35·4)
Bolivia	42·1 (40·6-43·9)	33·1 (31·9-34·4)	26·8 (25·7-27·7)	18·4 (17·5-19·2)	11·2 (10·3-12·1)
Ecuador	33·0 (31·6-34·5)	23·0 (22·0-24·0)	16·5 (15·6-17·4)	12·7 (11·9-13·6)	9·2 (8·6-10·0)
Peru	91·5 (87·9-95·1)	70·7 (68·1-73·3)	48·3 (46·5-50·3)	24·7 (23·6-25·8)	13·0 (12·1-14·1)
Latin America, Central	446·3 (430·8-462·4)	320·5 (307·9-333·5)	208·6 (199·1-218·2)	143·2 (136·0-151·2)	85·9 (77·2-95·9)
Colombia	69·6 (65·7-73·6)	44·5 (42·1-46·9)	30·6 (28·8-32·5)	24·6 (23·0-26·3)	16·3 (14·5-18·3)
Costa Rica	4·0 (3·8-4·3)	2·2 (2·0-2·4)	1·7 (1·5-1·9)	1·1 (1·0-1·3)	0·7 (0·6-0·8)
El Salvador	24·2 (22·6-25·9)	16·6 (15·6-17·7)	9·2 (8·6-10·0)	4·5 (4·1-5·0)	1·7 (1·5-1·9)
Guatemala	40·8 (38·6-42·9)	36·6 (34·9-38·4)	25·9 (24·6-27·3)	20·6 (19·0-22·3)	13·2 (11·8-14·9)
Honduras	17·3 (16·1-18·7)	14·3 (13·5-15·2)	10·0 (9·5-10·6)	7·2 (6·8-7·6)	4·8 (4·3-5·3)
Mexico	240·5 (227·5-253·4)	168·6 (158·0-179·4)	102·0 (93·1-111·8)	65·6 (59·2-72·5)	36·3 (32·3-40·9)
Nicaragua	19·5 (18·4-20·7)	14·9 (14·2-15·7)	10·1 (9·6-10·7)	5·6 (5·2-6·0)	3·3 (2·9-3·7)
Panama	3·2 (3·0-3·5)	2·2 (2·0-2·4)	1·7 (1·6-1·9)	1·6 (1·5-1·9)	1·3 (1·2-1·5)
Venezuela	26·7 (26·4-26·9)	20·1 (19·9-20·3)	16·9 (16·7-17·1)	11·9 (11·8-12·1)	7·9 (7·4-8·6)
Latin America, Southern	65·6 (65·1-66·1)	39·2 (38·9-39·6)	27·3 (26·9-27·6)	17·0 (16·8-17·3)	11·9 (8·9-15·9)
Argentina	38·4 (38·0-38·8)	27·2 (26·9-27·6)	20·1 (19·9-20·4)	13·4 (13·2-13·6)	9·6 (7·3-12·6)
Chile	24·1 (23·8-24·4)	9·3 (9·1-9·5)	5·7 (5·6-5·9)	2·7 (2·6-2·8)	1·8 (1·2-2·5)
Uruguay	3·0 (2·9-3·1)	2·2 (2·1-2·3)	1·3 (1·2-1·3)	0·8 (0·8-0·9)	0·4 (0·2-0·6)
Latin America, Tropical	401·2 (381·9-421·8)	330·2 (315·1-345·1)	196·1 (186·2-206·7)	119·3 (111·5-127·7)	57·1 (52·5-62·2)
Brazil	394·2 (375·1-414·4)	323·6 (308·6-338·6)	190·7 (180·9-201·4)	114·9 (107·4-123·0)	53·7 (49·4-58·6)
Paraguay	7·0 (6·6-7·4)	6·5 (6·2-6·9)	5·3 (5·0-5·6)	4·3 (4·0-4·6)	3·3 (3·0-3·6)
North Africa/Middle East	1488·8 (1448·5-1529·9)	1151·3 (1120·6-1184·6)	747·1 (726·5-767·4)	454·2 (433·9-474·6)	291·6 (270·9-314·1)
Algeria	127·1	94·4	50·1	24·2	22·9

	(118·8-135·8)	(88·8-100·2)	(46·8-53·5)	(22·1-26·5)	(20·2-26·3)
Bahrain	0·6	0·3	0·2	0·1	0·1
	(0·6-0·7)	(0·3-0·3)	(0·2-0·3)	(0·1-0·1)	(0·1-0·1)
Egypt	353·4	262·5	146·5	71·3	41·2
	(344·5-362·8)	(255·1-270·1)	(141·7-151·3)	(68·4-74·3)	(37·1-45·9)
Iran	248·8	190·9	125·7	48·2	25·9
	(231·5-267·9)	(179·3-202·9)	(117·8-134·0)	(44·0-52·6)	(22·7-29·9)
Iraq	50·4	39·7	35·7	37·1	30·8
	(46·5-54·4)	(37·6-41·8)	(34·0-37·4)	(35·2-39·0)	(28·0-33·9)
Jordan	7·0	5·0	3·8	3·9	3·5
	(6·6-7·3)	(4·8-5·2)	(3·7-4·0)	(3·7-4·1)	(3·2-3·8)
Kuwait	1·7	1·6	0·7	0·5	0·6
	(1·7-1·7)	(1·6-1·6)	(0·7-0·7)	(0·5-0·5)	(0·5-0·6)
Lebanon	4·6	4·6	2·7	1·3	0·8
	(4·2-5·1)	(4·3-4·9)	(2·6-2·9)	(1·2-1·5)	(0·7-0·9)
Libya	11·1	7·9	4·9	2·9	1·8
	(10·3-12·0)	(7·2-8·5)	(4·5-5·4)	(2·6-3·3)	(1·6-2·1)
Morocco	120·1	91·0	52·4	30·6	19·3
	(116·5-123·9)	(88·3-94·0)	(50·4-54·5)	(28·8-32·5)	(17·0-21·8)
Oman	7·6	5·5	2·6	1·0	0·6
	(7·1-8·2)	(5·0-6·0)	(2·3-2·9)	(0·9-1·1)	(0·5-0·6)
Palestine	7·6	4·8	4·2	3·7	2·5
	(6·8-8·6)	(4·2-5·4)	(3·7-4·7)	(3·2-4·2)	(2·2-2·9)
Qatar	0·2	0·2	0·2	0·1	0·2
	(0·2-0·2)	(0·2-0·3)	(0·2-0·2)	(0·1-0·2)	(0·2-0·2)
Saudi Arabia	43·6	39·2	26·7	12·4	6·0
	(39·3-48·1)	(35·2-43·3)	(23·5-30·0)	(11·0-14·2)	(5·2-7·0)
Sudan	72·0	88·4	89·2	86·8	58·8
	(69·1-75·3)	(85·2-91·8)	(84·6-94·2)	(78·9-95·2)	(52·0-66·6)
Syria	26·4	21·2	16·3	10·2	11·2
	(25·0-27·9)	(19·9-22·5)	(15·2-17·5)	(9·2-11·2)	(10·6-11·9)
Tunisia	32·7	19·3	10·8	4·6	2·6
	(31·4-34·0)	(18·5-20·1)	(10·2-11·4)	(4·3-5·0)	(2·3-2·9)
Turkey	272·7	189·1	98·8	54·0	21·9
	(262·9-282·1)	(182·8-196·0)	(95·2-102·7)	(50·9-57·2)	(19·5-24·6)
United Arab Emirates	0·9	1·3	1·0	0·6	0·8
	(0·8-1·0)	(1·1-1·4)	(0·8-1·1)	(0·5-0·6)	(0·7-1·0)
Yemen	99·3	83·6	73·7	59·8	38·0
	(96·0-102·4)	(80·8-86·4)	(70·9-76·4)	(56·8-62·9)	(33·8-43·2)
North America, High-income	93·6	59·1	48·7	35·1	29·9
	(92·9-94·3)	(58·5-59·7)	(48·2-49·1)	(34·7-35·4)	(24·6-36·2)
Canada	8·1	4·6	3·3	2·0	2·1
	(8·0-8·3)	(4·5-4·7)	(3·2-3·4)	(1·9-2·1)	(1·7-2·5)
USA	85·5	53·9	45·4	33·0	27·8
	(84·9-86·0)	(53·5-54·4)	(44·9-45·8)	(32·7-33·3)	(22·9-33·7)
Oceania	16·6	16·5	16·9	17·8	13·2
	(14·5-19·0)	(14·8-18·4)	(15·0-19·0)	(14·8-21·1)	(9·8-17·5)
Federated States of Micronesia	0·1	0·1	0·1	0·0	0·0
	(0·1-0·2)	(0·1-0·1)	(0·1-0·1)	(0·0-0·0)	(0·0-0·0)
Fiji	0·9	0·9	0·7	0·6	0·5
	(0·9-1·0)	(0·7-1·0)	(0·5-0·9)	(0·4-0·7)	(0·3-0·7)
Kiribati	0·2	0·2	0·2	0·1	0·0
	(0·2-0·3)	(0·1-0·2)	(0·1-0·2)	(0·1-0·1)	(0·0-0·1)
Marshall Islands	0·1	0·0	0·0	0·0	0·0
	(0·0-0·1)	(0·0-0·1)	(0·0-0·1)	(0·0-0·0)	(0·0-0·0)
Papua New Guinea	12·4	13·0	13·6	14·7	11·2
	(10·7-14·2)	(11·5-14·6)	(12·0-15·4)	(12·2-17·4)	(8·3-14·8)
Samoa	0·3	0·1	0·1	0·0	0·0
	(0·3-0·4)	(0·1-0·2)	(0·0-0·1)	(0·0-0·1)	(0·0-0·0)
Solomon Islands	0·8	0·6	0·5	0·4	0·3
	(0·6-0·9)	(0·5-0·8)	(0·4-0·6)	(0·3-0·5)	(0·2-0·4)
Tonga	0·1	0·0	0·0	0·0	0·0
	(0·0-0·1)	(0·0-0·1)	(0·0-0·1)	(0·0-0·1)	(0·0-0·1)

Vanuatu	0·3 (0·2-0·3)	0·2 (0·1-0·2)	0·1 (0·1-0·2)	0·2 (0·1-0·2)	0·2 (0·1-0·2)
sub-Saharan Africa, Central	314·5 (267·7-364·0)	351·5 (331·3-372·7)	424·6 (404·3-444·0)	524·2 (505·2-543·0)	460·0 (371·7-567·1)
Angola	66·8 (50·5-85·5)	75·4 (67·5-83·9)	97·9 (91·3-104·0)	104·6 (97·5-112·2)	82·1 (66·5-100·6)
Central African Republic	16·2 (15·0-17·4)	17·7 (16·8-18·7)	20·8 (19·9-21·8)	22·9 (21·2-24·7)	21·4 (17·0-27·3)
Congo	8·3 (6·6-10·4)	8·5 (7·5-9·6)	8·2 (7·7-8·7)	13·1 (12·3-13·8)	10·0 (8·5-11·6)
Democratic Republic of the Congo	217·3 (187·5-247·8)	245·0 (229·0-261·4)	291·7 (277·7-305·9)	377·2 (360·8-394·6)	340·4 (269·9-424·2)
Equatorial Guinea	2·4 (1·8-3·1)	1·4 (1·2-1·6)	2·8 (2·5-3·1)	3·3 (2·9-3·8)	2·8 (2·1-3·7)
Gabon	3·3 (2·7-4·1)	3·1 (2·9-3·3)	2·9 (2·7-3·1)	2·8 (2·7-3·0)	3·1 (2·6-3·6)
sub-Saharan Africa, Eastern	1072·3 (1020·3-1125·3)	1286·2 (1247·7-1323·6)	1449·4 (1416·1-1487·4)	1399·4 (1364·4-1432·8)	1003·7 (877·7-1148·2)
Burundi	37·7 (35·5-40·1)	43·1 (40·8-45·3)	47·8 (45·1-50·6)	50·6 (48·1-53·2)	39·3 (33·1-46·3)
Comoros	2·0 (1·7-2·3)	2·3 (2·1-2·5)	1·9 (1·7-2·0)	1·6 (1·4-2·0)	1·1 (0·8-1·6)
Djibouti	0·8 (0·6-1·0)	1·4 (1·2-1·7)	2·4 (2·2-2·7)	2·2 (2·0-2·4)	1·4 (1·1-1·9)
Eritrea	18·4 (16·6-20·3)	19·9 (18·7-20·9)	21·1 (20·0-22·3)	17·4 (16·3-18·5)	13·3 (9·9-18·2)
Ethiopia	320·0 (292·6-349·4)	409·1 (389·6-429·7)	454·2 (435·1-474·8)	408·8 (389·9-429·0)	228·5 (191·3-271·4)
Kenya	76·0 (72·5-79·8)	80·9 (77·1-85·0)	93·0 (88·8-97·5)	112·4 (106·4-118·6)	90·7 (72·0-113·9)
Madagascar	52·2 (49·0-56·0)	64·6 (61·7-67·7)	73·4 (70·4-76·7)	61·5 (58·4-64·6)	45·3 (35·9-56·9)
Malawi	80·1 (76·2-84·1)	85·1 (81·4-88·8)	100·3 (96·7-104·3)	83·6 (79·9-87·1)	55·2 (46·7-64·8)
Mauritius	1·7 (1·7-1·8)	0·9 (0·9-1·0)	0·4 (0·4-0·5)	0·3 (0·3-0·3)	0·1 (0·1-0·2)
Mozambique	108·0 (93·9-122·6)	122·7 (116·9-128·2)	131·8 (126·8-137·4)	122·0 (117·0-127·3)	86·9 (74·9-100·2)
Rwanda	42·3 (40·0-44·7)	55·4 (53·1-57·7)	52·6 (50·4-54·8)	49·4 (47·3-51·7)	25·3 (21·0-31·1)
Seychelles	0·1 (0·1-0·1)	0·0 (0·0-0·0)	0·0 (0·0-0·0)	0·0 (0·0-0·0)	0·0 (0·0-0·0)
Somalia	31·3 (24·2-39·9)	46·5 (39·6-54·3)	56·4 (52·3-60·8)	54·8 (50·8-59·6)	51·6 (40·0-65·3)
South Sudan	46·3 (36·3-58·4)	50·8 (41·1-61·7)	53·1 (46·0-61·3)	40·7 (35·1-47·3)	41·9 (32·3-53·8)
Tanzania	138·6 (131·8-146·3)	143·8 (137·9-150·4)	165·2 (158·7-172·2)	168·7 (161·7-175·7)	144·8 (119·6-174·4)
Uganda	79·3 (74·6-84·0)	116·3 (111·1-121·3)	136·8 (131·4-142·6)	157·2 (150·6-164·4)	130·5 (112·3-151·2)
Zambia	36·7 (34·5-39·0)	42·5 (40·5-44·7)	58·2 (55·9-60·8)	67·4 (64·2-70·8)	47·0 (37·8-59·2)
sub-Saharan Africa, Southern	167·9 (152·3-184·8)	158·8 (152·2-165·9)	121·7 (116·3-127·3)	131·8 (120·3-145·2)	74·7 (63·1-89·8)
Botswana	3·2 (2·9-3·4)	2·8 (2·6-3·0)	2·6 (2·3-2·9)	3·4 (2·9-4·0)	1·3 (0·9-1·9)
Lesotho	5·5 (5·1-6·0)	5·8 (5·3-6·2)	5·1 (4·8-5·5)	5·9 (5·6-6·3)	5·3 (4·3-6·7)
Namibia	3·4 (3·1-3·8)	4·1 (3·9-4·4)	3·6 (3·4-3·8)	3·7 (3·5-4·0)	1·8 (1·3-2·5)
South Africa	127·0	110·3	81·5	85·6	34·5

	(112·6-142·8)	(103·7-117·7)	(76·8-86·9)	(74·3-98·9)	(25·6-45·7)
Swaziland	3·0	3·2	2·7	3·4	2·4
	(2·5-3·6)	(2·9-3·6)	(2·5-2·9)	(3·2-3·6)	(1·9-3·0)
Zimbabwe	25·5	32·3	25·9	29·4	28·3
	(23·9-27·2)	(30·7-34·0)	(24·6-27·1)	(28·0-31·0)	(23·4-34·9)
sub-Saharan Africa, Western	1433·1	1500·8	1687·6	1837·9	1661·8
	(1375·8-1485·5)	(1458·2-1543·0)	(1652·7-1720·8)	(1799·3-1880·0)	(1512·6-1829·3)
Benin	38·5	37·1	39·5	37·4	22·4
	(36·6-40·4)	(35·6-38·7)	(38·0-41·0)	(35·9-38·9)	(20·0-24·9)
Burkina Faso	84·5	82·5	84·4	94·7	70·8
	(80·5-88·5)	(79·5-85·8)	(81·7-87·4)	(91·0-98·2)	(63·0-79·6)
Cameroon	62·5	69·5	71·3	89·6	82·7
	(59·5-65·8)	(66·6-72·4)	(68·6-74·1)	(85·8-93·4)	(74·5-93·1)
Cape Verde	1·6	0·8	0·7	0·5	0·2
	(1·6-1·7)	(0·8-0·9)	(0·7-0·8)	(0·4-0·6)	(0·1-0·2)
Chad	39·8	52·2	59·2	77·5	84·7
	(36·3-43·4)	(49·9-54·5)	(56·9-61·6)	(74·3-80·7)	(73·3-97·7)
Côte d'Ivoire	62·5	64·4	75·1	85·1	70·1
	(59·6-65·6)	(61·6-67·2)	(72·2-78·2)	(81·4-88·9)	(63·0-79·1)
Ghana	70·6	71·9	68·1	65·5	56·1
	(67·4-74·0)	(69·1-74·7)	(65·7-70·6)	(63·1-67·9)	(49·6-64·5)
Guinea	56·4	58·5	62·8	62·5	46·3
	(51·7-61·2)	(56·1-61·1)	(60·5-65·4)	(60·0-65·0)	(42·5-50·5)
Guinea-Bissau	7·9	9·3	9·8	10·0	9·5
	(6·9-8·9)	(8·5-10·1)	(9·1-10·6)	(9·3-10·8)	(8·1-11·1)
Liberia	19·8	21·5	21·7	18·1	11·5
	(18·9-20·8)	(20·6-22·4)	(20·7-22·7)	(17·3-18·9)	(10·0-13·5)
Mali	103·7	98·9	96·0	104·5	103·8
	(99·6-107·7)	(95·7-102·2)	(92·7-99·3)	(100·3-108·6)	(89·2-122·2)
Mauritania	8·7	9·2	8·4	9·9	8·9
	(8·2-9·2)	(8·7-9·7)	(8·0-8·9)	(9·2-10·6)	(7·5-10·6)
Niger	79·6	97·0	122·6	125·4	98·0
	(76·0-83·2)	(93·5-100·4)	(118·6-126·8)	(120·7-130·3)	(88·6-108·1)
Nigeria	675·2	703·6	850·8	940·9	907·7
	(641·5-707·6)	(675·7-732·2)	(819·1-880·3)	(908·0-974·3)	(803·4-1026·3)
Sao Tome and Principe	0·4	0·4	0·4	0·3	0·2
	(0·4-0·4)	(0·3-0·4)	(0·3-0·4)	(0·3-0·4)	(0·2-0·3)
Senegal	60·0	55·6	46·6	49·2	31·9
	(57·8-62·2)	(53·6-57·7)	(44·8-48·4)	(47·2-51·1)	(28·0-36·6)
Sierra Leone	33·7	39·8	39·6	36·3	27·9
	(30·3-37·4)	(37·3-42·4)	(37·9-41·4)	(34·9-37·9)	(24·3-32·4)
The Gambia	5·2	5·8	6·7	6·7	5·7
	(4·7-5·9)	(5·3-6·3)	(6·2-7·1)	(6·2-7·3)	(4·8-6·8)
Togo	21·5	21·9	23·0	22·9	22·4
	(20·3-22·7)	(20·9-22·9)	(22·0-24·1)	(21·3-24·6)	(19·2-26·4)

Web table 3. Global under-5 mortality deaths from several studies.

Web table 3. Global number of under-5 deaths (thousands) from several studies.

source	1990	1995	2000	2005	2007	2008	2009	2010	2011	2012	2013
GBD 2013	12223	10634	9305	7996	7501	7292	7083	6900	6694	6519	6350
GBD 2010	11560	10705	9357	7842	7350	7166	6993	6842			
Lozano et al, 2011	11600	10700	9332	8120	7735	7580	7432	7308			
Rajaratnam et al, 2010	11862	10855	9577	8440	8098	7951	7817	7693			
Murray et al, 2007	12121	11185	10314	9720							
UNICEF, 2013	12621	10854	9699	8234				6998		6553	
UNICEF, 2012	11968	10770	9562	8198				7148	6914		
UNICEF, 2011	12010	10702	9575	8467			7756	7614			
UNICEF, 2010	12393	11373	10169	8973	8521	8299	8087				
UNICEF, 2009	12500	11400	10400	9300	8900	8800					

Web table 4. Data source list of child mortality data sources used in the GBD 2013.

Web table 4: Data source list of child mortality data sources used in the GBD 2013.

VR/SRS/DSP = Vital registration, sample registration system, and disease surveillance poitns. HH = Household deaths. CBH = Complete birth history. SBH = Summary birth history.

Country	Source number	Source	VR/ SRS/ DSP	HH	CBH	SBH
Afghanistan						
	(AFG-01)	1972 National Demographic and Family Guidance Survey				x
	(AFG-02)	1979 Census		x		
	(AFG-03)	2000 Multiple Indicator Cluster Survey				x
	(AFG-04)	2003 Multiple Indicator Cluster Survey				x
	(AFG-05)	2006 Afghanistan Health Survey				x
	(AFG-06)	2008 National Risk and Vulnerability Assessment				x
	(AFG-07)	2010 Multiple Indicator Cluster Survey				x
	(AFG-08)	2010 Special Demographic and Health Survey			x	x
Albania						
	(ALB-01)	1950, 1955, 1957-64, 1987-07 Vital Registration	x			
	(ALB-02)	2000 Multiple Indicator Cluster Survey				x
	(ALB-03)	2002 Reproductive Health Survey			x	x
	(ALB-04)	2005 Multiple Indicator Cluster Survey				x
	(ALB-05)	2008-09 Standard Demographic and Health Survey			x	x
Algeria						
	(DZA-01)	1950-56, 1964-65, 1980-82, 1985-86, 1990, 1998, 2000, 2007-09 Vital Registration	x			
	(DZA-02)	1970 Fertility Survey				x
	(DZA-03)	1986 National Fertility Survey			x	
	(DZA-04)	1992 Pan Arab Project for Child Development			x	x
	(DZA-05)	1998 Census				x
	(DZA-06)	2000 Multiple Indicator Cluster Survey				x
	(DZA-07)	2002-03 Pan Arab Project for Family Health			x	x
	(DZA-08)	2010-11 Vital Registration (Report)	x			
Andorra						
	(AND-01)	1950-54, 1992, 1994, 2002-05, 2007-10 Vital Registration	x			
Angola						
	(AGO-01)	1996 Multiple Indicator Cluster Survey (Report)				x
	(AGO-02)	2001 Multiple Indicator Cluster Survey				x
	(AGO-03)	2006-07 Malaria Indicator Survey			x	x
	(AGO-04)	2008 Integrated Inquiry into People's Well-Being		x		
	(AGO-05)	2011 Malaria Indicator Survey			x	x
Antigua and Barbuda						
	(ATG-01)	1950-66, 1969-78, 1983, 1985-09 Vital Registration	x			
Argentina						
	(ARG-01)	1950-70, 1976-11 Vital Registration	x			
	(ARG-02)	1970 Census				x

	(ARG-03)	1980 Census				x
	(ARG-04)	1991 Census				x
Armenia						
	(ARM-01)	1981-12 Vital Registration	x			
	(ARM-02)	2000 Standard Demographic and Health Survey			x	x
	(ARM-03)	2001 Census				x
	(ARM-04)	2005 Standard Demographic and Health Survey			x	x
	(ARM-05)	2010 Standard Demographic and Health Survey			x	x
Australia						
	(AUS-01)	1950-11 Vital Registration	x			
Austria						
	(AUT-01)	1950-11 Vital Registration	x			
Azerbaijan						
	(AZE-01)	1981-10 Vital Registration	x			
	(AZE-02)	2000 Multiple Indicator Cluster Survey				x
	(AZE-03)	2001 Reproductive Health Survey			x	
	(AZE-04)	2006 Standard Demographic and Health Survey			x	x
Bahrain						
	(BHR-01)	1971 Census				x
	(BHR-02)	1980-82, 1984-93, 1995-09, 2012 Vital Registration	x			
	(BHR-03)	1981 Census				x
	(BHR-04)	1989 Child Health Survey			x	
	(BHR-05)	1991 Census				x
	(BHR-06)	1995 Gulf Family Health Survey			x	
	(BHR-07)	2001 Census				x
Bangladesh						
	(BGD-01)	1962-65 Population Growth Estimation Experiment		x		
	(BGD-02)	1974 Retrospective Survey of Fertility and Mortality				x
	(BGD-03)	1975-76 World Fertility Survey			x	x
	(BGD-04)	1980-02, 2004, 2006 Sample Registration System	x			
	(BGD-05)	1981 Contraceptive Prevalence Survey				x
	(BGD-06)	1985-86 Contraceptive Prevalence Survey				x
	(BGD-07)	1988-89 Fertility Survey			x	
	(BGD-08)	1993-94 Standard Demographic and Health Survey			x	x
	(BGD-09)	1996-97 Standard Demographic and Health Survey			x	x
	(BGD-10)	1999-00 Standard Demographic and Health Survey			x	x
	(BGD-11)	2001 Special Demographic and Health Survey			x	x
	(BGD-12)	2003, 2005, 2007-10 Sample Registration System (Report)	x			
	(BGD-13)	2004 Standard Demographic and Health Survey			x	x
	(BGD-14)	2007 Standard Demographic and Health Survey			x	x
	(BGD-15)	2011-12 Standard Demographic and Health Survey			x	x
Barbados						
	(BRB-01)	1950-95, 2000-08 Vital Registration	x			
Belarus						
	(BLR-01)	1959-11 Vital Registration	x			

	(BLR-02)	1989 Census				x
	(BLR-03)	1999 Census				x
	(BLR-04)	2005 Multiple Indicator Cluster Survey				x
Belgium						
	(BEL-01)	1950-10 Vital Registration	x			
	(BEL-02)	1961 Census				x
	(BEL-03)	1970 Census				x
Belize						
	(BLZ-01)	1950-09 Vital Registration	x			
	(BLZ-02)	1991 Census				x
	(BLZ-03)	1991 Reproductive Health Survey			x	x
	(BLZ-04)	1999 Reproductive Health Survey			x	x
	(BLZ-05)	2000 Census				x
	(BLZ-06)	2006 Multiple Indicator Cluster Survey				x
	(BLZ-07)	2011 Multiple Indicator Cluster Survey				x
Benin						
	(BEN-01)	1981-82 World Fertility Survey			x	x
	(BEN-02)	1981-83 Multi-Round Survey			x	
	(BEN-03)	1992 Census		x		x
	(BEN-04)	1996 Standard Demographic and Health Survey			x	x
	(BEN-05)	2001 Standard Demographic and Health Survey			x	x
	(BEN-06)	2002 Census		x		
	(BEN-07)	2006 Standard Demographic and Health Survey			x	x
	(BEN-08)	2011-12 Standard Demographic and Health Survey			x	x
Bhutan						
	(BTN-01)	1984 Demographic Sample Survey			x	x
	(BTN-02)	1994 National Health Survey			x	
	(BTN-03)	2000 National Health Survey			x	
	(BTN-04)	2005 Census		x		x
	(BTN-05)	2010 Multiple Indicator Cluster Survey				x
Bolivia						
	(BOL-01)	1951-58, 1965-66, 1976-77, 2000-03 Vital Registration	x			
	(BOL-02)	1976 Census				x
	(BOL-03)	1980 National Demographic Survey				x
	(BOL-04)	1988 Sample Survey				x
	(BOL-05)	1989 Standard Demographic and Health Survey			x	x
	(BOL-06)	1992 Census				x
	(BOL-07)	1993-94 Standard Demographic and Health Survey			x	x
	(BOL-08)	1998 Standard Demographic and Health Survey			x	x
	(BOL-09)	2000 Household Survey				x
	(BOL-10)	2000 Multiple Indicator Cluster Survey				x
	(BOL-11)	2001 Census				x
	(BOL-12)	2003-04 Standard Demographic and Health Survey			x	x
	(BOL-13)	2008 Standard Demographic and Health Survey			x	x
Bosnia and Herzegovina						

	(BIH-01)	1985-91, 1998-11 Vital Registration	x			
	(BIH-02)	2011 Multiple Indicator Cluster Survey				x
Botswana						
	(BWA-01)	1971 Census				x
	(BWA-02)	1981 Census				x
	(BWA-03)	1984 Family Health Survey				x
	(BWA-04)	1988 Standard Demographic and Health Survey			x	x
	(BWA-05)	1991 Census				x
	(BWA-06)	1996 Family Health Survey			x	x
	(BWA-07)	2000 Multiple Indicator Cluster Survey				x
	(BWA-08)	2001 Census		x		x
	(BWA-09)	2007 Demographic Survey		x		x
	(BWA-10)	2007 Family Health Survey		x		
Brazil						
	(BRA-01)	1960 Census				x
	(BRA-02)	1970 Census				x
	(BRA-03)	1974-11 Vital Registration	x			
	(BRA-04)	1980 Census				x
	(BRA-05)	1984 National Health Survey				x
	(BRA-06)	1986 National Health Survey				x
	(BRA-07)	1986 Standard Demographic and Health Survey			x	x
	(BRA-08)	1991 Census				x
	(BRA-09)	1996-97 Living Standards Measurement Study				x
	(BRA-10)	1996 Standard Demographic and Health Survey			x	x
	(BRA-11)	2000 Census				x
	(BRA-12)	2004 National Household Sample Survey				x
	(BRA-13)	2005 National Household Sample Survey				x
	(BRA-14)	2006 National Household Sample Survey				x
	(BRA-15)	2007 National Household Sample Survey				x
	(BRA-16)	2008 National Household Sample Survey				x
	(BRA-17)	2009 National Household Sample Survey				x
	(BRA-18)	2010 Census		x		x
Brunei						
	(BRN-01)	1950-59, 1964-78, 1982-92, 1995-11 Vital Registration	x			
	(BRN-02)	1960 Census				x
Bulgaria						
	(BGR-01)	1950-12 Vital Registration	x			
	(BGR-02)	1965 Census				x
	(BGR-03)	1975 Census				x
	(BGR-04)	1995 Living Standards Measurement Study				x
	(BGR-05)	1997 Living Standards Measurement Study				x
Burkina Faso						
	(BFA-01)	1960-61 Sample Demographic Survey in the Republic of Upper Volta		x		
	(BFA-02)	1976 Post-enumeration Survey				x
	(BFA-03)	1985 Census		x		x

	(BFA-04)	1992-93 Standard Demographic and Health Survey			x	x
	(BFA-05)	1996 Census		x		
	(BFA-06)	1998-99 Standard Demographic and Health Survey			x	x
	(BFA-07)	2003 Standard Demographic and Health Survey			x	x
	(BFA-08)	2006 Census		x		x
	(BFA-09)	2006 Multiple Indicator Cluster Survey				x
	(BFA-10)	2010-11 Standard Demographic and Health Survey			x	x
Burundi						
	(BDI-01)	1970-71 Demographic Survey			x	x
	(BDI-02)	1979 Post-Census Survey				x
	(BDI-03)	1987 Standard Demographic and Health Survey			x	x
	(BDI-04)	1990 Census				x
	(BDI-05)	2000 Multiple Indicator Cluster Survey				x
	(BDI-06)	2005 Multiple Indicator Cluster Survey				x
	(BDI-07)	2010-11 Standard Demographic and Health Survey			x	x
	(BDI-08)	2012 Malaria Indicator Survey				x
Cambodia						
	(KHM-01)	1959 Demographic Survey		x		
	(KHM-02)	1996 Socioeconomic Survey		x		
	(KHM-03)	1997 Socioeconomic Survey				x
	(KHM-04)	1998 Census				x
	(KHM-05)	1998 Special Demographic and Health Survey			x	x
	(KHM-06)	1999 Socioeconomic Survey				x
	(KHM-07)	2000 Standard Demographic and Health Survey			x	x
	(KHM-08)	2005-06 Standard Demographic and Health Survey			x	x
	(KHM-09)	2008 Census		x		x
	(KHM-10)	2010-11 Standard Demographic and Health Survey			x	x
Cameroon						
	(CMR-01)	1976 Census		x		
	(CMR-02)	1978 World Fertility Survey			x	x
	(CMR-03)	1987 Census		x		
	(CMR-04)	1991 Standard Demographic and Health Survey			x	x
	(CMR-05)	1998 Standard Demographic and Health Survey			x	x
	(CMR-06)	2000 Multiple Indicator Cluster Survey				x
	(CMR-07)	2004 Standard Demographic and Health Survey			x	x
	(CMR-08)	2005 Census				x
	(CMR-09)	2011 Standard Demographic and Health Survey			x	x
Canada						
	(CAN-01)	1950-09 Vital Registration	x			
	(CAN-02)	2010-11 Vital Registration (Report)	x			
Cape Verde						
	(CPV-01)	1955-57, 1959-60, 1966-75, 1979-80, 1983-85, 1990-91 Vital Registration	x			
	(CPV-02)	1998 Reproductive Health Survey			x	x
	(CPV-03)	2000 Census			x	x
	(CPV-04)	2005 Standard Demographic and Health Survey (Report)			x	x

Central African Republic						
	(CAF-01)	1975 Census				x
	(CAF-02)	1988 Census		x		x
	(CAF-03)	1994-95 Standard Demographic and Health Survey			x	x
	(CAF-04)	2000 Multiple Indicator Cluster Survey				x
	(CAF-05)	2006 Multiple Indicator Cluster Survey				x
	(CAF-06)	2010 Multiple Indicator Cluster Survey				x
Chad						
	(TCD-01)	1993 Census				x
	(TCD-02)	1996-97 Standard Demographic and Health Survey			x	x
	(TCD-03)	2000 Multiple Indicator Cluster Survey				x
	(TCD-04)	2004 Standard Demographic and Health Survey			x	x
	(TCD-05)	2010 Multiple Indicator Cluster Survey (Report)				x
Chile						
	(CHL-01)	1950-11 Vital Registration	x			
	(CHL-02)	1970 Census				x
	(CHL-03)	1982 Census				x
	(CHL-04)	1992 Census				x
	(CHL-05)	2002 Census				x
China						
	(CHN-01)	1975 Survey of Cancer Epidemiology		x		
	(CHN-02)	1982 Census		x		x
	(CHN-03)	1982 National 1 per 1000 Fertility Survey				x
	(CHN-04)	1986 Sample Survey on Population Change		x		
	(CHN-05)	1988 Fertility Sampling Survey in China		x		
	(CHN-06)	1990 Census		x		x
	(CHN-07)	1991 National Survey on Child Mortality		x		
	(CHN-08)	1992 Fertility Sampling Survey in China		x		
	(CHN-09)	1992 National Maternal and Child Health Surveillance System		x		
	(CHN-10)	1993 National Maternal and Child Health Surveillance System		x		
	(CHN-11)	1994 National Maternal and Child Health Surveillance System		x		
	(CHN-12)	1994 Sample Survey on Population Change		x		
	(CHN-13)	1995 1% Intra-Census Survey		x		x
	(CHN-14)	1995 National Maternal and Child Health Surveillance System		x		
	(CHN-15)	1996-00, 2004-10 Disease Surveillance Points	x			
	(CHN-16)	1996 Ministry of Health Routine Reporting for Maternal and Child Mortality		x		
	(CHN-17)	1996 Sample Survey on Population Change		x		
	(CHN-18)	1997 Ministry of Health Routine Reporting for Maternal and Child Mortality		x		
	(CHN-19)	1997 National Maternal and Child Health Surveillance System		x		
	(CHN-20)	1997 Sample Survey on Population Change		x		
	(CHN-21)	1998 Ministry of Health Routine Reporting for Maternal and Child Mortality		x		
	(CHN-22)	1998 National Maternal and Child Health Surveillance System		x		
	(CHN-23)	1998 Sample Survey on Population Change		x		
	(CHN-24)	1999 Ministry of Health Routine Reporting for Maternal and Child Mortality		x		
	(CHN-25)	1999 National Maternal and Child Health Surveillance System		x		

	(CHN-26)	1999 Sample Survey on Population Change		x		
	(CHN-27)	2000 Census		x		x
	(CHN-28)	2000 Ministry of Health Routine Reporting for Maternal and Child Mortality		x		
	(CHN-29)	2000 National Maternal and Child Health Surveillance System		x		
	(CHN-30)	2001 Ministry of Health Routine Reporting for Maternal and Child Mortality		x		
	(CHN-31)	2001 National Maternal and Child Health Surveillance System		x		
	(CHN-32)	2001 Sample Survey on Population Change		x		
	(CHN-33)	2002 Ministry of Health Routine Reporting for Maternal and Child Mortality		x		
	(CHN-34)	2002 National Maternal and Child Health Surveillance System		x		
	(CHN-35)	2002 Sample Survey on Population Change		x		
	(CHN-36)	2003 Ministry of Health Routine Reporting for Maternal and Child Mortality		x		
	(CHN-37)	2003 National Maternal and Child Health Surveillance System		x		
	(CHN-38)	2003 Sample Survey on Population Change		x		
	(CHN-39)	2004 Ministry of Health Routine Reporting for Maternal and Child Mortality		x		
	(CHN-40)	2004 National Maternal and Child Health Surveillance System		x		
	(CHN-41)	2004 Sample Survey on Population Change		x		
	(CHN-42)	2005 1% Intra-Census Survey		x		
	(CHN-43)	2005 Ministry of Health Routine Reporting for Maternal and Child Mortality		x		
	(CHN-44)	2005 National Maternal and Child Health Surveillance System		x		
	(CHN-45)	2006 Ministry of Health Routine Reporting for Maternal and Child Mortality		x		
	(CHN-46)	2006 National Maternal and Child Health Surveillance System		x		
	(CHN-47)	2006 Sample Survey on Population Change		x		
	(CHN-48)	2007 Ministry of Health Routine Reporting for Maternal and Child Mortality		x		
	(CHN-49)	2007 National Maternal and Child Health Surveillance System		x		
	(CHN-50)	2007 Sample Survey on Population Change		x		
	(CHN-51)	2008 Ministry of Health Routine Reporting for Maternal and Child Mortality		x		
	(CHN-52)	2008 National Maternal and Child Health Surveillance System		x		
	(CHN-53)	2008 Sample Survey on Population Change		x		
	(CHN-54)	2009 Maternal and Child Health Surveillance System		x		
	(CHN-55)	2009 Ministry of Health Routine Reporting for Maternal and Child Mortality		x		
	(CHN-56)	2009 Sample Survey on Population Change		x		
	(CHN-57)	2010 Census		x		x
	(CHN-58)	2010 Maternal and Child Health Surveillance System		x		
	(CHN-59)	2010 Ministry of Health Routine Reporting for Maternal and Child Mortality		x		
	(CHN-60)	2011 Maternal and Child Health Surveillance System		x		
	(CHN-61)	2011 Ministry of Health Routine Reporting for Maternal and Child Mortality		x		
	(CHN-62)	2012 Ministry of Health Routine Reporting for Maternal and Child Mortality		x		
Colombia						
	(COL-01)	1950-77, 1979-80, 1982-09, 2011 Vital Registration	x			
	(COL-02)	1973 Census				x
	(COL-03)	1976 World Fertility Survey			x	x
	(COL-04)	1985 Census				x
	(COL-05)	1986 Standard Demographic and Health Survey			x	x
	(COL-06)	1990 Standard Demographic and Health Survey			x	x
	(COL-07)	1993 Census				x

	(COL-08)	1995 Standard Demographic and Health Survey			x	x
	(COL-09)	2000 Standard Demographic and Health Survey			x	x
	(COL-10)	2004-05 Standard Demographic and Health Survey			x	x
	(COL-11)	2005 Census				x
	(COL-12)	2009-10 Standard Demographic and Health Survey			x	x
Comoros						
	(COM-01)	1958 Census		x		
	(COM-02)	1980 Census				x
	(COM-03)	1996 Standard Demographic and Health Survey			x	x
	(COM-04)	2000 Multiple Indicator Cluster Survey				x
	(COM-05)	2012 Standard Demographic and Health Survey (Report)			x	
Congo						
	(COG-01)	1974 Census				x
	(COG-02)	2005 Standard Demographic and Health Survey			x	x
	(COG-03)	2009 AIDS Indicator Survey				x
	(COG-04)	2011-12 Standard Demographic and Health Survey			x	x
Costa Rica						
	(CRI-01)	1950, 1952-11 Vital Registration	x			
	(CRI-02)	1973 Census				x
	(CRI-03)	1976 World Fertility Survey			x	x
	(CRI-04)	1981 Contraceptive Prevalence Survey				x
	(CRI-05)	1984 Census				x
	(CRI-06)	1986 Reproductive Health Survey			x	x
	(CRI-07)	1992-93 Reproductive Health Survey			x	x
	(CRI-08)	2000 Census				x
	(CRI-09)	2011 Census				x
Cote d'Ivoire						
	(CIV-01)	1978 Demographic Survey			x	x
	(CIV-02)	1980-81 World Fertility Survey			x	x
	(CIV-03)	1994 Standard Demographic and Health Survey			x	x
	(CIV-04)	1998-99 Standard Demographic and Health Survey			x	x
	(CIV-05)	1998 Census		x		
	(CIV-06)	2005 AIDS Indicator Survey			x	x
	(CIV-07)	2011-12 Standard Demographic and Health Survey			x	x
Croatia						
	(HRV-01)	1985-12 Vital Registration	x			
Cuba						
	(CUB-01)	1959-10 Vital Registration	x			
	(CUB-02)	1974 Income and Expenditure Survey				x
	(CUB-03)	1981 Census				x
	(CUB-04)	1987 National Fertility Survey				x
	(CUB-05)	2010 Multiple Indicator Cluster Survey				x
Cyprus						
	(CYP-01)	1960 Census				x
	(CYP-02)	1973 Census				x

	(CYP-03)	1974-11 Vital Registration	x			
	(CYP-04)	1992 Census				x
Czech Republic						
	(CZE-01)	1950-12 Vital Registration	x			
	(CZE-02)	1991 Census				x
	(CZE-03)	1993 Reproductive Health Survey			x	x
Democratic Republic of the Congo						
	(COD-01)	1984 Census				x
	(COD-02)	1995 Multiple Indicator Cluster Survey (Report)				x
	(COD-03)	2001 Multiple Indicator Cluster Survey				x
	(COD-04)	2007 Standard Demographic and Health Survey			x	x
	(COD-05)	2010 Multiple Indicator Cluster Survey				x
Denmark						
	(DNK-01)	1950-11 Vital Registration	x			
Djibouti						
	(DJI-01)	2002 Pan Arab Project for Family Health			x	x
	(DJI-02)	2006 Multiple Indicator Cluster Survey				x
Dominica						
	(DMA-01)	1950-63, 1966-10 Vital Registration	x			
Dominican Republic						
	(DOM-01)	1950-92, 1994-01, 2003-11 Vital Registration	x			
	(DOM-02)	1970 Census				x
	(DOM-03)	1975 World Fertility Survey				x
	(DOM-04)	1980 World Fertility Survey				x
	(DOM-05)	1981 Census		x		
	(DOM-06)	1983 Contraceptive Prevalence Survey				x
	(DOM-07)	1986 Standard Demographic and Health Survey			x	x
	(DOM-08)	1991 Standard Demographic and Health Survey			x	x
	(DOM-09)	1996 Standard Demographic and Health Survey			x	x
	(DOM-10)	2000 Multiple Indicator Cluster Survey				x
	(DOM-11)	2002 Standard Demographic and Health Survey			x	x
	(DOM-12)	2006 National Multipurpose Household Survey			x	
	(DOM-13)	2007 Standard Demographic and Health Survey			x	x
Ecuador						
	(ECU-01)	1954-10 Vital Registration	x			
	(ECU-02)	1974 Census				x
	(ECU-03)	1979-80 World Fertility Survey				x
	(ECU-04)	1982 Census				x
	(ECU-05)	1987 Standard Demographic and Health Survey			x	x
	(ECU-06)	1989 Reproductive Health Survey			x	x
	(ECU-07)	1990 Census				x
	(ECU-08)	1994 Reproductive Health Survey			x	x
	(ECU-09)	1995 Living Standards Measurement Study				x
	(ECU-10)	1998 Living Standards Measurement Study				x

	(ECU-11)	1999 Reproductive Health Survey			x	x
	(ECU-12)	2001 Census				x
	(ECU-13)	2004 Reproductive Health Survey			x	x
	(ECU-14)	2010 Census				x
Egypt						
	(EGY-01)	1950-81, 1983-11 Vital Registration	x			
	(EGY-02)	1976 Census				x
	(EGY-03)	1980 World Fertility Survey			x	x
	(EGY-04)	1984 Contraceptive Prevalence Survey				x
	(EGY-05)	1986 Census				x
	(EGY-06)	1988-89 Standard Demographic and Health Survey			x	x
	(EGY-07)	1991 Pan Arab Project for Child Development			x	x
	(EGY-08)	1992-93 Standard Demographic and Health Survey			x	x
	(EGY-09)	1995-96 Standard Demographic and Health Survey			x	x
	(EGY-10)	1997-1998 Standard Demographic and Health Survey (Report)			x	
	(EGY-11)	1998 Standard Demographic and Health Survey (Report)			x	
	(EGY-12)	2000 Standard Demographic and Health Survey			x	x
	(EGY-13)	2003 Interim Demographic and Health Survey			x	x
	(EGY-14)	2005 Standard Demographic and Health Survey			x	x
	(EGY-15)	2008 Standard Demographic and Health Survey			x	x
El Salvador						
	(SLV-01)	1950-09, 2011 Vital Registration	x			
	(SLV-02)	1971 Census				x
	(SLV-03)	1985 Standard Demographic and Health Survey			x	x
	(SLV-04)	1988 Reproductive Health Survey				x
	(SLV-05)	1992 Census				x
	(SLV-06)	1992 Household Survey				x
	(SLV-07)	1993 Household Survey				x
	(SLV-08)	1993 Reproductive Health Survey			x	x
	(SLV-09)	1998 Reproductive Health Survey			x	x
	(SLV-10)	2002-03 Reproductive Health Survey			x	x
	(SLV-11)	2007 Census		x		x
	(SLV-12)	2008 Reproductive Health Survey			x	x
Equatorial Guinea						
	(GNQ-01)	2000 Multiple Indicator Cluster Survey				x
	(GNQ-02)	2011 Standard Demographic and Health Survey (Report)			x	
Eritrea						
	(ERI-01)	1995-96 Standard Demographic and Health Survey			x	x
	(ERI-02)	2002 Standard Demographic and Health Survey			x	x
Estonia						
	(EST-01)	1959-12 Vital Registration	x			
	(EST-02)	1989 Census				x
Ethiopia						
	(ETH-01)	1984 Census				x
	(ETH-02)	1990 National Family and Fertility Survey			x	x

	(ETH-03)	1994 Census				x
	(ETH-04)	2000 Standard Demographic and Health Survey			x	x
	(ETH-05)	2005 Standard Demographic and Health Survey			x	x
	(ETH-06)	2007 Census		x		x
	(ETH-07)	2010-11 Standard Demographic and Health Survey			x	x
Federated States of Micronesia						
	(FSM-01)	1973 Census				x
	(FSM-02)	1994 Census				x
	(FSM-03)	2000 Census				x
	(FSM-04)	2003 Vital Registration	x			
Fiji						
	(FJI-01)	1950-87, 2009, 2011 Vital Registration	x			
	(FJI-02)	1956 Census				x
	(FJI-03)	1966 Census				x
	(FJI-04)	1974 World Fertility Survey			x	x
	(FJI-05)	1976 Census				x
	(FJI-06)	1986 Census				x
Finland						
	(FIN-01)	1950-11 Vital Registration	x			
France						
	(FRA-01)	1950-11 Vital Registration	x			
Gabon						
	(GAB-01)	2000-01 Standard Demographic and Health Survey			x	x
	(GAB-02)	2012 Standard Demographic and Health Survey			x	x
Georgia						
	(GEO-01)	1981-83, 1985-10, 2012 Vital Registration	x			
	(GEO-02)	1999-00 Reproductive Health Survey			x	x
	(GEO-03)	2005 Multiple Indicator Cluster Survey				x
	(GEO-04)	2005 Reproductive Health Survey			x	x
	(GEO-05)	2010 Reproductive Health Survey (Report)			x	
Germany						
	(DEU-01)	1956-12 Vital Registration	x			
Ghana						
	(GHA-01)	1970 Census				x
	(GHA-02)	1979-80 World Fertility Survey			x	x
	(GHA-03)	1988 Standard Demographic and Health Survey			x	x
	(GHA-04)	1993-94 Standard Demographic and Health Survey			x	x
	(GHA-05)	1998-99 Living Standards Measurement Study				x
	(GHA-06)	1998-99 Standard Demographic and Health Survey			x	x
	(GHA-07)	2000 Census				x
	(GHA-08)	2003 Standard Demographic and Health Survey			x	x
	(GHA-09)	2005 Living Standards Measurement Study				x
	(GHA-10)	2006 Multiple Indicator Cluster Survey				x
	(GHA-11)	2007-08 Special Demographic and Health Survey			x	x

	(GHA-12)	2008 Standard Demographic and Health Survey			x	x
	(GHA-13)	2011 Multiple Indicator Cluster Survey			x	x
Greece						
	(GRC-01)	1951-11 Vital Registration	x			
	(GRC-02)	1991 Census				x
Grenada						
	(GRD-01)	1950-69, 1974-78, 1984-85, 1988-10 Vital Registration	x			
Guatemala						
	(GTM-01)	1950-72, 1974-81, 1983-09, 2011 Vital Registration	x			
	(GTM-02)	1978-79 Reproductive Health Survey				x
	(GTM-03)	1981 Census				x
	(GTM-04)	1987 Standard Demographic and Health Survey			x	x
	(GTM-05)	1995 Standard Demographic and Health Survey			x	x
	(GTM-06)	1998-99 Interim Demographic and Health Survey			x	x
	(GTM-07)	2000 Living Standards Measurement Study				x
	(GTM-08)	2002 Reproductive Health Survey			x	x
	(GTM-09)	2008-09 Reproductive Health Survey			x	x
Guinea						
	(GIN-01)	1983 Census		x		
	(GIN-02)	1992 Standard Demographic and Health Survey (Report)			x	
	(GIN-03)	1996 Census				x
	(GIN-04)	1999 Standard Demographic and Health Survey			x	x
	(GIN-05)	2005 Standard Demographic and Health Survey			x	x
	(GIN-06)	2012 Standard Demographic and Health Survey			x	x
Guinea-Bissau						
	(GNB-01)	2000 Multiple Indicator Cluster Survey				x
	(GNB-02)	2006 Multiple Indicator Cluster Survey				x
	(GNB-03)	2010 Multiple Indicator Cluster Survey				x
Guyana						
	(GUY-01)	1950-61, 1969-71, 1974, 1977, 1979, 1984, 1988-99, 2001-09 Vital Registration	x			
	(GUY-02)	1975 World Fertility Survey			x	x
	(GUY-03)	1993 Living Standards Measurement Study				x
	(GUY-04)	2000 Multiple Indicator Cluster Survey				x
	(GUY-05)	2005 AIDS Indicator Survey			x	x
	(GUY-06)	2006-07 Multiple Indicator Cluster Survey				x
	(GUY-07)	2009 Standard Demographic and Health Survey			x	x
Haiti						
	(HTI-01)	1971-73 Multi-Round Demographic Survey			x	
	(HTI-02)	1971 Census			x	
	(HTI-03)	1972 Sample Survey		x		
	(HTI-04)	1977 World Fertility Survey			x	x
	(HTI-05)	1980, 1997, 1999, 2001-04 Vital Registration	x			
	(HTI-06)	1987 Mortality, Morbidity and Utilization of Services Survey			x	x
	(HTI-07)	1994-95 Standard Demographic and Health Survey			x	x
	(HTI-08)	2000 Standard Demographic and Health Survey			x	x

	(HTI-09)	2005-06 Standard Demographic and Health Survey			x	x
	(HTI-10)	2008 Global Fund Facility Survey			x	
	(HTI-11)	2012 Standard Demographic and Health Survey			x	x
Honduras						
	(HND-01)	1950-83, 1987-90 Vital Registration	x			
	(HND-02)	1970-72 National Demographic Survey			x	x
	(HND-03)	1974 Census				x
	(HND-04)	1983-84 National Demographic Survey				x
	(HND-05)	1985 National Maternal and Infant Health Survey				x
	(HND-06)	1987 Reproductive Health Survey				x
	(HND-07)	1988 Census				x
	(HND-08)	1991-92 Reproductive Health Survey			x	x
	(HND-09)	1996 Reproductive Health Survey			x	x
	(HND-10)	2001 Census		x		
	(HND-11)	2001 Reproductive Health Survey			x	x
	(HND-12)	2004 Survey of Living Conditions				x
	(HND-13)	2005-06 Standard Demographic and Health Survey			x	x
	(HND-14)	2011-12 Standard Demographic and Health Survey			x	x
Hungary						
	(HUN-01)	1950-12 Vital Registration	x			
	(HUN-02)	1960 Census				x
Iceland						
	(ISL-01)	1950-11 Vital Registration	x			
India						
	(IND-01)	1950-64 Vital Registration	x			
	(IND-02)	1970-80, 1983-84, 1986, 1988-89, 1992-09 Sample Registration System	x			
	(IND-03)	1970 All-India Family Planning Survey				x
	(IND-04)	1981 Census				x
	(IND-05)	1991 Census				x
	(IND-06)	1992-93 Standard Demographic and Health Survey			x	x
	(IND-07)	1998-00 Standard Demographic and Health Survey			x	x
	(IND-08)	1998-99 District Level Household and Facility Survey 1				x
	(IND-09)	2001 Census				x
	(IND-10)	2002-04 District Level Household and Facility Survey 2				x
	(IND-11)	2004-05 Human Development Survey			x	x
	(IND-12)	2005-06 Standard Demographic and Health Survey			x	x
	(IND-13)	2007-08 District Level Household and Facility Survey 3				x
	(IND-14)	2010-12 Sample Registration System (Report)	x			
Indonesia						
	(IDN-01)	1964-65 Socioeconomic National Sample Survey		x		x
	(IDN-02)	1971 Census				x
	(IDN-03)	1976 Intercensal Population Survey				x
	(IDN-04)	1976 World Fertility Survey			x	x
	(IDN-05)	1980 Census				x
	(IDN-06)	1985 Intercensal Population Survey		x		x

	(IDN-07)	1987 Standard Demographic and Health Survey			x	x
	(IDN-08)	1990 Census				x
	(IDN-09)	1991 Standard Demographic and Health Survey			x	x
	(IDN-10)	1992 National Socioeconomic Survey				x
	(IDN-11)	1993 Indonesia Family Life Survey			x	x
	(IDN-12)	1993 National Socioeconomic Survey				x
	(IDN-13)	1994 National Socioeconomic Survey				x
	(IDN-14)	1994 Standard Demographic and Health Survey			x	x
	(IDN-15)	1995 Intercensal Population Survey			x	x
	(IDN-16)	1995 National Socioeconomic Survey				x
	(IDN-17)	1996 National Socioeconomic Survey		x		x
	(IDN-18)	1997 Indonesia Family Life Survey			x	x
	(IDN-19)	1997 National Socioeconomic Survey				x
	(IDN-20)	1997 Standard Demographic and Health Survey			x	x
	(IDN-21)	1998 National Socioeconomic Survey		x		x
	(IDN-22)	1999 Census		x		
	(IDN-23)	1999 National Socioeconomic Survey		x		x
	(IDN-24)	2000 Census			x	x
	(IDN-25)	2000 Indonesia Family Life Survey			x	x
	(IDN-26)	2000 National Socioeconomic Survey				x
	(IDN-27)	2001 National Socioeconomic Survey				x
	(IDN-28)	2002-03 Standard Demographic and Health Survey			x	x
	(IDN-29)	2002 National Socioeconomic Survey				x
	(IDN-30)	2003 National Socioeconomic Survey		x		x
	(IDN-31)	2004 National Socioeconomic Survey				x
	(IDN-32)	2005 Intercensal Population Survey			x	
	(IDN-33)	2005 National Socioeconomic Survey				x
	(IDN-34)	2006 National Socioeconomic Survey		x		x
	(IDN-35)	2007 Indonesia Family Life Survey			x	
	(IDN-36)	2007 National Socioeconomic Survey				x
	(IDN-37)	2007 Standard Demographic and Health Survey			x	x
	(IDN-38)	2008 Indonesia Family Life Survey				x
	(IDN-39)	2008 National Socioeconomic Survey				x
	(IDN-40)	2009 National Socioeconomic Survey				x
	(IDN-41)	2010 Census				x
	(IDN-42)	2010 National Socioeconomic Survey				x
	(IDN-43)	2011 National Socioeconomic Survey				x
	(IDN-44)	2012 Standard Demographic and Health Survey			x	x
Iran						
	(IRN-01)	1973-76 Baseline Population Growth Survey			x	x
	(IRN-02)	1974-75, 1978-87, 1991, 1996-10 Vital Registration	x			
	(IRN-03)	1974 Sample Survey on Population and Health			x	
	(IRN-04)	1984 Mortality and Fertility Survey			x	
	(IRN-05)	1986 Census				x
	(IRN-06)	1991-94 Intercensal Population Survey				x

	(IRN-07)	1994 Mortality and Fertility Survey			x	
	(IRN-08)	1996 Census				x
	(IRN-09)	1998 Measuring Population Growth Survey				x
	(IRN-10)	2000 Iran Demographic and Health Survey			x	x
	(IRN-11)	2006 Census				x
	(IRN-12)	2010 Standard Demographic and Health Survey			x	
Iraq						
	(IRQ-01)	1955, 1958-69, 1976-77, 1987-89, 2008 Vital Registration	x			
	(IRQ-02)	1973-75 Demographic Sample Survey and Sample Registration System	x			
	(IRQ-03)	1974 Fertility Survey				x
	(IRQ-04)	1987 Census				x
	(IRQ-05)	1989 Child Health Survey			x	x
	(IRQ-06)	1990 Iraq Immunization, Diarrhoeal Disease, Maternal and Childhood Mortality Survey				x
	(IRQ-07)	1991 Epidemiological Study of Child Mortality in Post-War Iraq			x	
	(IRQ-08)	1997 Census				x
	(IRQ-09)	1999 Iraq Child and Maternal Mortality Survey			x	
	(IRQ-10)	2004 Multiple Indicator Rapid Assessment		x	x	x
	(IRQ-11)	2006-07 Iraq Family Health Survey			x	x
	(IRQ-12)	2006 Multiple Indicator Cluster Survey			x	x
	(IRQ-13)	2011 Multiple Indicator Cluster Survey			x	x
Ireland						
	(IRL-01)	1950-10 Vital Registration	x			
	(IRL-02)	2011 Census		x		
Israel						
	(ISR-01)	1950-12 Vital Registration	x			
Italy						
	(ITA-01)	1950-10 Vital Registration	x			
Jamaica						
	(JAM-01)	1950-65, 1967, 1970-71, 1975, 1977, 1980-91, 1999-06 Vital Registration	x			
	(JAM-02)	1975-76 World Fertility Survey			x	x
	(JAM-03)	1982 Census				x
	(JAM-04)	1999 Multiple Indicator Cluster Survey				x
	(JAM-05)	2001 Census				x
	(JAM-06)	2005 Multiple Indicator Cluster Survey				x
	(JAM-07)	2008-09 Reproductive Health Survey			x	
Japan						
	(JPN-01)	1950-11 Vital Registration	x			
Jordan						
	(JOR-01)	1953-57, 1959-80, 2004-06, 2008-10 Vital Registration	x			
	(JOR-02)	1972 National Fertility Survey				x
	(JOR-03)	1976 World Fertility Survey				x
	(JOR-04)	1979 Census				x
	(JOR-05)	1981 Demographic Survey				x
	(JOR-06)	1983 Reproductive Health Survey (Report)			x	

	(JOR-07)	1988 Child Mortality Survey				x
	(JOR-08)	1990 Child Mortality Survey				x
	(JOR-09)	1990 Standard Demographic and Health Survey			x	x
	(JOR-10)	1994 Population and Housing Census Accompanying Survey			x	
	(JOR-11)	1995-96 Assessment of Causes of Death by Verbal Autopsy			x	
	(JOR-12)	1997 Standard Demographic and Health Survey			x	x
	(JOR-13)	1999 Annual Fertility Survey				x
	(JOR-14)	2002 Standard Demographic and Health Survey			x	x
	(JOR-15)	2007 Standard Demographic and Health Survey			x	x
	(JOR-16)	2009 Interim Demographic and Health Survey			x	x
	(JOR-17)	2012 Standard Demographic and Health Survey			x	x
Kazakhstan						
	(KAZ-01)	1981-82, 1985-10 Vital Registration	x			
	(KAZ-02)	1989 Census				x
	(KAZ-03)	1995 Standard Demographic and Health Survey			x	x
	(KAZ-04)	1996 Living Standards Measurement Study				x
	(KAZ-05)	1999 Census				x
	(KAZ-06)	1999 Standard Demographic and Health Survey			x	x
	(KAZ-07)	2006 Multiple Indicator Cluster Survey				x
	(KAZ-08)	2009 Census				x
	(KAZ-09)	2010 Multiple Indicator Cluster Survey				x
Kenya						
	(KEN-01)	1969 Census				x
	(KEN-02)	1977-78 World Fertility Survey			x	x
	(KEN-03)	1977 National Demographic Survey				x
	(KEN-04)	1979 Census				x
	(KEN-05)	1988-89 Standard Demographic and Health Survey			x	x
	(KEN-06)	1989 Census				x
	(KEN-07)	1993 Standard Demographic and Health Survey			x	x
	(KEN-08)	1998 Standard Demographic and Health Survey			x	x
	(KEN-09)	1999 Census				x
	(KEN-10)	2000 Multiple Indicator Cluster Survey				x
	(KEN-11)	2003 Standard Demographic and Health Survey			x	x
	(KEN-12)	2008-09 Standard Demographic and Health Survey			x	x
	(KEN-13)	2009 Census		x		x
Kiribati						
	(KIR-01)	1963 Census				x
	(KIR-02)	1968 Census				x
	(KIR-03)	1973 Census				x
	(KIR-04)	1978 Census				x
	(KIR-05)	1991-01 Vital Registration	x			
	(KIR-06)	2005 Census				x
Kuwait						
	(KWT-01)	1962-89, 1991-11 Vital Registration	x			
	(KWT-02)	1975 Census				x

	(KWT-03)	1980 Census				x
	(KWT-04)	1987 Child Health Survey				x
	(KWT-05)	1996 Gulf Family Health Survey			x	
Kyrgyzstan						
	(KGZ-01)	1981-11 Vital Registration	x			
	(KGZ-02)	1993 Living Standards Measurement Study				x
	(KGZ-03)	1997 Standard Demographic and Health Survey			x	x
	(KGZ-04)	1999 Census				x
	(KGZ-05)	2005-06 Multiple Indicator Cluster Survey				x
	(KGZ-06)	2009 Census				x
	(KGZ-07)	2012 Standard Demographic and Health Survey			x	x
Laos						
	(LAO-01)	1992-93 Living Conditions Survey				x
	(LAO-02)	1994-95 Fertility and Birth Spacing Survey			x	
	(LAO-03)	1995 Census				x
	(LAO-04)	2000 Lao Reproductive Health Survey			x	
	(LAO-05)	2011 Standard Demographic and Health Survey (Report)			x	
Latvia						
	(LVA-01)	1959-12 Vital Registration	x			
	(LVA-02)	1989 Census				x
Lebanon						
	(LBN-01)	1971 National Fertility and Family Planning Survey				x
	(LBN-02)	1996 Pan Arab Project for Child Development			x	x
	(LBN-03)	2000 Multiple Indicator Cluster Survey				x
	(LBN-04)	2004 Pan Arab Project for Family Health			x	x
Lesotho						
	(LSO-01)	1971 Demographic Survey				x
	(LSO-02)	1976 Census				x
	(LSO-03)	1977 World Fertility Survey			x	x
	(LSO-04)	1986 Census				x
	(LSO-05)	1996 Census				x
	(LSO-06)	2000 Multiple Indicator Cluster Survey				x
	(LSO-07)	2001 Demographic Survey				x
	(LSO-08)	2004-05 Standard Demographic and Health Survey			x	x
	(LSO-09)	2006 Census		x		
	(LSO-10)	2009-10 Standard Demographic and Health Survey			x	x
Liberia						
	(LBR-01)	1969-71 Population Growth Survey			x	x
	(LBR-02)	1974 Census				x
	(LBR-03)	1986 Standard Demographic and Health Survey			x	x
	(LBR-04)	2006-07 Standard Demographic and Health Survey			x	x
	(LBR-05)	2008-09 Malaria Indicator Survey			x	x
	(LBR-06)	2011 Malaria Indicator Survey				x
	(LBR-07)	2013 Standard Demographic and Health Survey (Report)			x	
Libya						

	(LBY-01)	1972-76, 1981, 1996, 2000, 2002, 2006-08 Vital Registration	x			
	(LBY-02)	1973 Census				x
	(LBY-03)	1995 Pan Arab Project for Child Development			x	x
Lithuania						
	(LTU-01)	1959-11 Vital Registration	x			
Luxembourg						
	(LUX-01)	1950-11 Vital Registration	x			
Macedonia						
	(MKD-01)	1982, 1989-11 Vital Registration	x			
	(MKD-02)	2005 Multiple Indicator Cluster Survey				x
	(MKD-03)	2011 Multiple Indicator Cluster Survey (Report)				x
Madagascar						
	(MDG-01)	1955, 1957-61, 1964-68, 1970-72 Vital Registration	x			
	(MDG-02)	1966 Demographic Survey				x
	(MDG-03)	1992 Standard Demographic and Health Survey			x	x
	(MDG-04)	1993 Census		x		
	(MDG-05)	1997 Standard Demographic and Health Survey			x	x
	(MDG-06)	2000 Multiple Indicator Cluster Survey				x
	(MDG-07)	2003-04 Standard Demographic and Health Survey			x	x
	(MDG-08)	2008-09 Standard Demographic and Health Survey			x	x
	(MDG-09)	2011 Malaria Indicator Survey				x
	(MDG-10)	2013 Malaria Indicator Survey				x
Malawi						
	(MWI-01)	1970-72 Population Change Survey		x	x	x
	(MWI-02)	1977 Census		x		x
	(MWI-03)	1982 Demographic Survey				x
	(MWI-04)	1987 Census		x		x
	(MWI-05)	1992 Standard Demographic and Health Survey			x	x
	(MWI-06)	1995 Multiple Indicator Cluster Survey (Report)				x
	(MWI-07)	1998 Census		x		x
	(MWI-08)	2000 Standard Demographic and Health Survey			x	x
	(MWI-09)	2004-05 Standard Demographic and Health Survey			x	x
	(MWI-10)	2006 Multiple Indicator Cluster Survey				x
	(MWI-11)	2008 Census		x		x
	(MWI-12)	2008 Global Fund Facility Survey			x	
	(MWI-13)	2010 Standard Demographic and Health Survey			x	x
	(MWI-14)	2012 Malaria Indicator Survey				x
Malaysia						
	(MYS-01)	1952-72, 1976-78, 1984-86, 1990-09 Vital Registration	x			
	(MYS-02)	1970 Census				x
	(MYS-03)	1974 World Fertility Survey			x	x
	(MYS-04)	1980 Census				x
Maldives						
	(MDV-01)	1974-76, 1978-11 Vital Registration	x			
	(MDV-02)	1977 Census				x

	(MDV-03)	1985 Census				x
	(MDV-04)	1990 Census				x
	(MDV-05)	1995 Census				x
	(MDV-06)	2000 Census				x
	(MDV-07)	2009 Standard Demographic and Health Survey			x	x
Mali						
	(MLI-01)	1976 Census		x		
	(MLI-02)	1987 Census		x		x
	(MLI-03)	1987 Standard Demographic and Health Survey			x	x
	(MLI-04)	1995-96 Standard Demographic and Health Survey			x	x
	(MLI-05)	1998 Census		x		x
	(MLI-06)	2001 Standard Demographic and Health Survey			x	x
	(MLI-07)	2006 Standard Demographic and Health Survey			x	x
	(MLI-08)	2012 Standard Demographic and Health Survey (Report)			x	
Malta						
	(MLT-01)	1950-11 Vital Registration	x			
Marshall Islands						
	(MHL-01)	1986-97, 2005-06 Vital Registration	x			
	(MHL-02)	1999 Census				x
	(MHL-03)	2006-07 Standard Demographic and Health Survey (Report)			x	
Mauritania						
	(MRT-01)	1981 World Fertility Survey			x	x
	(MRT-02)	1988 Census			x	
	(MRT-03)	1990-91 Pan Arab Project for Child Development			x	x
	(MRT-04)	2000-01 Standard Demographic and Health Survey			x	x
	(MRT-05)	2003-04 Special Demographic and Health Survey			x	x
	(MRT-06)	2007 Multiple Indicator Cluster Survey				x
Mauritius						
	(MUS-01)	1950-11 Vital Registration	x			
Mexico						
	(MEX-01)	1950-12 Vital Registration	x			
	(MEX-02)	1976-77 World Fertility Survey			x	x
	(MEX-03)	1979 National Planning Survey on Contraceptive Use				x
	(MEX-04)	1980 Census				x
	(MEX-05)	1987 Standard Demographic and Health Survey			x	x
	(MEX-06)	1990 Census				x
	(MEX-07)	1992 National Survey of Demographic Dynamics			x	x
	(MEX-08)	2000 Census				x
	(MEX-09)	2005 Conteo				x
	(MEX-10)	2006 National Survey of Demographic Dynamics				x
	(MEX-11)	2010 Household Income and Expenditure Survey				x
Moldova						
	(MDA-01)	1981-82, 1985-12 Vital Registration	x			
	(MDA-02)	1989 Census				x
	(MDA-03)	1997 Reproductive Health Survey				x

	(MDA-04)	2005 Standard Demographic and Health Survey			x	x
Mongolia						
	(MNG-01)	1965, 1970, 1975, 1980, 1985, 1987-90, 1994-10 Vital Registration	x			
	(MNG-02)	1989 Census				x
	(MNG-03)	1994 Demographic Survey				x
	(MNG-04)	1998 Reproductive Health Survey			x	x
	(MNG-05)	2000 Multiple Indicator Cluster Survey				x
	(MNG-06)	2003 Reproductive Health Survey			x	x
	(MNG-07)	2005 Multiple Indicator Cluster Survey				x
	(MNG-08)	2008 Reproductive Health Survey				x
	(MNG-09)	2010 Multiple Indicator Cluster Survey				x
Montenegro						
	(MNE-01)	1961 Census		x		
	(MNE-02)	1971 Census		x		
	(MNE-03)	1981 Census		x		
	(MNE-04)	1991 Census		x		
	(MNE-05)	1995-09, 2011 Vital Registration	x			
Morocco						
	(MAR-01)	1980 World Fertility Survey			x	x
	(MAR-02)	1982 Census				x
	(MAR-03)	1983 Contraceptive Prevalence Survey				x
	(MAR-04)	1987 Standard Demographic and Health Survey			x	x
	(MAR-05)	1989-91, 1993, 1995-97, 1999, 2001, 2005, 2007-08, 2011 Vital Registration	x			
	(MAR-06)	1992 Standard Demographic and Health Survey			x	x
	(MAR-07)	1994 Census				x
	(MAR-08)	1995 Special Demographic and Health Survey			x	x
	(MAR-09)	1996-97 Pan Arab Project for Child Development			x	x
	(MAR-10)	2003-04 Standard Demographic and Health Survey			x	x
	(MAR-11)	2004 Census				x
	(MAR-12)	2009 Multi-Round Demographic Survey		x		
	(MAR-13)	2011 National Survey on Population and Family Health			x	
Mozambique						
	(MOZ-01)	1970 Census				x
	(MOZ-02)	1980 Census				x
	(MOZ-03)	1995 Multiple Indicator Cluster Survey (Report)				x
	(MOZ-04)	1997 Census		x		x
	(MOZ-05)	1997 Standard Demographic and Health Survey			x	x
	(MOZ-06)	2003 Standard Demographic and Health Survey			x	x
	(MOZ-07)	2007 Census		x		x
	(MOZ-08)	2008 Multiple Indicator Cluster Survey			x	x
	(MOZ-09)	2009 AIDS Indicator Survey				x
	(MOZ-10)	2011 Standard Demographic and Health Survey			x	x
Myanmar						
	(MMR-01)	1983 Census				x
	(MMR-02)	1991 Population Changes and Fertility Survey		x	x	

	(MMR-03)	1997 Fertility and Reproductive Health Survey			x	x
	(MMR-04)	1999 National Mortality Survey			x	
	(MMR-05)	2001 Fertility and Reproductive Health Survey		x		x
	(MMR-06)	2003 Overall and Cause-Specific Under-Five Mortality Survey		x		
	(MMR-07)	2005 Vital Registration	x			
	(MMR-08)	2007 Fertility and Reproductive Health Survey				x
	(MMR-09)	2010 Multiple Indicator Cluster Survey			x	
Namibia						
	(NAM-01)	1991 Census				x
	(NAM-02)	1992 Standard Demographic and Health Survey			x	x
	(NAM-03)	2000 Standard Demographic and Health Survey			x	x
	(NAM-04)	2001 Census		x		
	(NAM-05)	2006-07 Standard Demographic and Health Survey			x	x
Nepal						
	(NPL-01)	1971 Census				x
	(NPL-02)	1976 World Fertility Survey			x	x
	(NPL-03)	1981 Census				x
	(NPL-04)	1985-86 Fertility and Family Planning Survey				x
	(NPL-05)	1991 Census				x
	(NPL-06)	1991 Fertility, Family Planning and Health Survey			x	x
	(NPL-07)	1996 Standard Demographic and Health Survey			x	x
	(NPL-08)	2001 Census		x		x
	(NPL-09)	2001 Standard Demographic and Health Survey			x	x
	(NPL-10)	2006 Standard Demographic and Health Survey			x	x
	(NPL-11)	2011 Standard Demographic and Health Survey			x	x
Netherlands						
	(NLD-01)	1950-11 Vital Registration	x			
New Zealand						
	(NZL-01)	1950-11 Vital Registration	x			
Nicaragua						
	(NIC-01)	1950-65, 1968-69, 1973-78, 1987-94, 1996-11 Vital Registration	x			
	(NIC-02)	1971 Census				x
	(NIC-03)	1977-78 National Retrospective Demographic Survey				x
	(NIC-04)	1985-86 Socio-Demographic Survey				x
	(NIC-05)	1992-93 Reproductive Health Survey			x	x
	(NIC-06)	1993 Living Standards Measurement Study				x
	(NIC-07)	1995 Census				x
	(NIC-08)	1997-98 Standard Demographic and Health Survey			x	x
	(NIC-09)	2001 Living Standards Measurement Study				x
	(NIC-10)	2001 Standard Demographic and Health Survey			x	x
	(NIC-11)	2005 Census				x
	(NIC-12)	2005 Living Standards Measurement Study				x
	(NIC-13)	2006-07 Reproductive Health Survey			x	x
Niger						
	(NER-01)	1992 Standard Demographic and Health Survey			x	x

	(NER-02)	1996 Multiple Indicator Cluster Survey (Report)				x
	(NER-03)	1998 Standard Demographic and Health Survey			x	x
	(NER-04)	2000 Multiple Indicator Cluster Survey				x
	(NER-05)	2006 Standard Demographic and Health Survey			x	x
	(NER-06)	2012 Standard Demographic and Health Survey			x	x
Nigeria						
	(NGA-01)	1981-82 World Fertility Survey				x
	(NGA-02)	1990 Standard Demographic and Health Survey			x	x
	(NGA-03)	1999 Standard Demographic and Health Survey (Report)			x	
	(NGA-04)	2003 Standard Demographic and Health Survey			x	x
	(NGA-05)	2007 General Household Survey		x		x
	(NGA-06)	2007 Multiple Indicator Cluster Survey				x
	(NGA-07)	2007 Vital Registration	x			
	(NGA-08)	2008 Standard Demographic and Health Survey			x	x
	(NGA-09)	2010 Malaria Indicator Survey			x	x
	(NGA-10)	2011 Multiple Indicator Cluster Survey				x
	(NGA-11)	2013 Standard Demographic and Health Survey (Report)			x	
North Korea						
	(PRK-01)	1993 Census		x		
	(PRK-02)	2008 Census		x		
Norway						
	(NOR-01)	1950-12 Vital Registration	x			
Oman						
	(OMN-01)	1975 Sociodemographic Survey in 5 Towns				x
	(OMN-02)	1977-79 Sociodemographic Survey in 11 Towns				x
	(OMN-03)	1988-89 Oman Child Health Survey			x	x
	(OMN-04)	1993 Census				x
	(OMN-05)	1995 Gulf Family Health Survey			x	
	(OMN-06)	2001, 2003-04, 2007 Vital Registration	x			
Pakistan						
	(PAK-01)	1962-65 Population Growth Estimation Experiment		x		
	(PAK-02)	1968, 1976-79, 1984-93, 1997, 2001 Population Growth Survey	x			
	(PAK-03)	1973 Housing, Economic, Demographic Characteristics Survey				x
	(PAK-04)	1975 World Fertility Survey			x	x
	(PAK-05)	1981 Census				x
	(PAK-06)	1984-85 Contraceptive Prevalence Survey				x
	(PAK-07)	1990-91 Standard Demographic and Health Survey			x	x
	(PAK-08)	1991 Demographic Survey		x		
	(PAK-09)	1991 Living Standards Measurement Study			x	x
	(PAK-10)	1992 Demographic Survey		x		
	(PAK-11)	1995 Demographic Survey		x		
	(PAK-12)	1995, 1999 Population Growth Survey (Report)	x			
	(PAK-13)	1996 Demographic Survey		x		
	(PAK-14)	1996 Fertility and Planning Survey			x	x
	(PAK-15)	1997 Demographic Survey		x		

	(PAK-16)	1998-99 Integrated Household Survey				x
	(PAK-17)	1999 Demographic Survey		x		
	(PAK-18)	2000 Reproductive Health and Family Planning Survey			x	
	(PAK-19)	2001-02 Integrated Household Survey				x
	(PAK-20)	2003, 2005, 2007 Demographic Survey	x			
	(PAK-21)	2005-06 Social and Living Standards Measurement Survey				x
	(PAK-22)	2006-07 Standard Demographic and Health Survey			x	x
	(PAK-23)	2006 Demographic Survey (Report)	x			
	(PAK-24)	2007-08 Social and Living Standards Measurement Survey				x
	(PAK-25)	2012-13 Standard Demographic and Health Survey			x	x
Palestine						
	(PSE-01)	1995 Demographic Survey			x	
	(PSE-02)	1997 Census				x
	(PSE-03)	1999-2003 Demographic and Health Survey			x	
	(PSE-04)	2000 Palestine Health Survey			x	
	(PSE-05)	2000, 2002-04, 2006-09 Vital Registration	x			
	(PSE-06)	2006 Pan Arab Project for Family Health			x	
	(PSE-07)	2007 Census				x
	(PSE-08)	2010 Multiple Indicator Cluster Survey (Report)			x	
Panama						
	(PAN-01)	1950, 1952-10 Vital Registration	x			
	(PAN-02)	1960 Census				x
	(PAN-03)	1975-76 World Fertility Survey			x	x
	(PAN-04)	1975-77 National Demographic Survey			x	x
	(PAN-05)	1980 Census				x
	(PAN-06)	1990 Census				x
	(PAN-07)	1997 Living Standards Measurement Study				x
	(PAN-08)	2000 Census		x		x
	(PAN-09)	2003 Living Standards Measurement Study				x
Papua New Guinea						
	(PNG-01)	1971 Census				x
	(PNG-02)	1977, 1980 Vital Registration	x			
	(PNG-03)	1980 Census				x
	(PNG-04)	1991 Demographic and Health Survey (Report)				x
	(PNG-05)	1996 Demographic and Health Survey (Report)			x	x
	(PNG-06)	2006 Demographic and Health Survey (Report)			x	
Paraguay						
	(PRY-01)	1950-92, 1994-10 Vital Registration	x			
	(PRY-02)	1972 Census				x
	(PRY-03)	1977 National Demographic Survey				x
	(PRY-04)	1979 World Fertility Survey				x
	(PRY-05)	1982 Census				x
	(PRY-06)	1990 Standard Demographic and Health Survey			x	x
	(PRY-07)	1992 Census				x
	(PRY-08)	1995-96 Reproductive Health Survey			x	x

	(PRY-09)	1997 Integrated Household Survey				x
	(PRY-10)	1998 Reproductive Health Survey			x	x
	(PRY-11)	2000 Integrated Household Survey				x
	(PRY-12)	2002 Census				x
	(PRY-13)	2004 Reproductive Health Survey			x	x
	(PRY-14)	2008 Reproductive Health Survey			x	x
Peru						
	(PER-01)	1950-64, 1966-73, 1975-92, 1994-10 Vital Registration	x			
	(PER-02)	1972 Census				x
	(PER-03)	1974-76 National Demographic Survey			x	x
	(PER-04)	1977-78 World Fertility Survey			x	x
	(PER-05)	1981 Census				x
	(PER-06)	1981 National Survey of Contraceptive Prevalence				x
	(PER-07)	1985 Living Standards Measurement Study				x
	(PER-08)	1986 Standard Demographic and Health Survey			x	x
	(PER-09)	1991-92 Standard Demographic and Health Survey			x	x
	(PER-10)	1993 Census				x
	(PER-11)	1994 Living Standards Measurement Study				x
	(PER-12)	1996 Standard Demographic and Health Survey			x	x
	(PER-13)	2000 Standard Demographic and Health Survey			x	x
	(PER-14)	2004 Continuous Demographic and Health Survey			x	x
	(PER-15)	2005 Continuous Demographic and Health Survey			x	x
	(PER-16)	2006 Continuous Demographic and Health Survey			x	x
	(PER-17)	2007 Census				x
	(PER-18)	2007 Continuous Demographic and Health Survey			x	x
	(PER-19)	2008 Continuous Demographic and Health Survey			x	x
	(PER-20)	2009 Continuous Demographic and Health Survey			x	x
	(PER-21)	2010 Continuous Demographic and Health Survey			x	x
	(PER-22)	2011 Continuous Demographic and Health Survey			x	x
	(PER-23)	2012 Continuous Demographic and Health Survey			x	x
Philippines						
	(PHL-01)	1950-53, 1956-05, 2008-09 Vital Registration	x			
	(PHL-02)	1958 Philippine Statistical Sample Survey of Private Households				x
	(PHL-03)	1970 Census				x
	(PHL-04)	1978 World Fertility Survey			x	x
	(PHL-05)	1980 Census				x
	(PHL-06)	1990 Census				x
	(PHL-07)	1993 Standard Demographic and Health Survey			x	x
	(PHL-08)	1998 Standard Demographic and Health Survey			x	x
	(PHL-09)	2003 Standard Demographic and Health Survey			x	x
	(PHL-10)	2008 Standard Demographic and Health Survey			x	x
Poland						
	(POL-01)	1950-11 Vital Registration	x			
	(POL-02)	1970 Census				x
Portugal						

	(PRT-01)	1950-11 Vital Registration	x			
	(PRT-02)	1979-80 World Fertility Survey			x	x
Qatar						
	(QAT-01)	1981-90, 1992-97, 1999-11 Vital Registration	x			
	(QAT-02)	1987 Child Health Survey			x	x
	(QAT-03)	1998 Gulf Family Health Survey			x	
Romania						
	(ROU-01)	1956-11 Vital Registration	x			
	(ROU-02)	1966 Census				x
	(ROU-03)	1977 Census				x
	(ROU-04)	1994 Living Standards Measurement Study			x	x
	(ROU-05)	1999 Reproductive Health Survey			x	
Russia						
	(RUS-01)	1959-11 Vital Registration	x			
	(RUS-02)	1989 Census				x
Rwanda						
	(RWA-01)	1970 Sample Survey				x
	(RWA-02)	1978 Census				x
	(RWA-03)	1983 World Fertility Survey			x	x
	(RWA-04)	1991 Census				x
	(RWA-05)	1992 Standard Demographic and Health Survey			x	x
	(RWA-06)	1996 Socio-Demographic Survey				x
	(RWA-07)	2000 Standard Demographic and Health Survey			x	x
	(RWA-08)	2002 Census		x		x
	(RWA-09)	2005 Standard Demographic and Health Survey			x	x
	(RWA-10)	2006 Integrated Living Conditions Survey				x
	(RWA-11)	2007-08 Interim Demographic and Health Survey			x	x
	(RWA-12)	2010-11 Standard Demographic and Health Survey			x	x
Saint Lucia						
	(LCA-01)	1950-61, 1963, 1968, 1972-06, 2008 Vital Registration	x			
Saint Vincent and the Grenadines						
	(VCT-01)	1950-56, 1960-64, 1970-72, 1974, 1977-80, 1982-88, 1990, 1992, 1995-10 Vital Registration	x			
Samoa						
	(WSM-01)	1955-69, 1973-76, 1978, 1980 Vital Registration	x			
	(WSM-02)	1956 Census				x
	(WSM-03)	1961 Census				x
	(WSM-04)	1966 Census				x
	(WSM-05)	1976 Census				x
	(WSM-06)	1981 Census				x
	(WSM-07)	1999 Secretariat of the Pacific Community Demographic and Health Survey			x	
	(WSM-08)	2006 Census		x		
	(WSM-09)	2009 Standard Demographic and Health Survey (Report)			x	
	(WSM-10)	2011 Census		x		
Sao Tome and Principe						

	(STP-01)	1955-58, 1962-71, 1977-79, 1984-85, 1987 Vital Registration	x			
	(STP-02)	1981 Census				x
	(STP-03)	1991 Census				x
	(STP-04)	2000 Multiple Indicator Cluster Survey				x
	(STP-05)	2006 Multiple Indicator Cluster Survey				x
	(STP-06)	2008-09 Standard Demographic and Health Survey			x	x
Saudi Arabia						
	(SAU-01)	1987-88 Child Health Survey				x
	(SAU-02)	1990 Levels, Trends and Differentials of Infant and Child Mortality				x
	(SAU-03)	1996 Gulf Family Health Survey			x	
	(SAU-04)	2004 Census		x		
	(SAU-05)	2007 Saudi Arabia Demographic Research Bulletin		x		
	(SAU-06)	2012 Vital Registration	x			
Senegal						
	(SEN-01)	1978 World Fertility Survey			x	x
	(SEN-02)	1986 Standard Demographic and Health Survey			x	x
	(SEN-03)	1992-93 Standard Demographic and Health Survey			x	x
	(SEN-04)	1996 Multiple Indicator Cluster Survey			x	
	(SEN-05)	1997 Standard Demographic and Health Survey			x	x
	(SEN-06)	2000 Multiple Indicator Cluster Survey		x		
	(SEN-07)	2002 Census		x		
	(SEN-08)	2005 Standard Demographic and Health Survey			x	x
	(SEN-09)	2006 Malaria Indicator Survey			x	x
	(SEN-10)	2008-09 Malaria Indicator Survey			x	x
	(SEN-11)	2010-11 Standard Demographic and Health Survey			x	x
	(SEN-12)	2013 Standard Demographic and Health Survey				x
Serbia						
	(SRB-01)	1953 Census		x		
	(SRB-02)	1961 Census		x		
	(SRB-03)	1971 Census		x		
	(SRB-04)	1991 Census		x		
	(SRB-05)	1995-12 Vital Registration	x			
	(SRB-06)	2005-06 Multiple Indicator Cluster Survey				x
	(SRB-07)	2010 Multiple Indicator Cluster Survey				x
Seychelles						
	(SYC-01)	1952-57, 1959, 1961-96, 1998-12 Vital Registration	x			
	(SYC-02)	1960 Census		x		x
	(SYC-03)	1971 Census				x
Sierra Leone						
	(SLE-01)	1973 Census				x
	(SLE-02)	1974 Census				x
	(SLE-03)	1985 Census				x
	(SLE-04)	2000 Multiple Indicator Cluster Survey				x
	(SLE-05)	2004 Census		x		x
	(SLE-06)	2005 Multiple Indicator Cluster Survey				x

	(SLE-07)	2008 Standard Demographic and Health Survey			x	x
	(SLE-08)	2010 Multiple Indicator Cluster Survey				x
Singapore						
	(SGP-01)	1950-11 Vital Registration	x			
Slovakia						
	(SVK-01)	1950-11 Vital Registration	x			
Slovenia						
	(SVN-01)	1982-11 Vital Registration	x			
Solomon Islands						
	(SLB-01)	1970 Census				x
	(SLB-02)	1976 Census				x
	(SLB-03)	1999 Census			x	x
	(SLB-04)	2006-07 Standard Demographic and Health Survey (Report)			x	
Somalia						
	(SOM-01)	1999 Multiple Indicator Cluster Survey				x
	(SOM-02)	2006 Multiple Indicator Cluster Survey			x	x
South Africa						
	(ZAF-01)	1980-82, 1993-10 Vital Registration	x			
	(ZAF-02)	1990 Survey Conducted by Human Sciences Research Council		x		
	(ZAF-03)	1993 Living Standards Measurement Study				x
	(ZAF-04)	1993 October Household Survey		x		
	(ZAF-05)	1995 October Household Survey		x		
	(ZAF-06)	1996 Census				x
	(ZAF-07)	1996 October Household Survey		x		
	(ZAF-08)	1997 October Household Survey		x		
	(ZAF-09)	1998 October Household Survey		x		
	(ZAF-10)	1998 Standard Demographic and Health Survey			x	x
	(ZAF-11)	2001 Census		x		x
	(ZAF-12)	2003 Standard Demographic and Health Survey (Report)			x	
	(ZAF-13)	2007 Community Survey		x		x
	(ZAF-14)	2011 Census		x		
	(ZAF-15)	2012 Rapid Mortality Surveillance Report	x			
South Korea						
	(KOR-01)	1957, 1960, 1962-64, 1966-67, 1977-11 Vital Registration	x			
	(KOR-02)	1970 Census				x
	(KOR-03)	1974 World Fertility Survey			x	x
	(KOR-04)	1975 Census				x
	(KOR-05)	1980 Census				x
	(KOR-06)	1985 Census				x
	(KOR-07)	1990 Census				x
South Sudan						
	(SSD-01)	2008 Census				x
	(SSD-02)	2008 Survey		x		
	(SSD-03)	2010 Household Health Survey				x
Spain						

	(ESP-01)	1950-11 Vital Registration	x			
Sri Lanka						
	(LKA-01)	1950-89, 1991-95, 2004-07 Vital Registration	x			
	(LKA-02)	1971 Census				x
	(LKA-03)	1975 World Fertility Survey			x	x
	(LKA-04)	1987 Standard Demographic and Health Survey			x	x
	(LKA-05)	1993 Demographic and Health Survey (Report)			x	
	(LKA-06)	2000 Demographic and Health Survey (Report)			x	
	(LKA-07)	2001 Census				x
	(LKA-08)	2006-2007 Standard Demographic and Health Survey (Report)			x	
Sudan						
	(SDN-01)	1973 Census				x
	(SDN-02)	1978-79 World Fertility Survey			x	
	(SDN-03)	1983 Census				x
	(SDN-04)	1989-90 Standard Demographic and Health Survey			x	x
	(SDN-05)	1992-93 Pan Arab Project for Child Development			x	x
	(SDN-06)	1993 Census				x
	(SDN-07)	1999 Safe Motherhood Survey			x	
	(SDN-08)	2000 Multiple Indicator Cluster Survey (Report)				x
	(SDN-09)	2006 Pan Arab Project Family Health			x	
	(SDN-10)	2008 Census		x		x
	(SDN-11)	2010 Multiple Indicator Cluster Survey			x	
Suriname						
	(SUR-01)	1950-57, 1961-66, 1971-73, 1975-82, 1984-09 Vital Registration	x			
	(SUR-02)	1999-00 Multiple Indicator Cluster Survey				x
	(SUR-03)	2006 Multiple Indicator Cluster Survey				x
Swaziland						
	(SWZ-01)	1966 Census				x
	(SWZ-02)	1976 Census				x
	(SWZ-03)	1986 Census				x
	(SWZ-04)	1997 Census		x		
	(SWZ-05)	2000 Multiple Indicator Cluster Survey				x
	(SWZ-06)	2006-07 Standard Demographic and Health Survey			x	x
	(SWZ-07)	2007 Census		x		
	(SWZ-08)	2010 Multiple Indicator Cluster Survey			x	x
Sweden						
	(SWE-01)	1950-11 Vital Registration	x			
Switzerland						
	(CHE-01)	1950-11 Vital Registration	x			
	(CHE-02)	1960 Census				x
Syria						
	(SYR-01)	1964-78, 1983-85, 2005-07 Vital Registration	x			
	(SYR-02)	1970 Census				x
	(SYR-03)	1976 Sample Population Census				x
	(SYR-04)	1978 World Fertility Survey			x	x

	(SYR-05)	1981 Census				x
	(SYR-06)	1990 Syria EPI/CDD and Child Mortality Survey				x
	(SYR-07)	1993 Pan Arab Project for Child Development			x	x
	(SYR-08)	1994 Census				x
	(SYR-09)	1999 Multi-Purpose Survey		x		
	(SYR-10)	2000 Multiple Indicator Cluster Survey (Report)		x		
	(SYR-11)	2001 Pan Arab Project for Family Health			x	x
	(SYR-12)	2006 Multiple Indicator Cluster Survey				x
Taiwan						
	(TWN-01)	1955-12 Vital Registration	x			
Tajikistan						
	(TJK-01)	1981-82, 1985-05, 2007-08, 2011 Vital Registration	x			
	(TJK-02)	1989 Census				x
	(TJK-03)	1999 Living Standards Measurement Study				x
	(TJK-04)	2000 Multiple Indicator Cluster Survey				x
	(TJK-05)	2002 Demographic Survey			x	x
	(TJK-06)	2003 Living Standards Measurement Study				x
	(TJK-07)	2005 Multiple Indicator Cluster Survey				x
	(TJK-08)	2007 Living Standards Measurement Study			x	x
	(TJK-09)	2010 Survey on Infant Child and Maternal Mortality			x	
	(TJK-10)	2012 Standard Demographic and Health Survey			x	x
Tanzania						
	(TZA-01)	1967 Census		x		
	(TZA-02)	1973 National Demographic Survey of Tanzania		x		
	(TZA-03)	1978 Census				x
	(TZA-04)	1988 Census				x
	(TZA-05)	1991-92 Standard Demographic and Health Survey			x	x
	(TZA-06)	1993 Living Standards Measurement Study				x
	(TZA-07)	1996 Standard Demographic and Health Survey			x	x
	(TZA-08)	1999 Standard Demographic and Health Survey			x	x
	(TZA-09)	2002 Census		x		x
	(TZA-10)	2003-04 AIDS Indicator Survey			x	x
	(TZA-11)	2004-05 Standard Demographic and Health Survey			x	x
	(TZA-12)	2007-08 AIDS Indicator Survey			x	x
	(TZA-13)	2009-10 Standard Demographic and Health Survey			x	x
	(TZA-14)	2011-12 AIDS Indicator Survey			x	x
Thailand						
	(THA-01)	1950-00, 2002-09 Vital Registration	x			
	(THA-02)	1970 Census				x
	(THA-03)	1975 World Fertility Survey			x	x
	(THA-04)	1980 Census				x
	(THA-05)	1987 Standard Demographic and Health Survey			x	x
	(THA-06)	1989 Survey of Population Change				x
	(THA-07)	1990 Census				x
	(THA-08)	1995 Survey of Population Change			x	

	(THA-09)	2000 Census				x
	(THA-10)	2005-06 Multiple Indicator Cluster Survey				x
The Bahamas						
	(BHS-01)	1965, 1967-69, 1971-08 Vital Registration	x			
The Gambia						
	(GMB-01)	1973 Census				x
	(GMB-02)	1983 Census				x
	(GMB-03)	1990 Contraceptive Prevalence and Fertility Determinants Survey			x	
	(GMB-04)	1993 Census				x
	(GMB-05)	2000 Multiple Indicator Cluster Survey				x
	(GMB-06)	2005-06 Multiple Indicator Cluster Survey				x
	(GMB-07)	2010 Multiple Indicator Cluster Survey (Report)				x
	(GMB-08)	2013 Standard Demographic and Health Survey (Report)			x	
Timor-Leste						
	(TLS-01)	1991 Standard Demographic and Health Survey			x	x
	(TLS-02)	1994 Standard Demographic and Health Survey			x	x
	(TLS-03)	1997 Standard Demographic and Health Survey			x	x
	(TLS-04)	2001 Living Standards Measurement Study				x
	(TLS-05)	2003 Standard Demographic and Health Survey				x
	(TLS-06)	2004 Census				x
	(TLS-07)	2009-10 Standard Demographic and Health Survey			x	x
Togo						
	(TGO-01)	1961 Census				x
	(TGO-02)	1961 Demographic Survey		x		
	(TGO-03)	1971 Demographic Survey				x
	(TGO-04)	1988 Standard Demographic and Health Survey			x	x
	(TGO-05)	1998 Standard Demographic and Health Survey			x	x
	(TGO-06)	2006 Multiple Indicator Cluster Survey				x
	(TGO-07)	2010 Multiple Indicator Cluster Survey				x
Tonga						
	(TON-01)	1957-64, 1966, 1982-83, 1990, 2003-04 Vital Registration	x			
	(TON-02)	1966 Census				x
	(TON-03)	1976 Census				x
	(TON-04)	1986 Census				x
	(TON-05)	2006 Census		x		
Trinidad and Tobago						
	(TTO-01)	1950-08 Vital Registration	x			
	(TTO-02)	1977 World Fertility Survey			x	x
	(TTO-03)	1987 Standard Demographic and Health Survey			x	x
	(TTO-04)	2000 Multiple Indicator Cluster Survey				x
	(TTO-05)	2006 Multiple Indicator Cluster Survey				x
Tunisia						
	(TUN-01)	1960, 1968-74, 1976-80, 1987-89, 1993-95, 1998 Vital Registration	x			
	(TUN-02)	1968-69 National Demographic Survey			x	
	(TUN-03)	1975 Census				x

	(TUN-04)	1978 World Fertility Survey			x	x
	(TUN-05)	1983 Contraceptive Prevalence Survey				x
	(TUN-06)	1984 Census				x
	(TUN-07)	1988 Standard Demographic and Health Survey			x	x
	(TUN-08)	1994-95 Pan Arab Project for Child Development			x	x
	(TUN-09)	2002 Pan Arab Project for Family Health			x	x
	(TUN-10)	2011-12 Multiple Indicator Cluster Survey			x	x
Turkey						
	(TUR-01)	1966-67 Demographic Survey		x	x	x
	(TUR-02)	1970 Census				x
	(TUR-03)	1975 Census				x
	(TUR-04)	1978-79, 1981-84, 1987-11 Vital Registration	x			
	(TUR-05)	1978 World Fertility Survey			x	x
	(TUR-06)	1980 Census				x
	(TUR-07)	1983 Population and Health Survey				x
	(TUR-08)	1985 Census				x
	(TUR-09)	1988 Population and Health Survey			x	x
	(TUR-10)	1989 Demographic Survey (Report)		x		x
	(TUR-11)	1990 Census				x
	(TUR-12)	1993 Standard Demographic and Health Survey			x	x
	(TUR-13)	1998 Standard Demographic and Health Survey			x	x
	(TUR-14)	2000 Census				x
	(TUR-15)	2003-04 Standard Demographic and Health Survey			x	x
	(TUR-16)	2008 Demographic and Health Survey				x
	(TUR-17)	2011 Infant Mortality Survey				x
Turkmenistan						
	(TKM-01)	1981-82, 1985-06 Vital Registration	x			
	(TKM-02)	2000 Standard Demographic and Health Survey			x	x
Uganda						
	(UGA-01)	1969 Census				x
	(UGA-02)	1988-89 Standard Demographic and Health Survey			x	x
	(UGA-03)	1991 Census				x
	(UGA-04)	1992 National Integrated Household Survey				x
	(UGA-05)	1995 Standard Demographic and Health Survey			x	x
	(UGA-06)	2000-01 Standard Demographic and Health Survey			x	x
	(UGA-07)	2002 Census		x		x
	(UGA-08)	2004 AIDS Indicator Survey				x
	(UGA-09)	2006 Standard Demographic and Health Survey			x	x
	(UGA-10)	2009-10 Malaria Indicator Survey			x	x
	(UGA-11)	2011 AIDS Indicator Survey				x
	(UGA-12)	2011 Standard Demographic and Health Survey			x	x
Ukraine						
	(UKR-01)	1959-12 Vital Registration	x			
	(UKR-02)	1989 Census				x
	(UKR-03)	1999 Reproductive Health Survey			x	

	(UKR-04)	2001 Census				x
	(UKR-05)	2005 Multiple Indicator Cluster Survey				x
	(UKR-06)	2007 Standard Demographic and Health Survey			x	x
	(UKR-07)	2012 Multiple Indicator Cluster Survey				x
United Arab Emirates						
	(ARE-01)	1975 Census				x
	(ARE-02)	1980 Census				x
	(ARE-03)	1987-88 Child Health Survey				x
	(ARE-04)	1995 Gulf Family Health Survey			x	
	(ARE-05)	1998 United Arab Emirates Ministry of Planning Survey		x		
	(ARE-06)	2004 United Arab Emirates Ministry of Planning Survey		x		
	(ARE-07)	2004 Vital Registration	x			
	(ARE-08)	2006 United Arab Emirates Ministry of Planning Survey		x		
United Kingdom						
	(GBR-01)	1950-11 Vital Registration	x			
United States						
	(USA-01)	1950-10 Vital Registration	x			
	(USA-02)	2011 Vital Registration (Report)	x			
Uruguay						
	(URY-01)	1950-04, 2007-09 Vital Registration	x			
	(URY-02)	1975 Census				x
	(URY-03)	1985 Census				x
	(URY-04)	1996 Census				x
Uzbekistan						
	(UZB-01)	1981-82, 1985-06 Vital Registration	x			
	(UZB-02)	1996 Standard Demographic and Health Survey			x	x
	(UZB-03)	2000 Multiple Indicator Cluster Survey				x
	(UZB-04)	2002 Special Demographic and Health Survey			x	x
	(UZB-05)	2006 Multiple Indicator Cluster Survey				x
Vanuatu						
	(VUT-01)	1967 Census				x
	(VUT-02)	1989 Census		x		x
	(VUT-03)	1999 Census		x		
	(VUT-04)	2007-08 Multiple Indicator Cluster Survey				x
	(VUT-05)	2009 Census				x
Venezuela						
	(VEN-01)	1950-94, 1996-11 Vital Registration	x			
	(VEN-02)	1977 World Fertility Survey				x
	(VEN-03)	1981 Census				x
	(VEN-04)	1990 Census				x
	(VEN-05)	1998 National Population and Family Survey		x		
	(VEN-06)	2001 Census				x
Vietnam						
	(VNM-01)	1989 Census		x		x
	(VNM-02)	1994 Intercensal Demographic Survey				x

	(VNM-03)	1997 Standard Demographic and Health Survey			x	x
	(VNM-04)	1999 Census		x	x	x
	(VNM-05)	2000 Multiple Indicator Cluster Survey				x
	(VNM-06)	2002 Standard Demographic and Health Survey			x	x
	(VNM-07)	2005 AIDS Indicator Survey				x
	(VNM-08)	2006 Multiple Indicator Cluster Survey				x
	(VNM-09)	2006 Population Change and Family Planning Survey		x		
	(VNM-10)	2007 Population Change and Family Planning Survey				x
	(VNM-11)	2008 Health Statistics Yearbook		x		
	(VNM-12)	2008 Population Change and Family Planning Survey				x
	(VNM-13)	2009 Census				x
	(VNM-14)	2010 Multiple Indicator Cluster Survey				x
	(VNM-15)	2010 Population Change and Family Planning Survey (Report)				x
	(VNM-16)	2011 Population Change and Family Planning Survey (Report)				x
Yemen						
	(YEM-01)	1979 World Fertility Survey			x	x
	(YEM-02)	1991-92 Standard Demographic and Health Survey			x	x
	(YEM-03)	1994 Census				x
	(YEM-04)	1997 Standard Demographic and Health Survey (Report)			x	
	(YEM-05)	2003 Pan Arab Project for Family Health			x	x
	(YEM-06)	2006 Multiple Indicator Cluster Survey			x	x
	(YEM-07)	2006 Yemen Annual Statistical Report		x		
Zambia						
	(ZMB-01)	1969 Census				x
	(ZMB-02)	1974 Sample Census of Population				x
	(ZMB-03)	1980 Census				x
	(ZMB-04)	1990 Census				x
	(ZMB-05)	1992 Standard Demographic and Health Survey			x	x
	(ZMB-06)	1996-97 Standard Demographic and Health Survey			x	x
	(ZMB-07)	1998 Living Conditions Monitoring Survey		x		
	(ZMB-08)	2000 Census				x
	(ZMB-09)	2001-02 Standard Demographic and Health Survey			x	x
	(ZMB-10)	2005 Sexual Behavior Survey		x		
	(ZMB-11)	2006 Living Conditions Monitoring Survey		x		
	(ZMB-12)	2007 Household Health Coverage Survey		x		
	(ZMB-13)	2007 Standard Demographic and Health Survey			x	x
	(ZMB-14)	2009 Sexual Behavior Survey		x		
	(ZMB-15)	2010 Living Conditions Monitoring Survey		x		
	(ZMB-16)	2012 Malaria Indicator Survey				x
Zimbabwe						
	(ZWE-01)	1969 Census				x
	(ZWE-02)	1982 Census				x
	(ZWE-03)	1988-89 Standard Demographic and Health Survey			x	x
	(ZWE-04)	1990, 1995 Vital Registration	x			
	(ZWE-05)	1992 Census				x

	(ZWE-06)	1994 Standard Demographic and Health Survey			x	x
	(ZWE-07)	1997 Intercensal Demographic Survey		x		
	(ZWE-08)	1999 Standard Demographic and Health Survey			x	x
	(ZWE-09)	2002 Census		x		x
	(ZWE-10)	2005-06 Standard Demographic and Health Survey			x	x
	(ZWE-11)	2009 Multiple Indicator Cluster Survey			x	x
	(ZWE-12)	2010-11 Standard Demographic and Health Survey			x	x
	(ZWE-13)	2012 Census				x

Web table 5. Shapley decomposition analysis of the change in the number of deaths comparing 2013 to 1990 related to changes in income per capita, maternal education, HIV child death rate, births, secular trend, and unexplained factors for 188 GBD countries.

Web table 5. Shapley decomposition analysis of the change in the number of deaths comparing 2013 to 1990 related to changes in income per capita, maternal education, HIV child death rate, births, secular trend, and unexplained factors for 188 GBD countries

		Changes in under-5 deaths (thousands)						
Region		Fertility	Maternal Education	HIV/AIDS	Income	Unexplained	Secular Trend	Total
Asia Pacific, High-income	Brunei	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)
	Japan	-1 (-1,-1)	-·8 (-·9,-·8)	0 (0,0)	-·2 (-·2,-·2)	·4 (·1,·8)	-3 (-3·4,-2·7)	-4·6 (-4·7,-4·6)
	Singapore	-·1 (-·1,-·1)	0 (0,0)	0 (0,0)	0 (0,0)	-·1 (-·1,0)	-·1 (-·1,-·1)	-·3 (-·3,-·3)
	South Korea	-1·6 (-1·6,-1·5)	-1·1 (-1·2,-1)	0 (0,0)	-·7 (-·8,-·7)	-·4 (-·7,0)	-2·6 (-3,-2·3)	-6·4 (-6·4,-6·3)
Asia, Central	Armenia	-1 (-1,-1)	-·4 (-·4,-·3)	0 (0,0)	-·1 (-·2,-·1)	-·1 (-·2,-·1)	-1·2 (-1·4,-1·1)	-2·8 (-2·8,-2·8)
	Azerbaijan	-1·7 (-1·7,-1·7)	-2·6 (-2·8,-2·4)	0 (0,0)	-·9 (-1,-·8)	2·4 (1·5,3·3)	-7 (-8,-6·2)	-9·8 (-9·9,-9·7)
	Georgia	-1 (-1,-1)	-·4 (-·4,-·3)	0 (0,0)	·1 (·1,·1)	·4 (·2,·6)	-1·6 (-1·8,-1·4)	-2·5 (-2·5,-2·4)
	Kazakhstan	-1·7 (-1·8,-1·7)	-3·5 (-3·8,-3·3)	0 (0,0)	-1·2 (-1·3,-1)	8 (6·6,9·6)	-11·2 (-12·7,-9·9)	-9·6 (-9·8,-9·5)
	Kyrgyzstan	·7 (·7,·7)	-1·4 (-1·5,-1·3)	0 (0,0)	·2 (·2,·2)	-·1 (-·7,·5)	-4·8 (-5·4,-4·3)	-5·4 (-5·4,-5·4)
	Mongolia	-·3 (-·4,-·3)	-·8 (-·8,-·7)	0 (0,0)	-·3 (-·3,-·3)	·6 (·2,1)	-3·1 (-3·5,-2·8)	-3·9 (-4,-3·9)
	Tajikistan	4 (3·9,4)	-3·8 (-4·1,-3·6)	0 (0,0)	1·3 (1·2,1·4)	·8 (-·5,2·1)	-11·1 (-12·5,-9·9)	-8·9 (-8·9,-8·8)
	Turkmenistan	-1·4 (-1·5,-1·4)	-2·2 (-2·4,-2·1)	0 (0,0)	-·4 (-·4,-·4)	3·3 (2·5,4·1)	-6·4 (-7·3,-5·7)	-7·2 (-7·3,-7·1)
	Uzbekistan	-4 (-4·2,-4)	-7·3 (-7·9,-6·7)	0 (0,0)	-1·5 (-1·7,-1·4)	17·1 (14·3,20·2)	-22·4 (-25·5,-19·8)	-18·2 (-18·5,-17·9)
Asia, East	China	-261·8 (-263·1,-260·9)	-226·4 (-243·9,-210)	·3 (·3,·4)	-217·5 (-239·1,-196·2)	-202·8 (-261·2,-141·5)	-304·2 (-366·6,-243·3)	-1212·4 (-1215·2,-1210·9)
	North Korea	-2·2 (-2·2,-2·2)	-4·7 (-5·1,-4·4)	0 (0,0)	1·4 (1·3,1·5)	-3·4 (-4·5,-2·2)	-5·7 (-6·9,-4·6)	-14·6 (-14·7,-14·6)
	Taiwan	-1·6 (-1·7,-1·6)	-·7 (-·7,-·6)	0 (0,0)	-·3 (-·3,-·3)	1·2 (1,1·4)	-·8 (-1,-·6)	-2·2 (-2·3,-2·2)
Asia, South	Afghanistan	51·6 (50·9,52·6)	-6·1 (-6·6,-5·7)	0 (0,0)	2 (1·8,2·2)	6 (-4·4,16·8)	-68·8 (-79·5,-58·2)	-15·3 (-16,-14·5)
	Bangladesh	-49·7 (-50·7,-49·3)	-79·7 (-85·7,-73·3)	0 (0,0)	-29·5 (-32·5,-26·6)	-65·7 (-116·9,-14·6)	-143·5 (-193·5,-93·3)	-368 (-371·2,-366·7)
	Bhutan	-·4 (-·4,-·4)	-·4 (-·4,-·4)	0 (0,0)	-·3 (-·3,-·2)	-·1 (-·3,·2)	-·8 (-1,-·5)	-1·9 (-1·9,-1·9)
	India	-85·8 (-89·7,-83·1)	-663·3 (-719·9,-606·6)	1·8 (1·6,1·9)	-313·1 (-348·9,-280·5)	346·4 (-61·8,765·5)	-1097·7 (-1507·2,-699·1)	-1811·8 (-1854·3,-1783·4)
	Nepal	-8·3 (-8·4,-8·2)	-16·3 (-17·6,-15·1)	0 (0,0)	-3·8 (-4·2,-3·4)	-19·7 (-29,-10·6)	-26·5 (-35·5,-17·3)	-74·5 (-74·9,-74·4)
	Pakistan	13 (12·3,13·9)	-131·6 (-144·4,-119·7)	·2 (·2,·3)	-32·9 (-36·7,-29·2)	229·5 (138·8,324·4)	-239·6 (-333·6,-149·8)	-161·4 (-169·9,-154·8)
Asia, Southeast	Cambodia	·2 (·2,·3)	-7·5 (-8·1,-7)	0 (0,0)	-4·6 (-5·1,-4·1)	-4 (-6·2,-1·7)	-11·7 (-14·2,-9·3)	-27·5 (-27·6,-27·5)
	Indonesia	3·6 (3·6,3·6)	-84·7 (-91·3,-78·5)	·5 (·5,·6)	-29·2 (-32·2,-26·4)	-33·1 (-53·4,-13)	-104·1 (-125·8,-83)	-247 (-247·7,-246·4)
	Laos	-·2 (-·2,-·2)	-5 (-5·4,-4·7)	0 (0,0)	-3·3 (-3·6,-3)	-1·8 (-3·5,0)	-9·1 (-11,-7·2)	-19·4 (-19·5,-19·3)
	Malaysia	·1 (·1,·1)	-2·3 (-2·5,-2·1)	0 (0,0)	-·7 (-·8,-·7)	·2 (-·3,·7)	-2·4 (-2·9,-1·9)	-5·1 (-5·1,-5)
	Maldives	0 (0,0)	-·1 (-·1,0)	0 (0,0)	0 (-·1,0)	-·2 (-·2,-·2)	-·1 (-·2,-·1)	-·5 (-·5,-·5)

	Myanmar	-13·9 (-14,-13·9)	-20·7 (-22·3,-19·2)	0 (0,0)	-13 (-14·3,-11·7)	-10·1 (-15·4,-4·7)	-27·7 (-33·4,-22·1)	-85·4 (-85·7,-85·2)
	Philippines	13·7 (13·6,13·8)	-16·2 (-17·4,-15)	·1 (·1,·1)	-4·5 (-4·9,-4)	0 (-6·8,7)	-34·8 (-42·2,-27·7)	-41·7 (-41·7,-41·6)
	Sri Lanka	·4 (·4,·4)	-2·2 (-2·4,-2·1)	0 (0,0)	-1 (-1·1,-·9)	-3·7 (-4·3,-3·2)	-2·9 (-3·5,-2·3)	-9·4 (-9·4,-9·4)
	Thailand	-7·6 (-7·6,-7·5)	-4·6 (-5,-4·3)	0 (0,0)	-2·3 (-2·5,-2·1)	-3·6 (-4·9,-2·2)	-7 (-8·5,-5·6)	-25·1 (-25·2,-25·1)
	Timor-Leste	·7 (·7,·7)	-1·4 (-1·5,-1·3)	0 (0,0)	-·2 (-·3,-·2)	-1·2 (-1·4,-·9)	-1·2 (-1·5,-1)	-3·4 (-3·4,-3·4)
	Vietnam	-17·1 (-17·2,-17)	-9·2 (-9·9,-8·5)	0 (0,0)	-9·7 (-10·6,-8·7)	-8·4 (-12·6,-4)	-21·6 (-26·1,-17·2)	-65·8 (-66·1,-65·7)
Australasia	Australia	·4 (·4,·4)	-·2 (-·3,-·2)	0 (0,0)	-·1 (-·1,-·1)	0 (-·1,·2)	-1·1 (-1·3,-1)	-1·1 (-1·1,-1·1)
	New Zealand	0 (0,0)	-·1 (-·1,-·1)	0 (0,0)	0 (0,0)	·1 (·1,·1)	-·3 (-·3,-·3)	-·3 (-·3,-·3)
Caribbean	Antigua and Barbuda	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)
	Barbados	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)	-·1 (-·1,-·1)
	Belize	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)	-·1 (-·1,-·1)	-·1 (-·1,-·1)
	Cuba	-·6 (-·6,-·6)	-·4 (-·4,-·4)	0 (0,0)	-·1 (-·1,0)	-·1 (-·2,0)	-·5 (-·6,-·4)	-1·8 (-1·8,-1·8)
	Dominica	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)
	Dominican Republic	0 (0,0)	-3·1 (-3·3,-2·8)	0 (0,0)	-1 (-1·1,-·9)	1·1 (·4,1·8)	-3·8 (-4·5,-3)	-6·8 (-6·8,-6·7)
	Grenada	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)	-·1 (-·1,-·1)
	Guyana	0 (0,0)	-·2 (-·3,-·2)	0 (0,0)	-·1 (-·1,-·1)	·4 (·3,·4)	-·3 (-·4,-·2)	-·3 (-·3,-·3)
	Haiti	0 (0,0)	-9 (-9·7,-8·4)	-1·9 (-2·1,-1·8)	·8 (·7,·9)	·1 (-2,2·2)	-11·4 (-13·5,-9·1)	-21·5 (-21·6,-21·4)
	Jamaica	-·3 (-·3,-·3)	-·3 (-·3,-·3)	0 (0,0)	0 (0,0)	·2 (·1,·3)	-·6 (-·7,-·4)	-1 (-1,-1)
	Saint Lucia	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)	-·1 (-·1,-·1)
	Saint Vincent and the Grenadines	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)	-·1 (-·1,-·1)
	Suriname	0 (0,0)	-·1 (-·1,-·1)	0 (0,0)	0 (0,0)	·2 (·1,·2)	-·2 (-·2,-·1)	-·1 (-·1,-·1)
	The Bahamas	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)	-·1 (-·1,-·1)	-·2 (-·2,-·2)
	Trinidad and Tobago	-·2 (-·2,-·2)	-·1 (-·2,-·1)	0 (0,0)	-·1 (-·1,-·1)	·3 (·3,·4)	-·2 (-·3,-·2)	-·3 (-·3,-·3)
Europe, Central	Albania	-1·2 (-1·2,-1·2)	-·4 (-·4,-·4)	0 (0,0)	-·2 (-·2,-·1)	·2 (·1,·4)	-1·2 (-1·4,-1·1)	-2·7 (-2·8,-2·7)
	Bosnia and Herzegovina	-·3 (-·3,-·3)	-·2 (-·2,-·2)	0 (0,0)	-·1 (-·1,-·1)	·1 (0,·1)	-·4 (-·4,-·3)	-·9 (-·9,-·9)
	Bulgaria	-·5 (-·5,-·5)	-·2 (-·2,-·2)	0 (0,0)	-·1 (-·1,-·1)	·3 (·2,·4)	-·8 (-·9,-·7)	-1·3 (-1·3,-1·3)
	Croatia	-·1 (-·1,-·1)	-·1 (-·1,-·1)	0 (0,0)	0 (0,0)	0 (0,·1)	-·3 (-·3,-·2)	-·5 (-·5,-·5)
	Czech Republic	-·1 (-·1,-·1)	-·1 (-·1,-·1)	0 (0,0)	-·1 (-·1,0)	-·4 (-·4,-·3)	-·6 (-·6,-·5)	-1·2 (-1·2,-1·2)
	Hungary	-·3 (-·3,-·3)	-·2 (-·2,-·2)	0 (0,0)	-·1 (-·1,0)	-·3 (-·4,-·2)	-·8 (-·9,-·7)	-1·6 (-1·6,-1·6)
	Macedonia	-·2 (-·2,-·2)	-·1 (-·2,-·1)	0 (0,0)	0 (0,0)	-·2 (-·3,-·2)	-·4 (-·4,-·3)	-1 (-1,-1)
	Montenegro	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)	-·1 (-·1,-·1)	-·1 (-·1,-·1)
	Poland	-1·4 (-1·5,-1·4)	-·6 (-·6,-·5)	0 (0,0)	-·5 (-·6,-·5)	-1·6 (-2,-1·2)	-3·4 (-3·8,-3)	-7·5 (-7·6,-7·5)
	Romania	-1·9	-1·2	0	-·2	-1·2	-3·6	-8·2

		(-2,-1·9)	(-1·3,-1·1)	(0,0)	(-·2,-·2)	(-1·6,-·8)	(-4·1,-3·3)	(-8·2,-8·2)
	Serbia	-·6	-·4	0	0	-·5	-·9	-2·2
		(-·6,-·6)	(-·4,-·3)	(0,0)	(0,0)	(-·6,-·4)	(-1,-·8)	(-2·2,-2·2)
	Slovakia	-·2	-·2	0	-·1	·2	-·5	-·7
		(-·2,-·2)	(-·2,-·2)	(0,0)	(-·1,-·1)	(·1,·3)	(-·6,-·4)	(-·7,-·7)
	Slovenia	0	0	0	0	0	-·1	-·1
		(0,0)	(0,0)	(0,0)	(0,0)	(0,0)	(-·1,-·1)	(-·1,-·1)
Europe, Eastern	Belarus	-·5	-·2	0	-·2	-·1	-1·1	-2·1
		(-·5,-·5)	(-·2,-·2)	(0,0)	(-·2,-·2)	(-·2,·1)	(-1·3,-1)	(-2·1,-2·1)
	Estonia	-·1	0	0	0	-·1	-·1	-·3
		(-·1,-·1)	(0,0)	(0,0)	(0,0)	(-·1,-·1)	(-·1,-·1)	(-·3,-·3)
	Latvia	-·2	0	0	0	0	-·2	-·5
		(-·2,-·1)	(-·1,0)	(0,0)	(0,0)	(-·1,0)	(-·3,-·2)	(-·5,-·5)
	Lithuania	-·2	-·1	0	0	0	-·3	-·6
		(-·2,-·2)	(-·1,-·1)	(0,0)	(0,0)	(-·1,0)	(-·3,-·3)	(-·6,-·6)
	Moldova	-·8	-·3	0	·1	0	-·9	-1·9
		(-·8,-·8)	(-·3,-·2)	(0,0)	(·1,·1)	(-·1,·1)	(-1,-·8)	(-1·9,-1·9)
	Russia	-6·1	-7	0	-·8	6·9	-24·5	-31·5
		(-6·2,-6)	(-7·6,-6·5)	(0,0)	(-·8,-·7)	(4,10)	(-27·7,-21·7)	(-31·8,-31·3)
	Ukraine	-2·9	-1·3	0	·2	1·4	-6·5	-9·1
		(-3,-2·9)	(-1·4,-1·2)	(0,0)	(·2,·2)	(·7,2·2)	(-7·3,-5·7)	(-9·2,-9·1)
Europe, Western	Andorra	0	0	0	0	0	0	0
		(0,0)	(0,0)	(0,0)	(0,0)	(0,0)	(0,0)	(0,0)
	Austria	-·1	-·1	0	0	0	-·3	-·5
		(-·1,-·1)	(-·1,-·1)	(0,0)	(0,0)	(-·1,0)	(-·4,-·3)	(-·5,-·5)
	Belgium	·1	-·2	0	0	0	-·5	-·7
		(·1,·1)	(-·2,-·1)	(0,0)	(-·1,0)	(-·1,0)	(-·6,-·4)	(-·7,-·7)
	Cyprus	0	0	0	0	0	0	-·1
		(0,0)	(0,0)	(0,0)	(0,0)	(0,0)	(0,0)	(-·1,-·1)
	Denmark	0	0	0	0	-·1	-·2	-·3
		(0,0)	(0,0)	(0,0)	(0,0)	(-·1,0)	(-·3,-·2)	(-·3,-·3)
	Finland	0	0	0	0	0	-·2	-·3
		(0,0)	(-·1,0)	(0,0)	(0,0)	(0,0)	(-·2,-·2)	(-·3,-·3)
	France	·2	-1	0	-·2	-·1	-2·7	-3·8
		(·2,·2)	(-1,-·9)	(0,0)	(-·2,-·2)	(-·4,·3)	(-3·1,-2·4)	(-3·8,-3·7)
	Germany	-·9	-·9	0	-·2	-·4	-2·8	-5·1
		(-·9,-·8)	(-·9,-·8)	(0,0)	(-·3,-·2)	(-·7,-·1)	(-3·1,-2·4)	(-5·2,-5·1)
	Greece	0	-·2	0	0	0	-·4	-·6
		(0,0)	(-·2,-·2)	(0,0)	(0,0)	(-·1,0)	(-·5,-·4)	(-·6,-·6)
	Iceland	0	0	0	0	0	0	0
		(0,0)	(0,0)	(0,0)	(0,0)	(0,0)	(0,0)	(0,0)
	Ireland	·1	-·1	0	-·1	·1	-·3	-·2
		(·1,·1)	(-·1,-·1)	(0,0)	(-·1,0)	(0,·1)	(-·3,-·2)	(-·2,-·2)
	Israel	·4	-·2	0	-·1	-·2	-·6	-·6
		(·4,·4)	(-·2,-·2)	(0,0)	(-·1,-·1)	(-·2,-·1)	(-·7,-·5)	(-·6,-·6)
	Italy	0	-·6	0	-·1	-·5	-2	-3·2
		(0,0)	(-·6,-·6)	(0,0)	(-·1,-·1)	(-·7,-·3)	(-2·3,-1·8)	(-3·2,-3·2)
	Luxembourg	0	0	0	0	0	0	0
		(0,0)	(0,0)	(0,0)	(0,0)	(0,0)	(0,0)	(0,0)
	Malta	0	0	0	0	0	0	0
		(0,0)	(0,0)	(0,0)	(0,0)	(0,0)	(0,0)	(0,0)
	Netherlands	-·1	-·2	0	-·1	·1	-·7	-1
		(-·1,-·1)	(-·3,-·2)	(0,0)	(-·1,-·1)	(0,·2)	(-·8,-·6)	(-1,-1)
	Norway	0	-·1	0	0	-·1	-·2	-·3
		(0,0)	(-·1,-·1)	(0,0)	(0,0)	(-·1,0)	(-·2,-·2)	(-·3,-·3)
	Portugal	-·2	-·3	0	-·1	-·3	-·5	-1·3
		(-·2,-·2)	(-·3,-·2)	(0,0)	(-·1,0)	(-·4,-·3)	(-·5,-·4)	(-1·3,-1·3)
	Spain	·6	-·9	0	-·2	·1	-1·6	-2
		(·6,·6)	(-1,-·8)	(0,0)	(-·2,-·2)	(-·1,·3)	(-1·8,-1·4)	(-2,-2)
	Sweden	0	-·1	0	0	-·1	-·3	-·5
		(0,0)	(-·1,-·1)	(0,0)	(0,0)	(-·2,-·1)	(-·4,-·3)	(-·6,-·5)
	Switzerland	0	0	0	0	0	-·3	-·3
		(0,0)	(0,0)	(0,0)	(0,0)	(0,·1)	(-·3,-·3)	(-·3,-·3)
	United Kingdom	0	-·9	0	-·4	·9	-3·3	-3·7
		(0,0)	(-·9,-·8)	(0,0)	(-·4,-·3)	(·5,1·3)	(-3·7,-2·9)	(-3·7,-3·7)
Latin America, Andean	Bolivia	1·7	-6·1	0	-·9	-3	-7·7	-16·1
		(1·7,1·7)	(-6·6,-5·7)	(0,0)	(-1,-·8)	(-4·4,-1·6)	(-9·1,-6·2)	(-16·1,-16)
	Ecuador	1	-3·4	0	-·6	1·1	-5·4	-7·4

		(1,1)	(-3·6,-3·1)	(0,0)	(-·7,-·6)	(·1,2·1)	(-6·5,-4·3)	(-7·4,-7·4)
	Peru	-2·2	-8·2	0	-1·9	-11	-11·2	-34·6
		(-2·2,-2·2)	(-8·8,-7·6)	(0,0)	(-2·1,-1·7)	(-12·9,-9)	(-13·3,-9·1)	(-34·6,-34·6)
Latin America, Central	Colombia	0	-4·3	0	-1·5	1	-9·7	-14·5
		(0,0)	(-4·6,-3·9)	(0,0)	(-1·6,-1·3)	(-·8,2·8)	(-11·5,-7·8)	(-14·6,-14·4)
	Costa Rica	-·1	-·3	0	-·1	·1	-·5	-1
		(-·1,-·1)	(-·3,-·3)	(0,0)	(-·1,-·1)	(0,·2)	(-·6,-·4)	(-1,-1)
	El Salvador	-1·2	-1·3	0	-·3	-2·5	-1·8	-7·1
		(-1·2,-1·2)	(-1·4,-1·2)	(0,0)	(-·4,-·3)	(-2·8,-2·2)	(-2·1,-1·5)	(-7·2,-7·1)
	Guatemala	6·3	-4·8	0	-·8	-5·6	-8·4	-13·3
		(6·3,6·3)	(-5·2,-4·5)	(0,0)	(-·9,-·7)	(-7·1,-4·1)	(-9·9,-6·8)	(-13·3,-13·3)
	Honduras	·8	-2·2	-·1	-·3	-·5	-3·1	-5·3
		(·7,·8)	(-2·3,-2)	(-·1,-·1)	(-·3,-·2)	(-1·1,-·1)	(-3·7,-2·5)	(-5·4,-5·3)
	Mexico	-5·1	-19·5	0	-2·6	-11·7	-26·7	-65·6
		(-5·1,-5)	(-21,-18·1)	(0,0)	(-2·8,-2·3)	(-16·4,-6·8)	(-31·7,-21·6)	(-65·7,-65·5)
	Nicaragua	-·6	-1·4	0	-·1	-2·1	-2·6	-6·8
		(-·6,-·6)	(-1·5,-1·3)	(0,0)	(-·1,0)	(-2·6,-1·7)	(-3,-2·1)	(-6·8,-6·8)
	Panama	·2	-·4	0	-·2	·7	-·7	-·4
		(·2,·2)	(-·5,-·4)	(0,0)	(-·2,-·2)	(·5,·8)	(-·8,-·6)	(-·4,-·4)
	Venezuela	·7	-3·7	0	-·2	-·8	-5·1	-9
		(·7,·8)	(-3·9,-3·4)	(0,0)	(-·2,-·2)	(-1·7,·2)	(-6,-4·1)	(-9,-9)
Latin America, Southern	Argentina	-·3	-3·6	0	-1·2	3·2	-8·7	-10·7
		(-·3,-·3)	(-3·9,-3·4)	(0,0)	(-1·4,-1·1)	(2·2,4·4)	(-9·9,-7·6)	(-10·8,-10·6)
	Chile	-·8	-·9	0	-·5	·2	-2	-4
		(-·8,-·7)	(-1,-·8)	(0,0)	(-·5,-·4)	(-·1,·5)	(-2·3,-1·8)	(-4,-3·9)
	Uruguay	-·1	-·2	0	-·1	0	-·5	-·9
		(-·1,-·1)	(-·2,-·2)	(0,0)	(-·1,-·1)	(-·1,·1)	(-·5,-·4)	(-·9,-·9)
Latin America, Tropical	Brazil	-19·9	-32·1	-·2	-4·7	-30·8	-44·6	-132·4
		(-20,-19·9)	(-34·6,-29·7)	(-·2,-·2)	(-5·2,-4·2)	(-38·7,-22·8)	(-52·8,-36·1)	(-132·6,-132·3)
	Paraguay	·6	-1·3	0	-·1	·7	-1·9	-2
		(·6,·6)	(-1·4,-1·2)	(0,0)	(-·1,-·1)	(·3,1)	(-2·2,-1·5)	(-2,-2)
North Africa/Middle East	Algeria	4·3	-12·6	0	-1	5·3	-23	-27
		(4·2,4·4)	(-13·5,-11·6)	(0,0)	(-1,-·9)	(1·7,8·8)	(-26·7,-19·5)	(-27·1,-26·8)
	Bahrain	·1	-·1	0	0	0	-·1	-·2
		(·1,·1)	(-·1,-·1)	(0,0)	(0,0)	(0,0)	(-·2,-·1)	(-·2,-·2)
	Egypt	7·3	-29·4	0	-7·6	-20·8	-52·8	-103·2
		(7·3,7·4)	(-31·6,-27·2)	(0,0)	(-8·4,-6·8)	(-28·6,-13·3)	(-60·6,-45)	(-103·5,-103)
	Iran	-14·1	-23·3	0	-4·7	-10·4	-38·3	-90·9
		(-14·3,-14)	(-25,-21·5)	(0,0)	(-5·2,-4·2)	(-16·1,-5)	(-44,-32·7)	(-91·4,-90·5)
	Iraq	16·6	-7·5	0	·8	8·4	-23·3	-5
		(16·3,16·9)	(-8·1,-6·9)	(0,0)	(·7,·9)	(4·7,12)	(-27,-19·6)	(-5·2,-4·8)
	Jordan	2	-1·7	0	-·2	2·1	-2·7	-·5
		(2,2·1)	(-1·8,-1·5)	(0,0)	(-·2,-·1)	(1·6,2·5)	(-3·2,-2·3)	(-·5,-·4)
	Kuwait	·4	-·2	0	0	·2	-·5	-·1
		(·4,·4)	(-·2,-·2)	(0,0)	(-·1,0)	(·2,·3)	(-·5,-·4)	(-·1,-·1)
	Lebanon	-·1	-·5	0	-·1	·2	-·9	-1·4
		(-·1,-·1)	(-·6,-·5)	(0,0)	(-·1,-·1)	(·1,·3)	(-1·1,-·8)	(-1·4,-1·4)
	Libya	·2	-1·2	0	0	-·1	-2	-3·1
		(·2,·2)	(-1·3,-1·1)	(0,0)	(0,0)	(-·4,·2)	(-2·3,-1·7)	(-3·1,-3·1)
	Morocco	·4	-8·2	0	-2·6	-·7	-21·5	-32·5
		(·4,·4)	(-8·8,-7·6)	(0,0)	(-2·9,-2·4)	(-3·9,2·5)	(-24·7,-18·2)	(-32·7,-32·4)
	Oman	·1	-·6	0	-·1	-·5	-·9	-2
		(·1,·1)	(-·6,-·5)	(0,0)	(-·1,-·1)	(-·6,-·4)	(-1,-·8)	(-2,-2)
	Palestine	1·2	-1·4	0	-·1	·8	-2·3	-1·8
		(1·2,1·2)	(-1·5,-1·2)	(0,0)	(-·1,-·1)	(·4,1·1)	(-2·7,-2)	(-1·8,-1·8)
	Qatar	·2	-·1	0	0	·1	-·2	0
		(·2,·2)	(-·1,-·1)	(0,0)	(0,0)	(0,·1)	(-·2,-·1)	(0,0)
	Saudi Arabia	-·4	-5·9	0	-·2	-5·2	-8·8	-20·5
		(-·4,-·4)	(-6·3,-5·4)	(0,0)	(-·2,-·2)	(-6·5,-4)	(-10·1,-7·6)	(-20·5,-20·5)
	Sudan	32·4	-22·7	·3	-10	17·4	-51·1	-33·7
		(31·8,33·1)	(-24·4,-20·9)	(·2,·3)	(-11,-9)	(9·5,25·2)	(-59·2,-43·1)	(-33·8,-33·6)
	Syria	1·8	-3·7	0	-·6	-2·3	-6·3	-11·2
		(1·8,1·8)	(-4,-3·5)	(0,0)	(-·6,-·5)	(-3·3,-1·5)	(-7·3,-5·4)	(-11·2,-11·2)
	Tunisia	-·8	-2·1	0	-·5	-·9	-3·6	-7·9
		(-·8,-·8)	(-2·2,-1·9)	(0,0)	(-·6,-·5)	(-1·4,-·3)	(-4·2,-3·1)	(-7·9,-7·9)
	Turkey	-5·5	-18·6	0	-4·2	-14·1	-31·8	-74·2

		(-5·6,-5·5)	(-20,-17·2)	(0,0)	(-4·7,-3·8)	(-18·7,-9·6)	(-36·4,-27·1)	(-74·5,-74)
	United Arab	1·1	-·5	0	0	-·1	-·7	-·2
	Emirates	(1·1,1·1)	(-·5,-·4)	(0,0)	(0,0)	(-·3,0)	(-·9,-·6)	(-·2,-·2)
	Yemen	11·6	-7·6	0	-2·6	-3·2	-36·1	-38
		(11·5,11·8)	(-8·2,-7)	(0,·1)	(-2·9,-2·4)	(-8·5,2·1)	(-41·6,-30·6)	(-38,-37·9)
North America, High-income	Canada	·1	-·5	0	-·1	1	-1·7	-1·2
		(·1,·1)	(-·5,-·4)	(0,0)	(-·2,-·1)	(·8,1·2)	(-1·9,-1·4)	(-1·3,-1·2)
	United States	1·8	-1·7	-·1	-2	6·1	-21·9	-17·9
		(1·7,1·8)	(-1·8,-1·6)	(-·1,-·1)	(-2·2,-1·8)	(3·4,9·1)	(-24·9,-19·2)	(-17·9,-17·9)
Oceania	Federated States of Micronesia	0	0	0	0	0	0	-·1
		(0,0)	(0,0)	(0,0)	(0,0)	(0,0)	(0,0)	(-·1,-·1)
	Fiji	-·1	-·2	0	0	·4	-·3	-·2
		(-·1,-·1)	(-·2,-·2)	(0,0)	(0,0)	(·3,·4)	(-·3,-·2)	(-·2,-·2)
	Kiribati	0	0	0	0	0	-·1	-·1
		(0,0)	(-·1,0)	(0,0)	(0,0)	(0,0)	(-·1,0)	(-·1,-·1)
	Marshall Islands	0	0	0	0	0	0	0
		(0,0)	(0,0)	(0,0)	(0,0)	(0,0)	(0,0)	(0,0)
	Papua New Guinea	4·8	-3·8	0	-·6	2·3	-5·5	-2·7
		(4·8,4·9)	(-4,-3·5)	(0,0)	(-·6,-·5)	(1·2,3·4)	(-6·6,-4·3)	(-2·7,-2·7)
	Samoa	0	0	0	0	0	0	-·1
		(0,0)	(0,0)	(0,0)	(0,0)	(0,0)	(0,0)	(-·1,-·1)
	Solomon Islands	·1	-·1	0	0	0	-·2	-·2
		(·1,·1)	(-·2,-·1)	(0,0)	(0,0)	(0,·1)	(-·2,-·1)	(-·2,-·2)
	Tonga	0	0	0	0	·1	0	0
		(0,0)	(0,0)	(0,0)	(0,0)	(·1,·1)	(0,0)	(0,0)
	Vanuatu	·1	-·1	0	0	·1	-·1	0
		(·1,·1)	(-·1,-·1)	(0,0)	(0,0)	(·1,·1)	(-·1,-·1)	(0,0)
sub-Saharan Africa, Central	Angola	52·6	-24·5	4	-10·3	-3·8	-37	-19·1
		(52·3,52·9)	(-26·4,-22·7)	(3·7,4·3)	(-11·3,-9·2)	(-10,2·7)	(-43·5,-30·5)	(-19·2,-18·9)
	Central African Republic	6·2	-4·4	-1·5	·9	7·8	-8·5	·5
		(6·1,6·3)	(-4·8,-4·1)	(-1·6,-1·4)	(·8,1)	(6·3,9·3)	(-10,-7)	(·5,·5)
	Congo	5·9	-2·9	-·1	-·1	2·8	-3·8	1·8
		(5·8,6)	(-3·2,-2·7)	(-·1,-·1)	(-·1,0)	(2·1,3·5)	(-4·5,-3·1)	(1·8,1·8)
	Democratic Republic of the Congo	177·2	-73·7	1·9	40·2	28·5	-130·4	43·7
		(176·1,178·7)	(-79·3,-68·1)	(1·7,2)	(36·2,44·2)	(4·7,51·9)	(-153·2,-107·2)	(42·7,44·9)
	Equatorial Guinea	1·4	-1	·4	-1·4	1·8	-1·2	-·1
		(1·3,1·4)	(-1,-·9)	(·3,·4)	(-1·5,-1·2)	(1·5,2)	(-1·5,-1)	(-·1,-·1)
	Gabon	1·4	-1·1	0	0	1·1	-1·3	·2
		(1·4,1·4)	(-1·1,-1)	(0,0)	(0,0)	(·9,1·3)	(-1·5,-1)	(·2,·2)
sub-Saharan Africa, Eastern	Burundi	22·8	-7·6	-·4	1·8	-7·7	-17·7	-8·8
		(22·7,22·9)	(-8·2,-7)	(-·4,-·3)	(1·6,2)	(-10·7,-4·7)	(-20·7,-14·6)	(-8·8,-8·7)
	Comoros	·8	-·5	0	·1	-·5	-·6	-·8
		(·8,·8)	(-·5,-·5)	(0,0)	(·1,·1)	(-·6,-·4)	(-·7,-·5)	(-·8,-·8)
	Djibouti	·1	-·5	·1	·1	-·1	-·8	-1·1
		(·1,·1)	(-·5,-·5)	(·1,·1)	(·1,·1)	(-·2,-·1)	(-·9,-·6)	(-1·1,-1·1)
	Eritrea	8·8	-4·9	-·1	-·7	-4·7	-6·9	-8·6
		(8·7,8·8)	(-5·3,-4·6)	(-·1,-·1)	(-·7,-·6)	(-5·9,-3·6)	(-8·1,-5·7)	(-8·6,-8·5)
	Ethiopia	104·3	-46·1	-3·3	-25·2	-134·3	-129·5	-234·1
		(104·2,104·5)	(-49·6,-42·6)	(-3·6,-3·1)	(-27·7,-22·7)	(-155·5,-112·9)	(-151,-107·2)	(-234·2,-234·1)
	Kenya	44	-37·3	3·6	-1·6	26·4	-37·6	-2·4
		(43·6,44·6)	(-40·2,-34·4)	(3·3,3·9)	(-1·8,-1·4)	(19·8,33·3)	(-44·3,-30·8)	(-2·5,-2·3)
	Madagascar	26·1	-14·2	·3	1·8	-21·7	-23·9	-31·6
		(26·1,26·2)	(-15·3,-13·2)	(·2,·3)	(1·6,1·9)	(-25·6,-17·6)	(-27·8,-19·7)	(-31·6,-31·6)
	Malawi	28·6	-25·1	-9·2	-2·5	-9·5	-30·3	-47·9
		(28·5,28·8)	(-27,-23·2)	(-10,-8·5)	(-2·7,-2·2)	(-14·8,-4·1)	(-35·5,-25)	(-48,-47·9)
	Mauritius	-·2	-·1	0	0	·2	-·1	-·3
		(-·2,-·1)	(-·2,-·1)	(0,0)	(-·1,0)	(·1,·2)	(-·2,-·1)	(-·3,-·3)
	Mozambique	57·2	-17·2	4·8	-16·3	-33·5	-43·7	-48·6
		(57·2,57·4)	(-18·5,-15·9)	(4·4,5·2)	(-17·9,-14·7)	(-40·8,-26·1)	(-51,-36·1)	(-48·6,-48·5)
	Rwanda	10·4	-7·7	-2·9	-2·1	-9·2	-14·2	-25·8

		(10·4,10·4)	(-8·3,-7·1)	(-3·2,-2·7)	(-2·4,-1·9)	(-11·6,-6·8)	(-16·6,-11·8)	(-25·8,-25·8)
	Seychelles	0	0	0	0	0	0	0
		(0,0)	(0,0)	(0,0)	(0,0)	(0,0)	(0,0)	(0,0)
	Somalia	23·7	-5·9	·6	2·5	-3·6	-21·5	-4·2
		(23·6,23·8)	(-6·3,-5·4)	(·6,·7)	(2·2,2·7)	(-7·3,·1)	(-25·2,-17·7)	(-4·3,-4·1)
	South Sudan	21	-4·9	3·1	·6	-11·3	-19	-10·6
		(20·9,21)	(-5·3,-4·6)	(2·9,3·4)	(·5,·7)	(-14·6,-8·1)	(-22·2,-15·7)	(-10·6,-10·5)
	Tanzania	88·3	-36·1	-6·3	-13·6	6	-63·5	-25·1
		(87·8,89)	(-38·8,-33·3)	(-6·9,-5·8)	(-14·9,-12·2)	(-4·8,17·1)	(-74·5,-52·2)	(-25·3,-24·8)
	Uganda	89·8	-41	-9·1	-16·2	21·3	-56·4	-11·6
		(89·1,90·6)	(-44·2,-37·9)	(-9·9,-8·4)	(-17·8,-14·5)	(11·4,31·4)	(-66·3,-46·3)	(-11·8,-11·4)
	Zambia	33·7	-11·4	-12·8	-1·2	·7	-21·9	-12·9
		(33·5,34)	(-12·3,-10·5)	(-13·9,-11·8)	(-1·3,-1)	(-3·3,4·6)	(-25·7,-18)	(-13,-12·9)
sub-Saharan Africa, Southern	Botswana	0	-·7	0	-·2	·3	-·7	-1·3
		(0,0)	(-·7,-·6)	(0,0)	(-·2,-·2)	(·2,·5)	(-·9,-·6)	(-1·3,-1·3)
	Lesotho	0	-1·7	1·7	-·5	2·8	-2·1	·2
		(0,0)	(-1·8,-1·5)	(1·5,1·8)	(-·6,-·5)	(2·4,3·2)	(-2·5,-1·8)	(·1,·2)
	Namibia	·3	-·9	·1	-·1	-·3	-1	-1·9
		(·3,·3)	(-·9,-·8)	(·1,·1)	(-·2,-·1)	(-·4,-·1)	(-1·2,-·9)	(-1·9,-1·9)
	South Africa	·8	-17·1	2·5	-1·8	-10·3	-20·8	-46·7
		(·8,·8)	(-18·5,-15·9)	(2·3,2·7)	(-2,-1·6)	(-13·8,-6·7)	(-24·3,-17·1)	(-46·8,-46·7)
	Swaziland	0	-·9	·4	-·1	1·3	-1	-·3
		(0,0)	(-1,-·9)	(·4,·4)	(-·2,-·1)	(1·2,1·5)	(-1·2,-·9)	(-·4,-·3)
	Zimbabwe	4·3	-10·1	-2·2	1·8	20·2	-11·4	2·5
		(4·2,4·3)	(-11,-9·3)	(-2·3,-2)	(1·6,1·9)	(18,22·4)	(-13·5,-9·3)	(2·4,2·6)
sub-Saharan Africa, Western	Benin	15·5	-6·2	·3	-·9	-15·6	-12·5	-19·3
		(15·5,15·5)	(-6·7,-5·8)	(·3,·4)	(-1,-·8)	(-17·5,-13·5)	(-14·5,-10·3)	(-19·4,-19·3)
	Burkina Faso	41·3	-12·2	-3·4	-6·1	-4·1	-31·6	-16
		(41·1,41·6)	(-13·1,-11·2)	(-3·6,-3·1)	(-6·7,-5·5)	(-9·4,1·2)	(-37,-26)	(-16·1,-15·8)
	Cameroon	35·6	-26·1	4·2	2·4	27	-31·7	11·4
		(35·2,36·1)	(-28·2,-24·1)	(3·9,4·6)	(2·2,2·6)	(21·5,32·9)	(-37·4,-26)	(11·3,11·6)
	Cape Verde	-·1	-·2	0	-·1	0	-·2	-·6
		(-·1,-·1)	(-·2,-·1)	(0,0)	(-·1,-·1)	(-·1,0)	(-·2,-·1)	(-·6,-·5)
	Chad	50·6	-8·9	2·5	-6·6	18	-29·9	25·9
		(50·2,51·2)	(-9·5,-8·2)	(2·3,2·7)	(-7·2,-5·9)	(12·7,23·3)	(-35·2,-24·5)	(25·5,26·3)
	Cote d'Ivoire	29·9	-12·8	-·3	2·8	4·1	-29·2	-5·4
		(29·7,30·2)	(-13·7,-11·8)	(-·3,-·3)	(2·5,3·1)	(-·9,9·1)	(-34·2,-24)	(-5·5,-5·3)
	Ghana	21·8	-15·2	-·2	-6	11	-24·8	-13·3
		(21·6,22)	(-16·3,-14)	(-·2,-·2)	(-6·6,-5·4)	(6·7,15·4)	(-29·1,-20·3)	(-13·3,-13·3)
	Guinea	23·8	-6·4	1·3	-1·2	-15	-22·1	-19·5
		(23·8,23·9)	(-6·9,-5·9)	(1·2,1·4)	(-1·4,-1·1)	(-18·6,-11·2)	(-25·8,-18·2)	(-19·5,-19·4)
	Guinea-Bissau	3·4	-1·6	·9	·2	·6	-3·9	-·3
		(3·4,3·4)	(-1·7,-1·5)	(·8,·9)	(·2,·3)	(0,1·3)	(-4·6,-3·2)	(-·4,-·3)
	Liberia	7·8	-3·6	0	1·4	-8·9	-6·4	-9·6
		(7·8,7·9)	(-3·9,-3·3)	(0,0)	(1·3,1·6)	(-10,-7·8)	(-7·5,-5·3)	(-9·6,-9·6)
	Mali	67·4	-11	·2	-6·1	-·9	-41·5	8·1
		(67·1,67·9)	(-11·8,-10·1)	(·2,·2)	(-6·8,-5·5)	(-8,6·4)	(-48·7,-34·2)	(7·8,8·4)
	Mauritania	4·4	-2·2	0	-·3	2·1	-3·6	·4
		(4·3,4·4)	(-2·4,-2)	(0,0)	(-·3,-·2)	(1·5,2·7)	(-4·2,-2·9)	(·4,·4)
	Niger	90	-11·8	·1	1·8	-61·9	-48·6	-30·5
		(89·8,90·2)	(-12·7,-10·9)	(·1,·1)	(1·6,2)	(-69·9,-53·8)	(-56·5,-40·3)	(-30·5,-30·3)
	Nigeria	503·9	-304·2	55·9	-73	243·9	-366·9	59·7
		(499·2,509·6)	(-327·8,-281)	(51·4,60·7)	(-80·2,-65·6)	(180·8,310·4)	(-432·5,-301·3)	(58,61·8)
	Sao Tome and	·1	-·1	0	0	-·1	-·1	-·2
	Principe	(·1,·1)	(-·1,-·1)	(0,0)	(0,0)	(-·1,0)	(-·2,-·1)	(-·2,-·2)
	Senegal	20·2	-6·7	·1	-·9	-13·1	-15·9	-16·3
		(20·2,20·2)	(-7·2,-6·2)	(·1,·1)	(-1,-·8)	(-15·6,-10·4)	(-18·5,-13·1)	(-16·3,-16·3)
	Sierra Leone	8·5	-6	·4	·8	-2·7	-13·1	-12·1
		(8·5,8·6)	(-6·5,-5·5)	(·4,·4)	(·7,·9)	(-4·9,-·5)	(-15·3,-10·8)	(-12·1,-12)
	The Gambia	4·1	-1·5	0	0	-1·2	-2·6	-1·2
		(4·1,4·1)	(-1·6,-1·4)	(0,0)	(0,0)	(-1·7,-·8)	(-3,-2·1)	(-1·2,-1·2)
	Togo	10·4	-6·4	·4	·6	3·6	-9·2	-·7
		(10·4,10·5)	(-6·9,-5·9)	(·3,·4)	(·5,·7)	(2,5·2)	(-10·9,-7·6)	(-·7,-·6)

Web table 6. Number of years with data in each decade by country.

Web table 6: Number of years with data in each decade by country.						
	1950s	1960s	1970s	1980s	1990s	2000s
Asia Pacific, High-income						
Brunei	10	6	9	8	8	12
Japan	10	10	10	10	10	12
Singapore	10	10	10	10	10	12
South Korea	10	10	8	10	10	12
Asia, Central						
Armenia	0	0	5	10	10	13
Azerbaijan	0	0	4	10	10	11
Georgia	0	0	5	10	10	12
Kazakhstan	0	1	9	10	10	11
Kyrgyzstan	0	2	10	10	10	13
Mongolia	0	6	10	10	10	11
Tajikistan	0	0	7	10	10	13
Turkmenistan	0	0	1	8	10	7
Uzbekistan	0	0	8	10	10	7
Asia, East						
China	3	10	10	10	10	13
North Korea	0	0	0	0	1	1
Taiwan	5	10	10	10	10	13
Asia, South						
Bangladesh	10	10	10	10	10	12
Bhutan	0	0	4	10	10	10
India	10	10	10	10	10	13
Nepal	10	10	10	10	10	11
Pakistan	10	10	10	10	10	13
Asia, Southeast						
Cambodia	1	0	9	10	10	11
Indonesia	10	10	10	10	10	13
Laos	0	0	2	7	8	6
Malaysia	10	10	10	3	10	10
Maldives	1	4	7	10	10	12
Mauritius	10	10	10	10	10	12
Myanmar	0	2	5	8	8	7
Philippines	10	10	10	10	10	10
Seychelles	9	10	10	10	9	13
Sri Lanka	10	10	10	10	9	8
Thailand	10	10	10	10	10	10
Timor-Leste	0	3	10	10	10	10
Vietnam	0	6	10	10	10	11
Australasia						
Australia	10	10	10	10	10	12

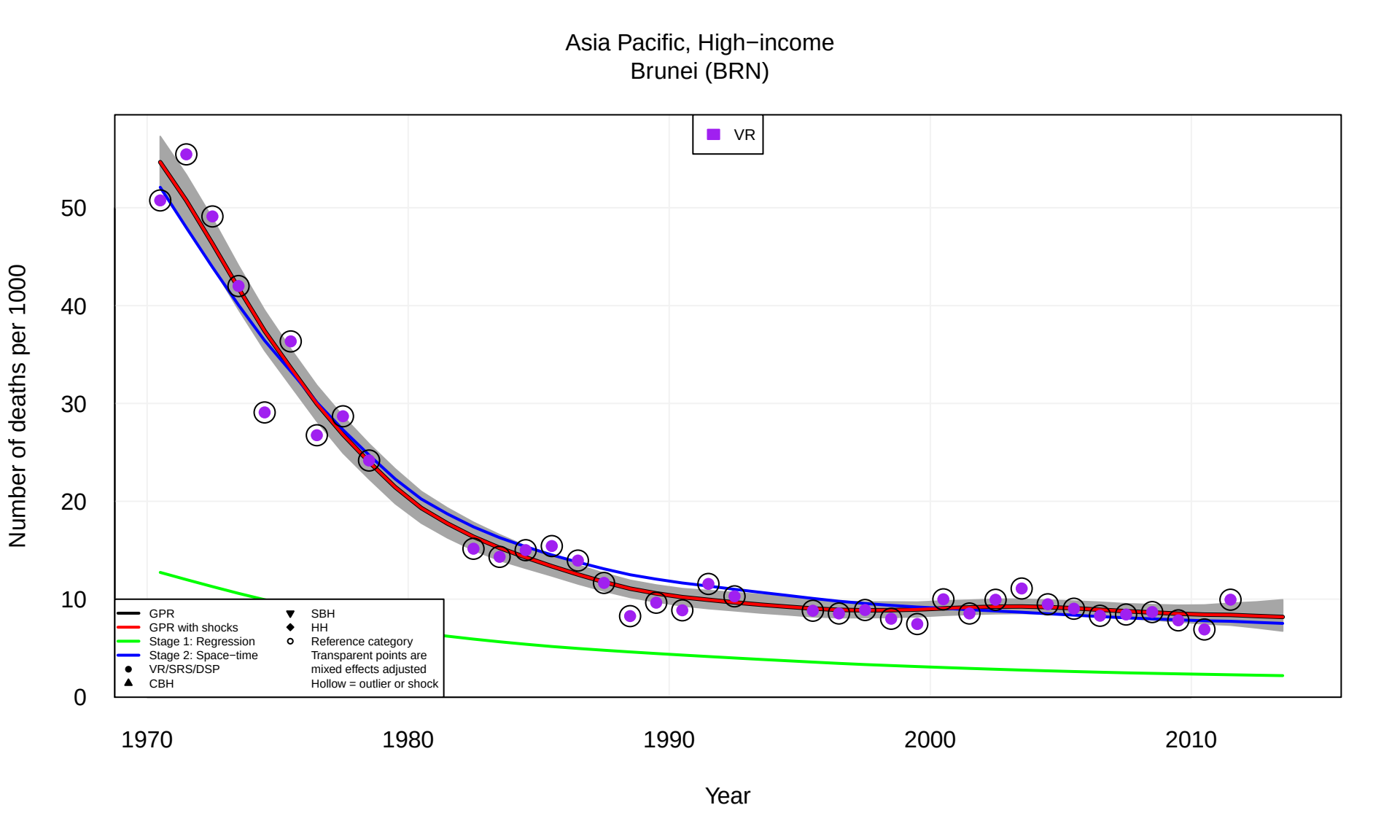
New Zealand	10	10	10	10	10	12
Caribbean						
Antigua and Barbuda	10	8	9	6	10	10
Barbados	10	10	10	10	6	9
Belize	10	10	10	10	10	12
Cuba	1	10	10	10	10	11
Dominica	10	8	10	10	10	11
Dominican Republic	10	10	10	10	10	12
Grenada	10	10	5	4	10	11
Guyana	10	10	10	10	10	10
Haiti	7	10	10	10	10	12
Jamaica	10	10	10	10	10	7
Saint Lucia	10	4	8	10	10	8
Saint Vincent and the Grenadines	7	5	7	8	7	11
Suriname	8	6	8	10	10	10
The Bahamas	0	4	9	10	10	9
Trinidad and Tobago	10	10	10	10	10	9
Europe, Central						
Albania	5	5	2	10	10	9
Bosnia and Herzegovina	0	0	0	5	5	12
Bulgaria	10	10	10	10	10	13
Croatia	0	0	0	5	10	13
Czech Republic	10	10	10	10	10	13
Hungary	10	10	10	10	10	13
Macedonia	0	0	0	8	10	12
Montenegro	0	1	1	1	6	11
Poland	10	10	10	10	10	12
Romania	10	10	10	10	10	12
Serbia	1	1	1	9	10	13
Slovakia	10	10	10	10	10	12
Slovenia	0	0	0	8	10	12
Europe, Eastern						
Belarus	1	10	10	10	10	12
Estonia	1	10	10	10	10	13
Latvia	1	10	10	10	10	13
Lithuania	1	10	10	10	10	12
Moldova	0	1	3	10	10	13
Russia	1	10	10	10	10	12
Ukraine	1	10	10	10	10	13
Europe, Western						
Andorra	5	0	0	0	2	8
Austria	10	10	10	10	10	12
Belgium	10	10	10	10	10	11
Cyprus	6	4	7	10	10	12
Denmark	10	10	10	10	10	12

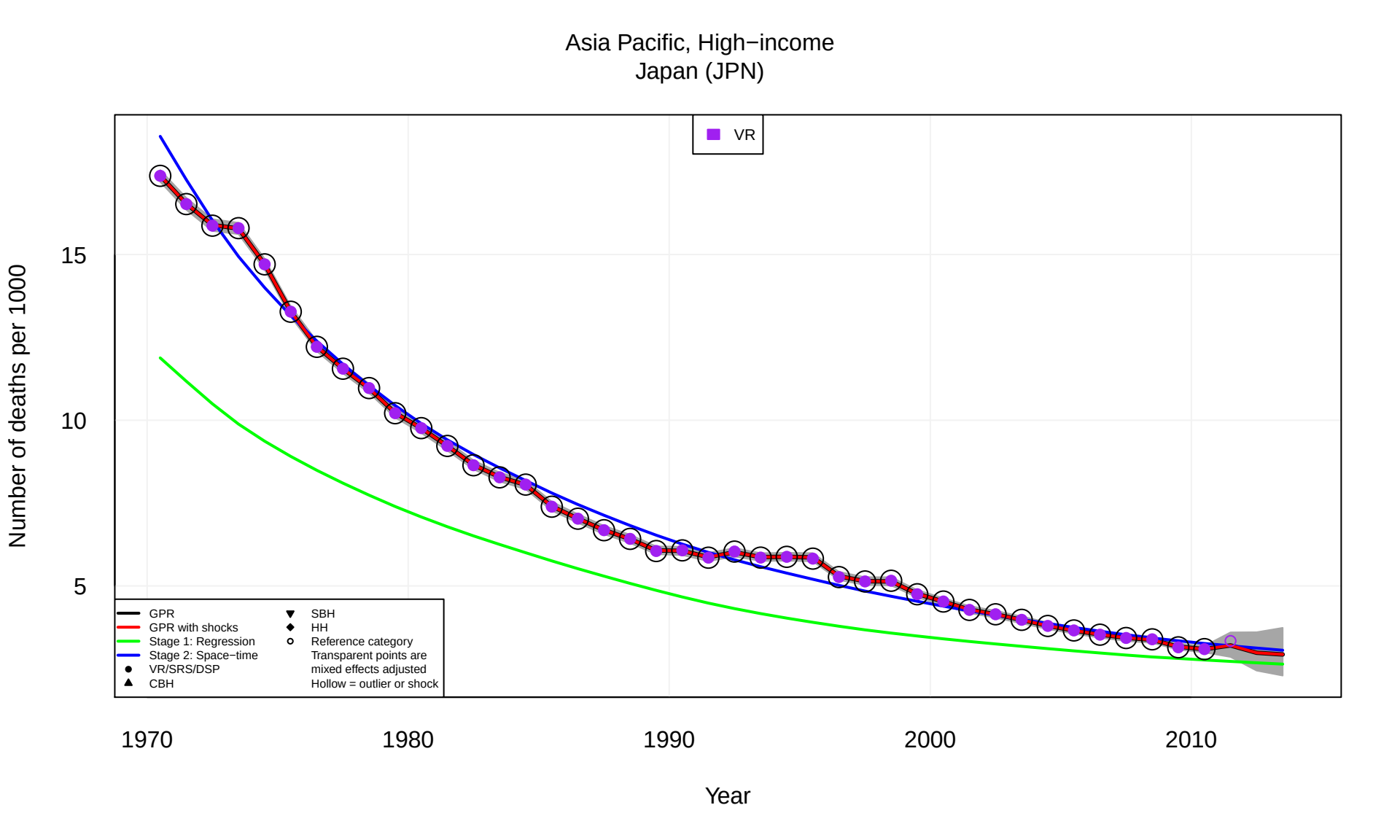
Finland	10	10	10	10	10	12
France	10	10	10	10	10	12
Germany	4	10	10	10	10	13
Greece	9	10	10	10	10	12
Iceland	10	10	10	10	10	12
Ireland	10	10	10	10	10	12
Israel	10	10	10	10	10	13
Italy	10	10	10	10	10	11
Luxembourg	10	10	10	10	10	12
Malta	10	10	10	10	10	12
Netherlands	10	10	10	10	10	12
Norway	10	10	10	10	10	13
Portugal	10	10	10	10	10	12
Spain	10	10	10	10	10	12
Sweden	10	10	10	10	10	12
Switzerland	10	10	10	10	10	12
United Kingdom	10	10	10	10	10	12
Latin America, Andean						
Bolivia	9	10	10	10	10	8
Ecuador	10	10	10	10	10	11
Peru	10	10	10	10	10	13
Latin America, Central						
Colombia	10	10	10	10	10	12
Costa Rica	10	10	10	10	10	12
El Salvador	10	10	10	10	10	11
Guatemala	10	10	10	10	10	11
Honduras	10	10	10	10	10	12
Mexico	10	10	10	10	10	13
Nicaragua	10	10	10	10	10	12
Panama	10	10	10	10	10	11
Venezuela	10	10	10	10	10	12
Latin America, Southern						
Argentina	10	10	10	10	10	12
Chile	10	10	10	10	10	12
Uruguay	10	10	10	10	10	8
Latin America, Tropical						
Brazil	10	10	10	10	10	12
Paraguay	10	10	10	10	10	11
North Africa/Middle East						
Afghanistan	1	4	2	9	10	11
Algeria	8	9	10	10	10	8
Bahrain	3	4	6	9	9	11
Egypt	10	10	10	10	10	12
Iran	1	5	10	10	10	11
Iraq	3	10	10	10	10	11

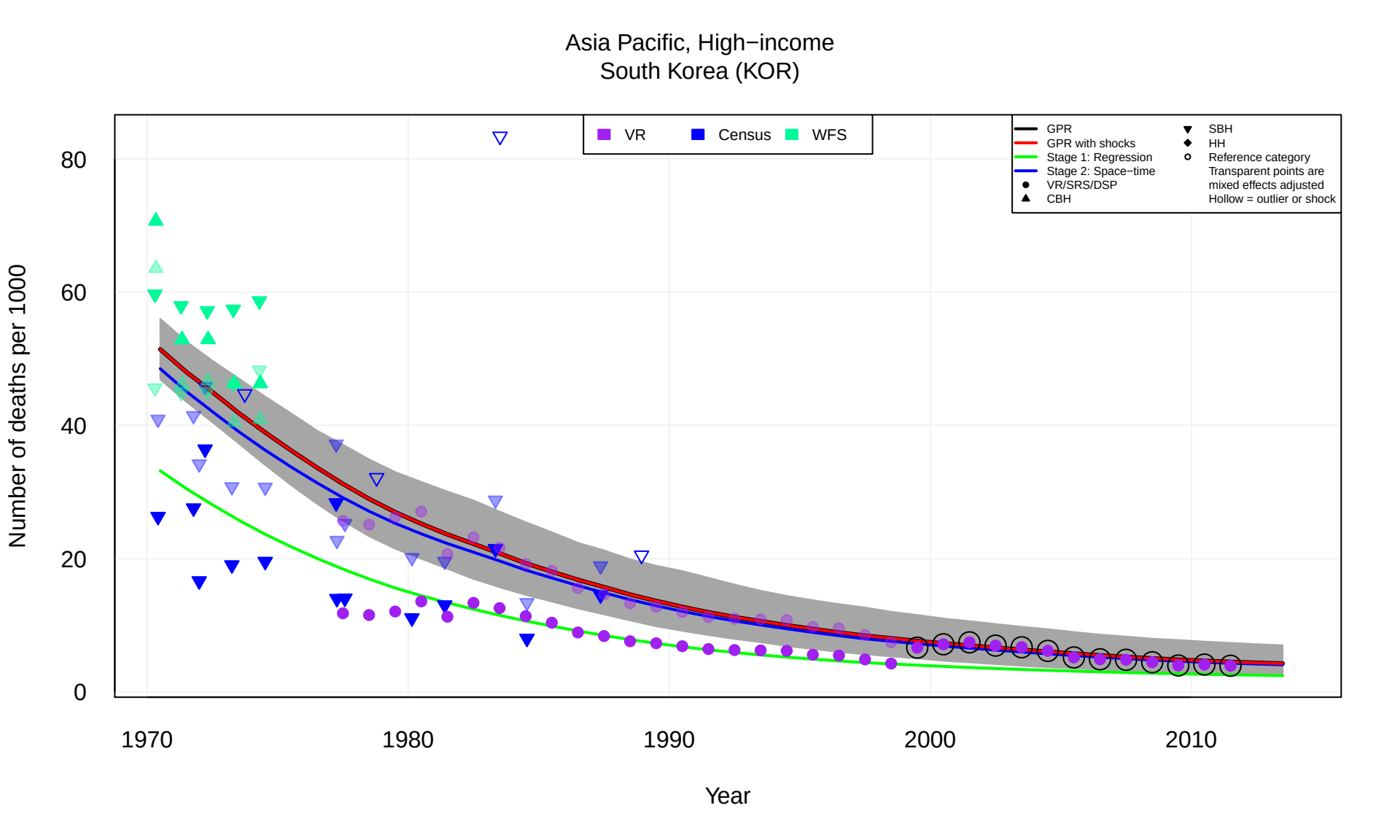
Jordan	6	10	10	10	10	13
Kuwait	1	10	10	10	9	12
Lebanon	1	6	10	10	10	5
Libya	2	7	10	10	7	5
Morocco	7	10	10	10	10	9
Oman	0	6	9	8	3	4
Palestine	0	0	1	3	5	10
Qatar	0	0	4	10	8	12
Saudi Arabia	0	0	5	7	2	13
Sudan	5	10	10	10	10	9
Syria	7	10	10	10	10	8
Tunisia	7	10	10	10	10	12
Turkey	8	10	10	10	10	12
United Arab Emirates	2	5	7	4	2	2
Yemen	5	10	10	10	10	7
North America, High-income						
Canada	10	10	10	10	10	12
United States	10	10	10	10	10	12
Oceania						
Federated States of Micronesia	1	4	3	3	6	1
Fiji	10	10	10	8	4	7
Kiribati	5	8	4	1	10	4
Marshall Islands	0	0	0	6	8	3
Papua New Guinea	2	5	6	6	6	1
Samoa	9	10	9	1	1	4
Solomon Islands	4	6	2	2	6	2
Tonga	5	8	5	4	1	3
Vanuatu	3	3	2	7	10	8
sub-Saharan Africa, Central						
Angola	0	0	4	10	10	11
Central African Republic	2	5	10	10	10	11
Congo	2	3	4	10	10	12
Democratic Republic of the Congo	0	0	10	10	10	10
Equatorial Guinea	0	0	4	10	10	3
Gabon	0	0	8	10	10	12
sub-Saharan Africa, Eastern						
Burundi	1	9	10	10	10	12
Comoros	1	2	9	10	10	3
Djibouti	0	0	3	10	10	7
Eritrea	0	0	10	10	10	2
Ethiopia	0	2	10	10	10	11
Kenya	10	10	10	10	10	10
Madagascar	7	8	10	10	10	13
Malawi	3	9	10	10	10	12
Mozambique	2	5	10	10	10	12

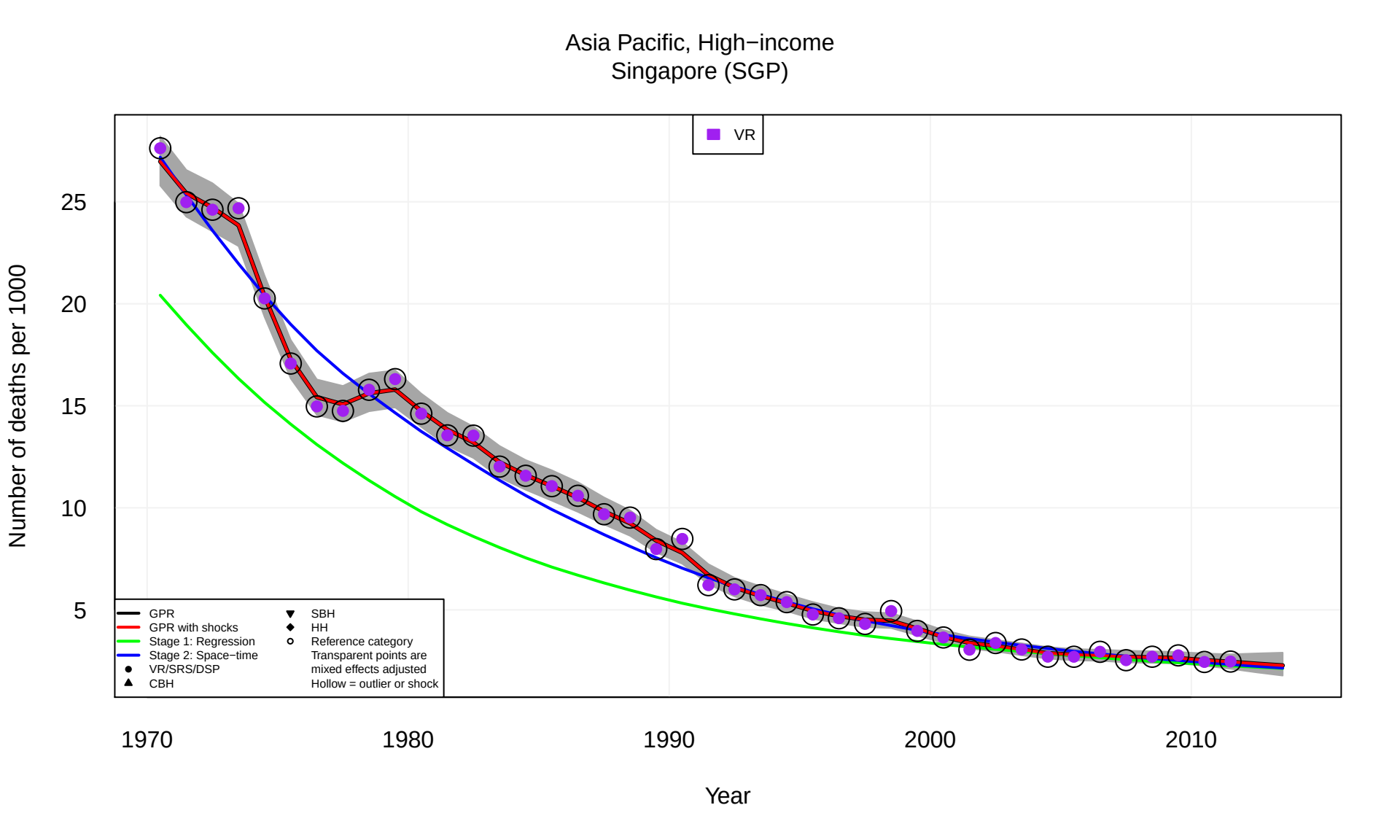
Rwanda	4	10	10	10	10	11
Somalia	0	0	0	8	10	7
South Sudan	0	0	0	7	10	10
Tanzania	3	9	10	10	10	12
Uganda	3	8	10	10	10	12
Zambia	3	9	10	10	10	12
sub-Saharan Africa, Southern						
Botswana	2	7	10	10	9	6
Lesotho	7	10	10	10	10	10
Namibia	0	3	10	10	10	7
South Africa	0	2	10	10	10	13
Swaziland	4	5	7	10	10	11
Zimbabwe	2	9	10	10	10	11
sub-Saharan Africa, Western						
Benin	3	10	10	10	10	12
Burkina Faso	0	7	10	10	10	11
Cameroon	9	10	10	10	10	12
Cape Verde	4	5	10	10	10	3
Chad	0	1	10	10	10	10
Cote d'Ivoire	5	10	10	10	10	12
Ghana	6	10	10	10	10	12
Guinea	0	0	9	10	10	13
Guinea-Bissau	0	0	5	10	10	7
Liberia	5	9	10	10	10	12
Mali	0	8	10	10	10	8
Mauritania	4	10	10	10	10	8
Niger	0	6	10	10	10	12
Nigeria	0	7	10	10	10	12
Sao Tome and Principe	4	8	7	10	10	9
Senegal	7	10	10	10	10	11
Sierra Leone	2	7	8	10	10	11
The Gambia	2	5	7	10	10	9
Togo	4	9	10	10	10	11

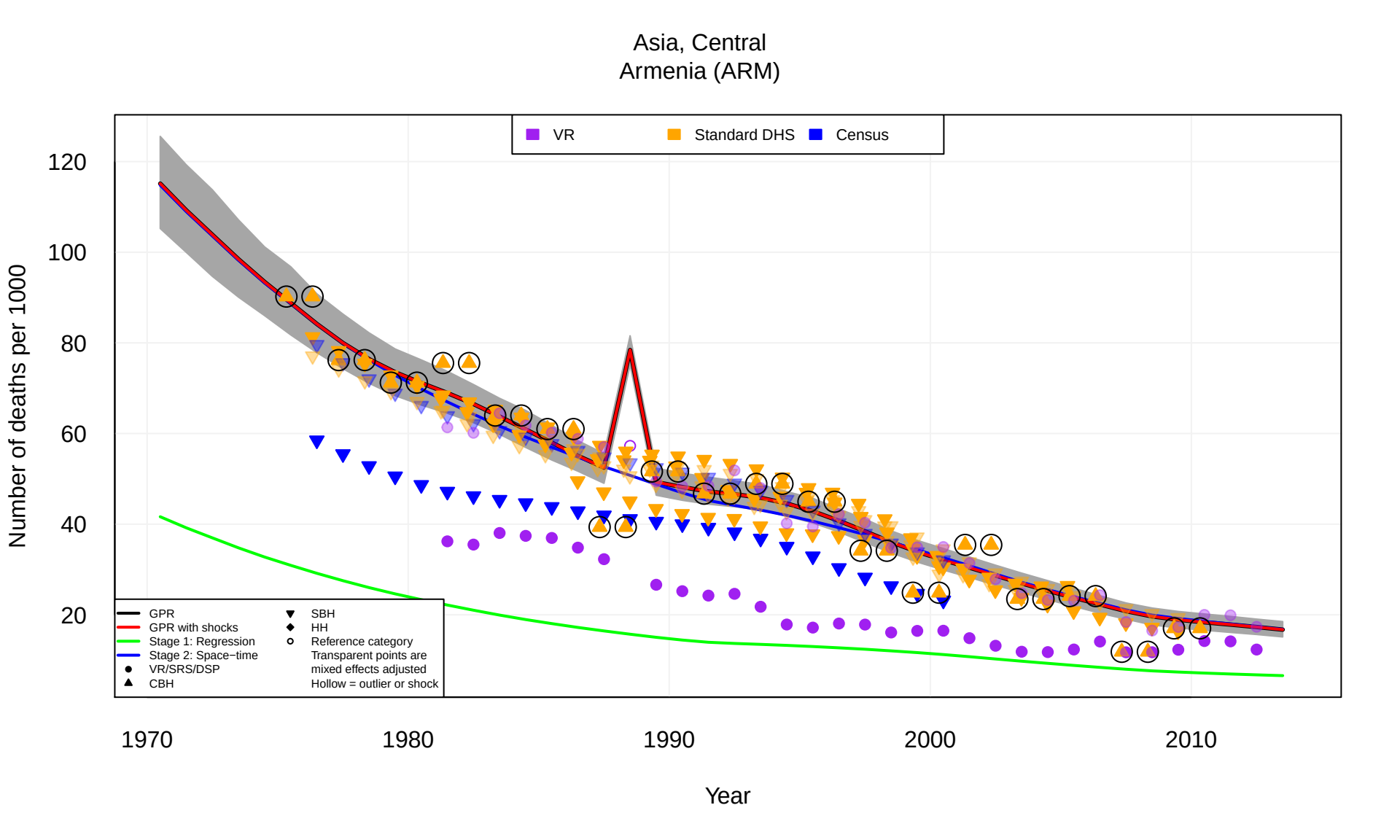
Web figure 1. Under-5 mortality rate for 188 countries.

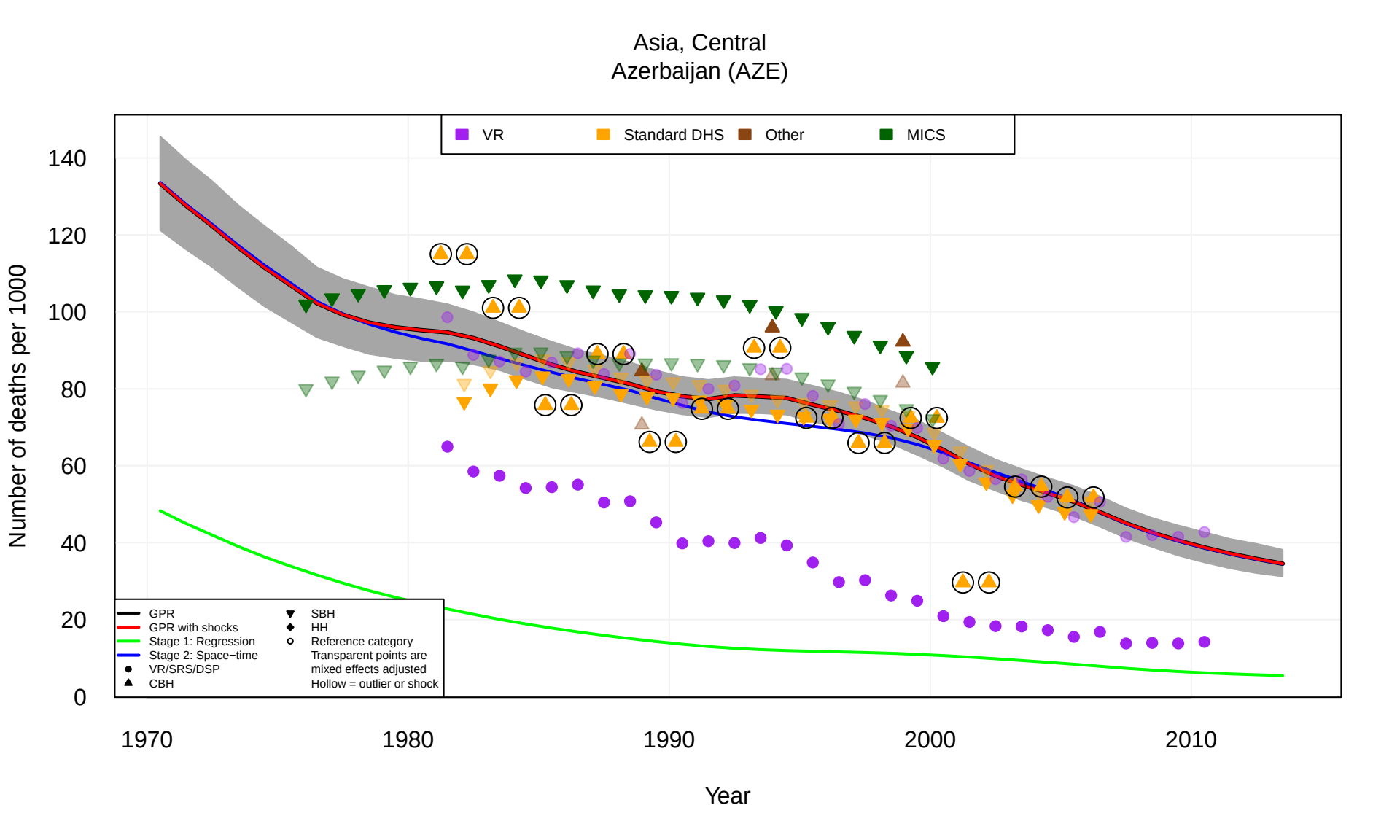

Asia Pacific, High−income
Brunei (BRN)
VR
Number of deaths per 1000
0
10
20
30
40
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

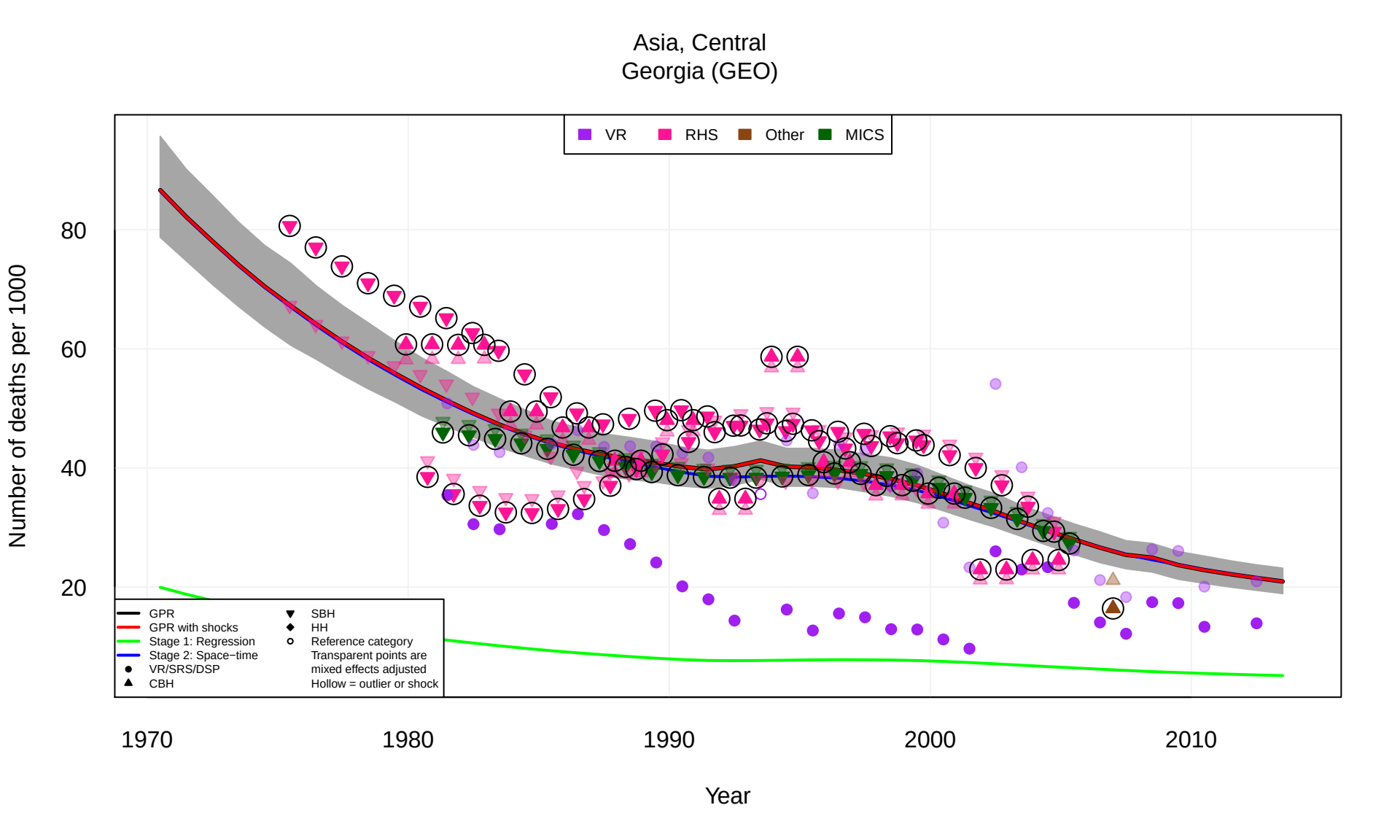

Asia Pacific, High−income
Japan (JPN)
VR
Number of deaths per 1000
15
10
5
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

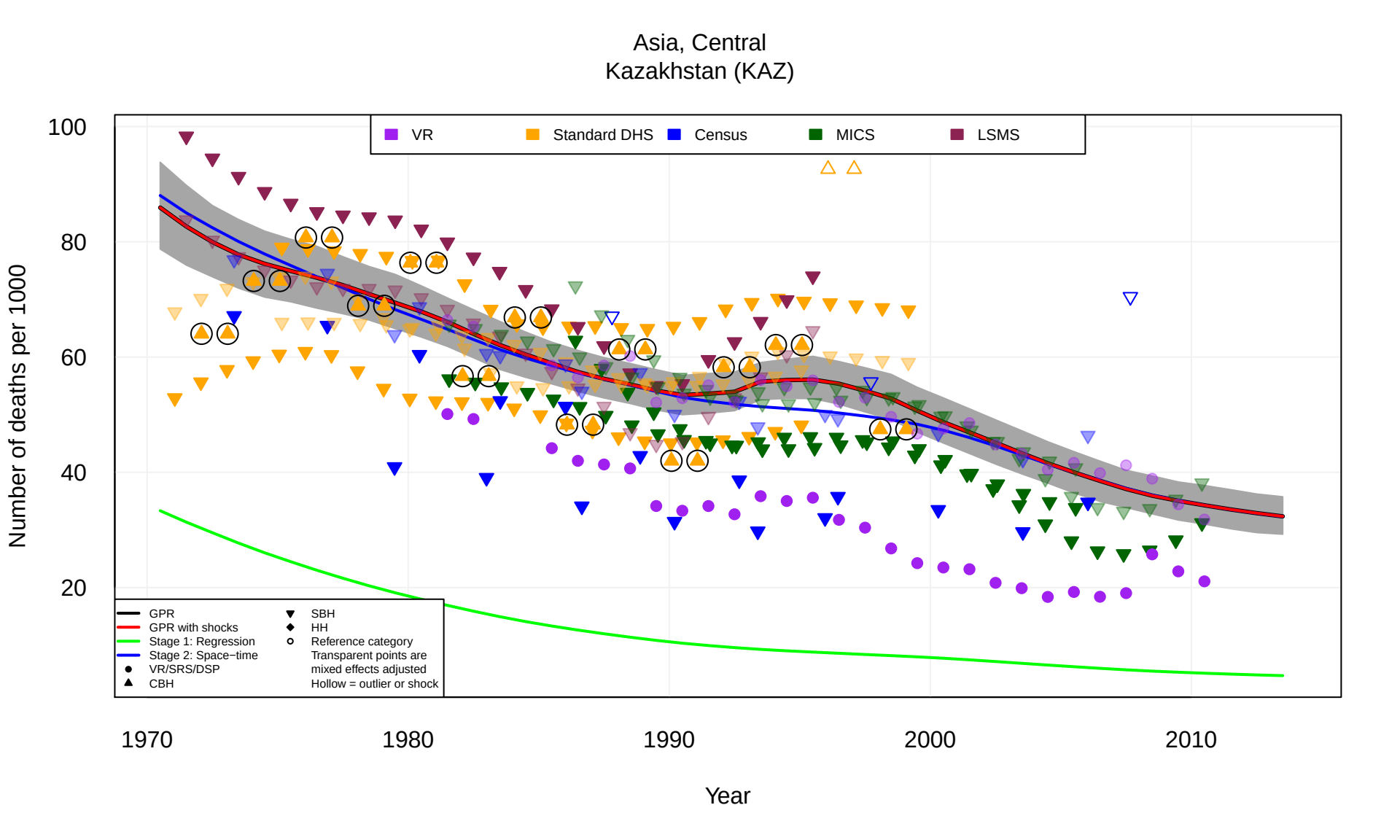

Asia Pacific, High−income
South Korea (KOR)
VR
Census
WFS
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock
Number of deaths per 1000
0
20
40
60
80
1970
1980
1990
2000
2010
Year

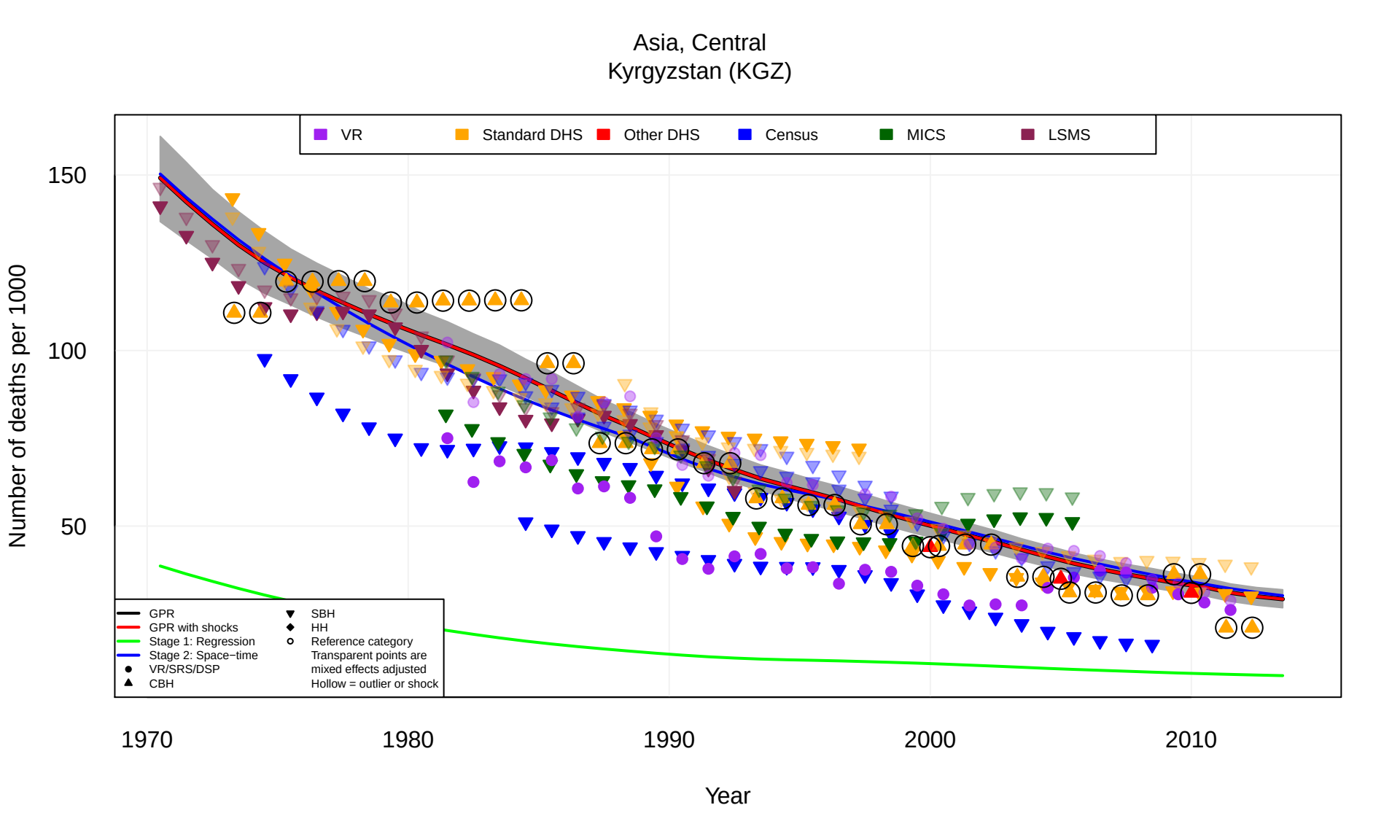

Asia Pacific, High−income
Singapore (SGP)
VR
Number of deaths per 1000
25
20
15
10
5
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

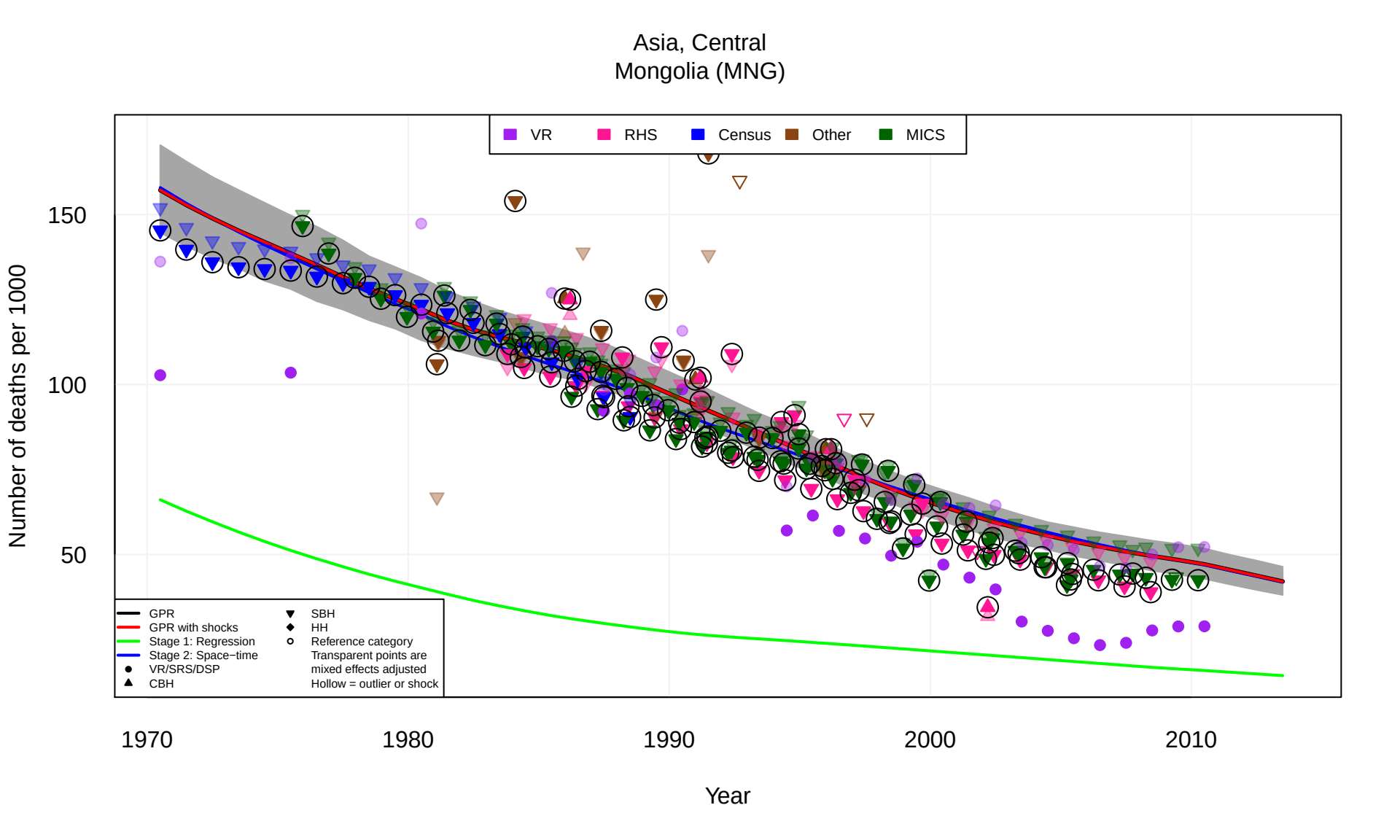

Asia, Central
Armenia (ARM)
VR
Standard DHS
Census
120
100
80
60
40
20
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

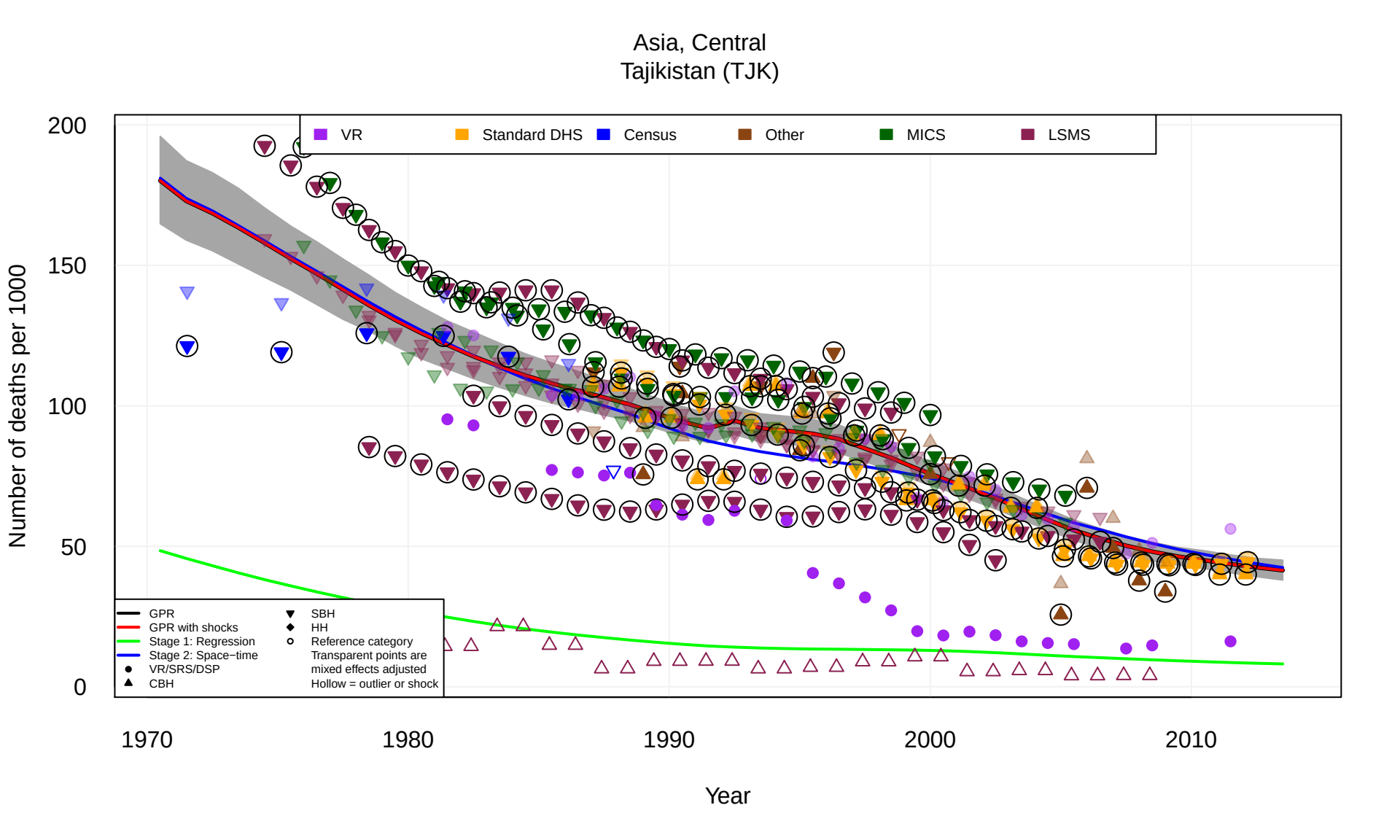

Asia, Central
Azerbaijan (AZE)
VR
Standard DHS
Other
MICS
Number of deaths per 1000
0
20
40
60
80
100
120
140
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

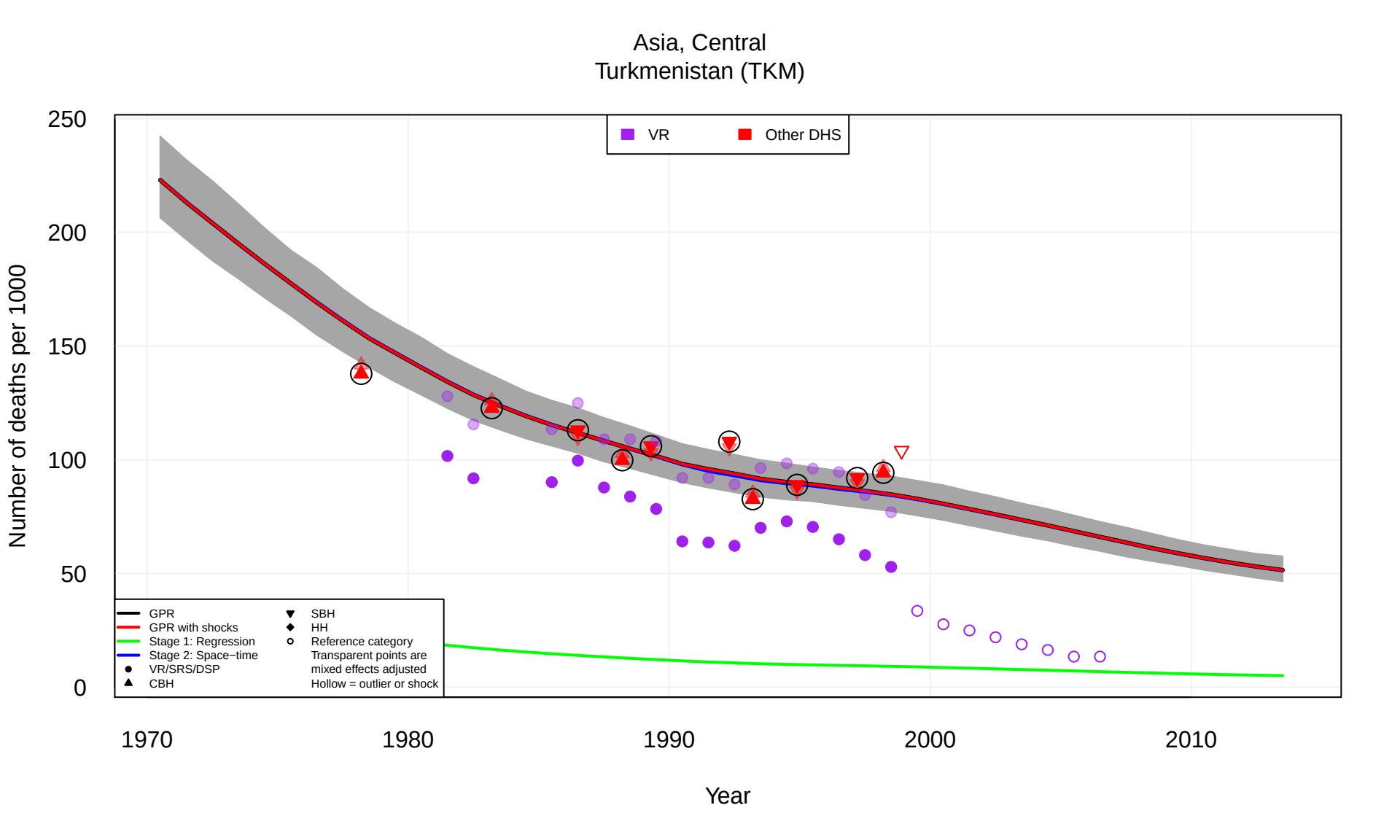

Asia, Central
Georgia (GEO)
VR
RHS
Other
MICS
Number of deaths per 1000
80
60
40
20
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

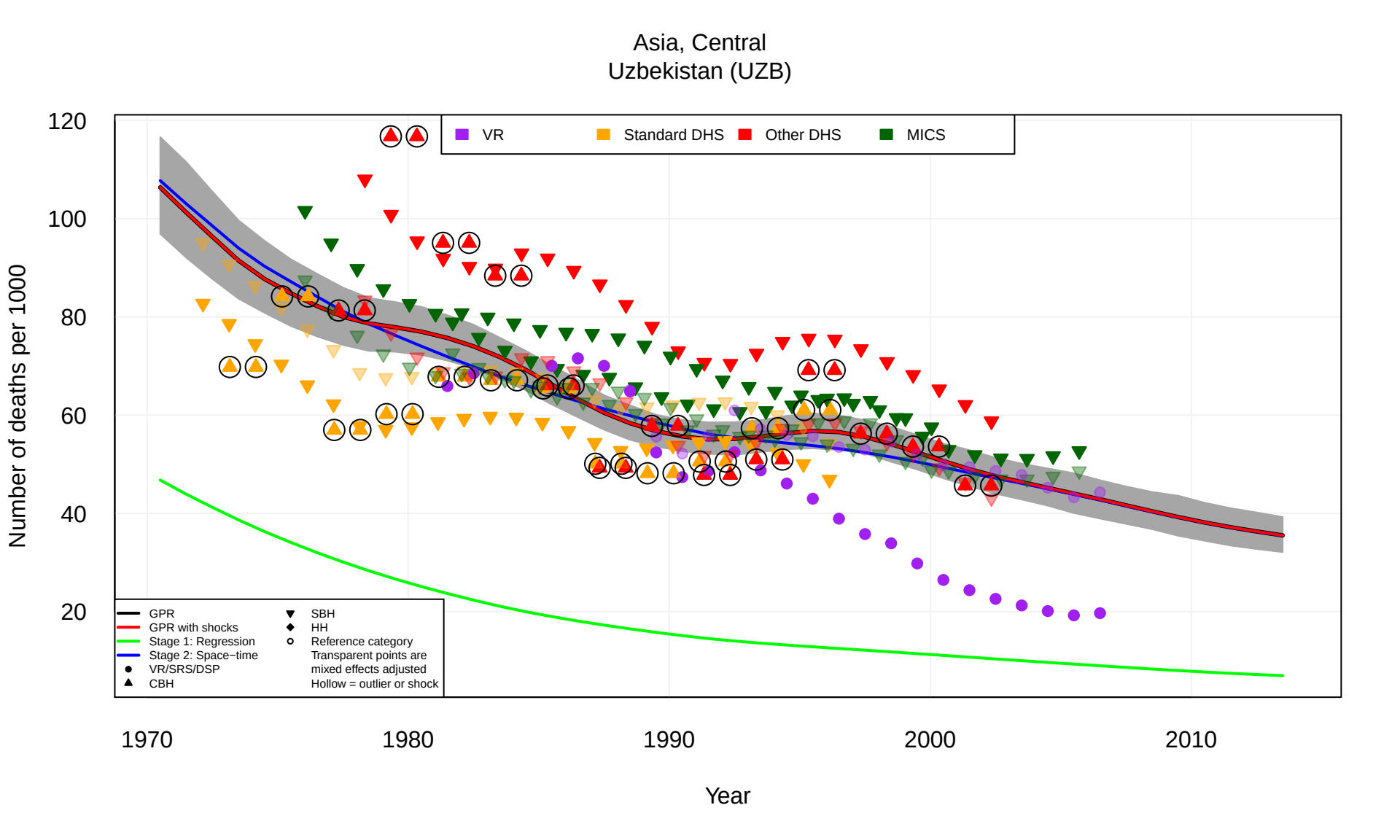

Asia, Central
Kazakhstan (KAZ)
VR
Standard DHS
Census
MICS
LSMS
Number of deaths per 1000
100
80
60
40
20
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

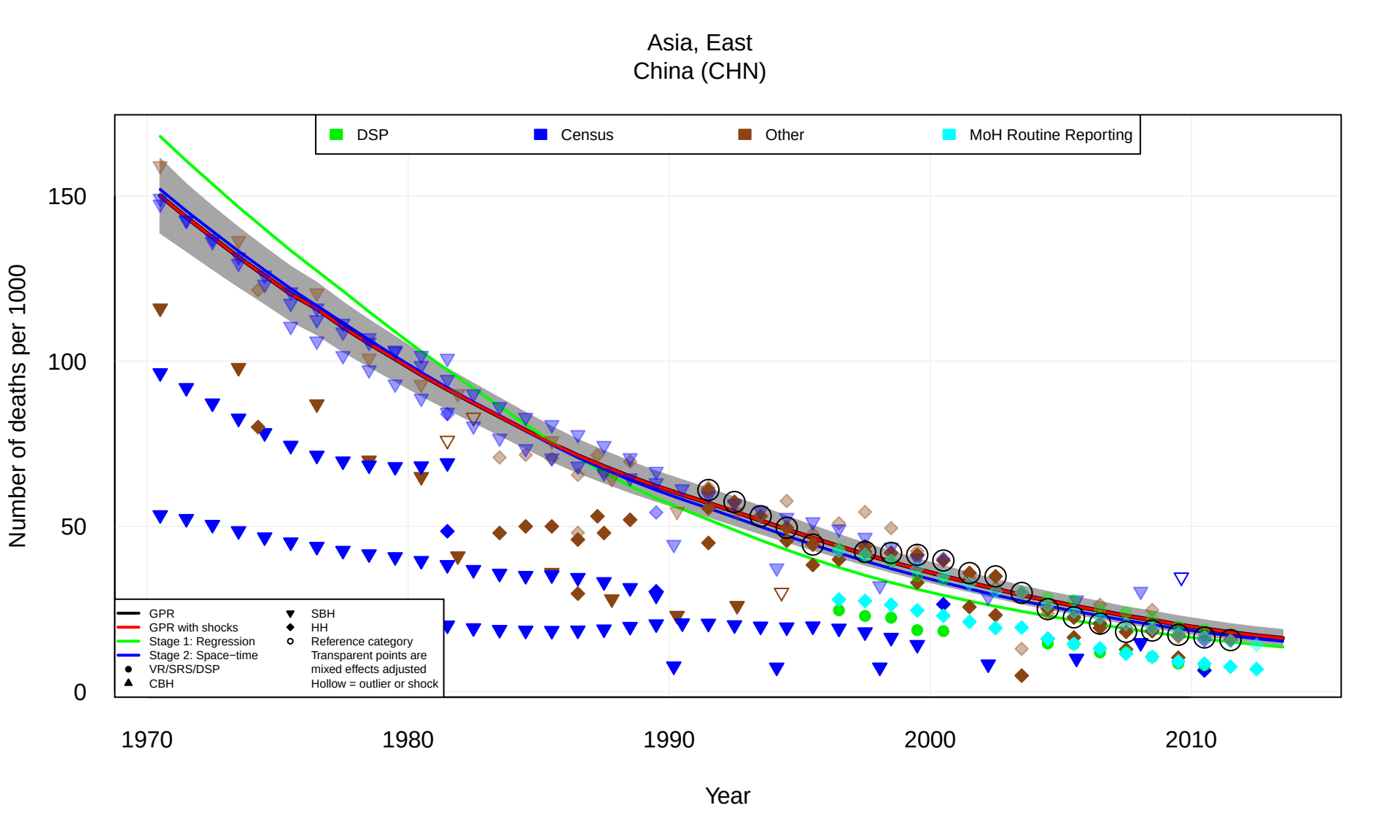

Asia, Central
Kyrgyzstan (KGZ)
VR
Standard DHS
Other DHS
Census
MICS
LSMS
150
100
50
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

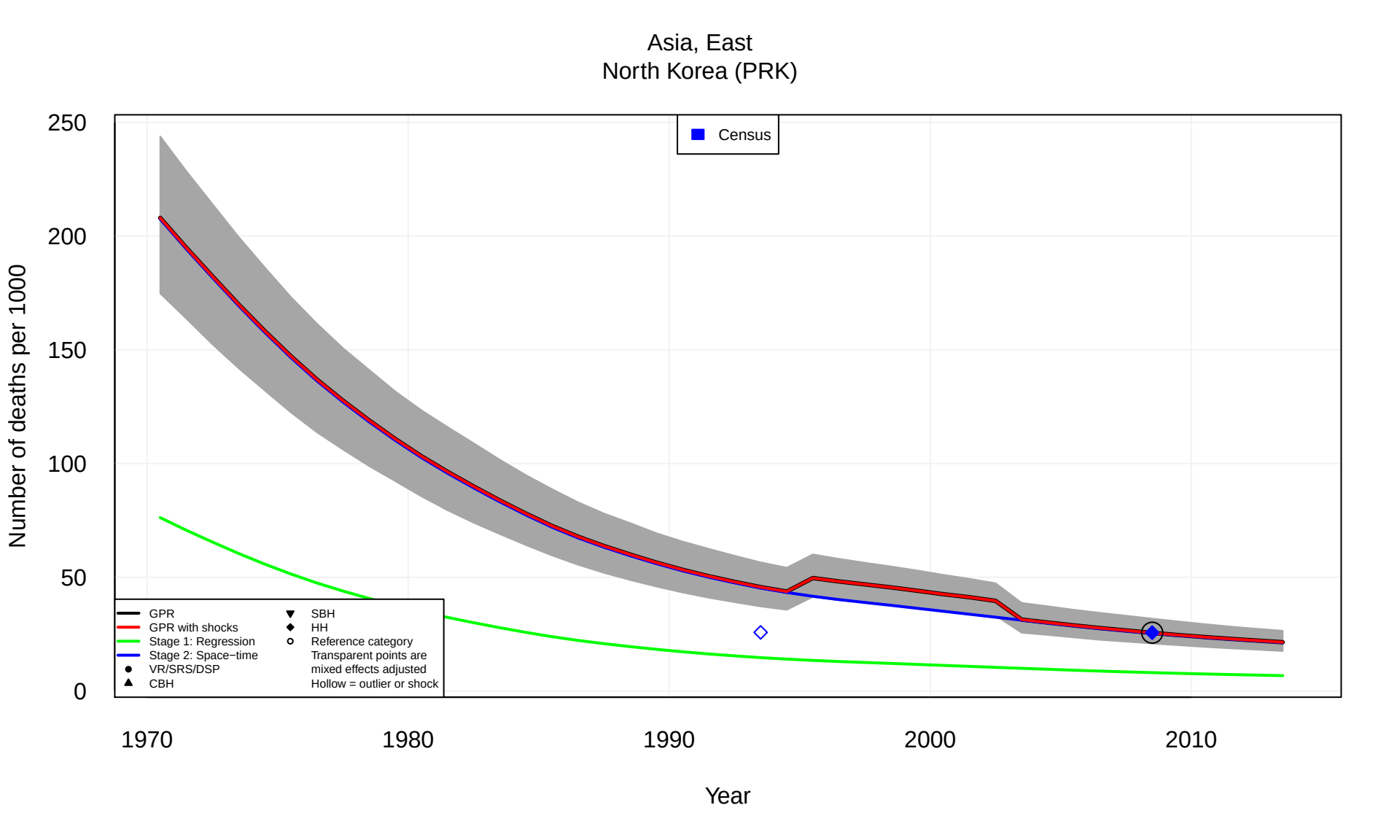

Asia, Central
Mongolia (MNG)
VR
RHS
Census
Other
MICS
Number of deaths per 1000
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

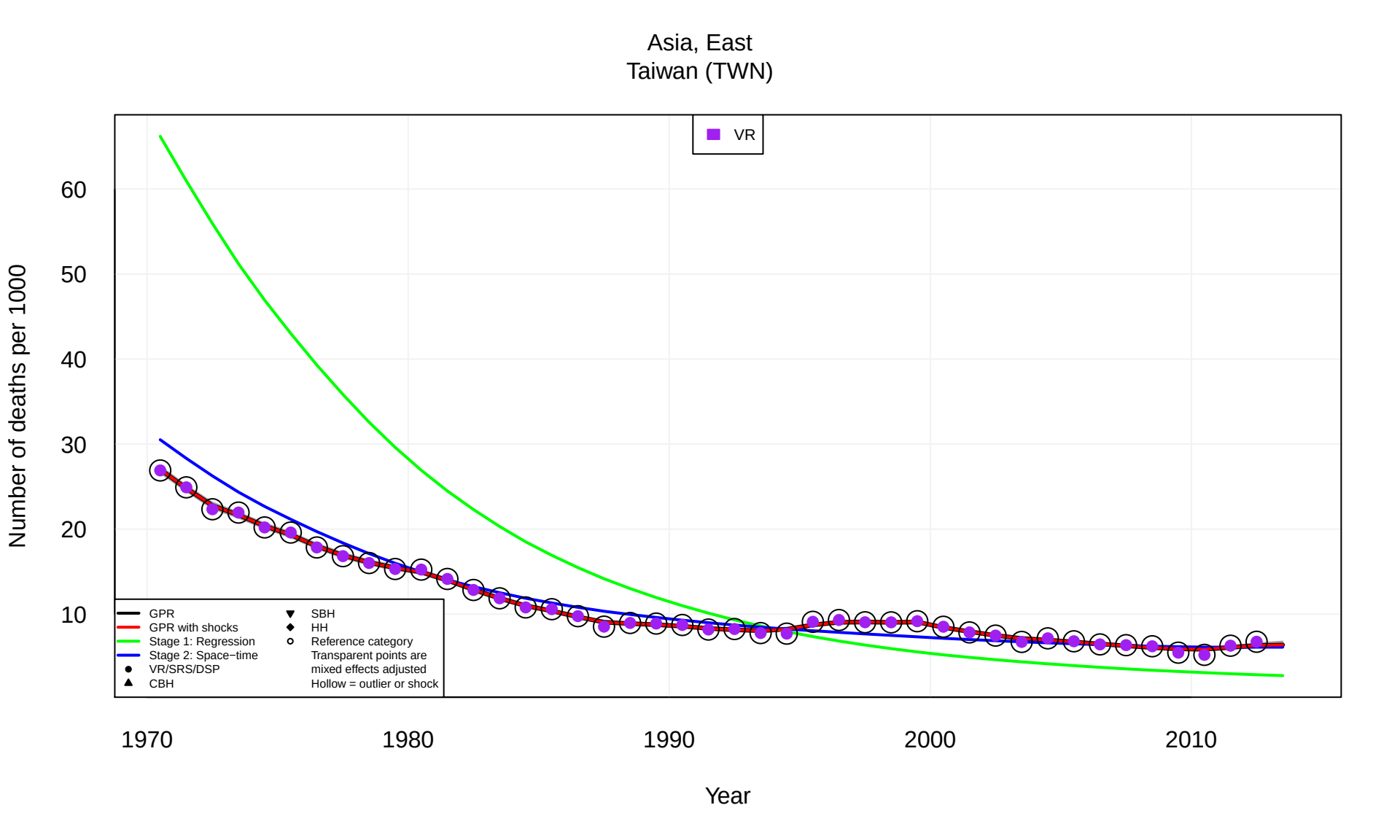

Asia, Central
Tajikistan (TJK)
VR
Standard DHS
Census
Other
MICS
LSMS
Number of deaths per 1000
200
150
100
50
0
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

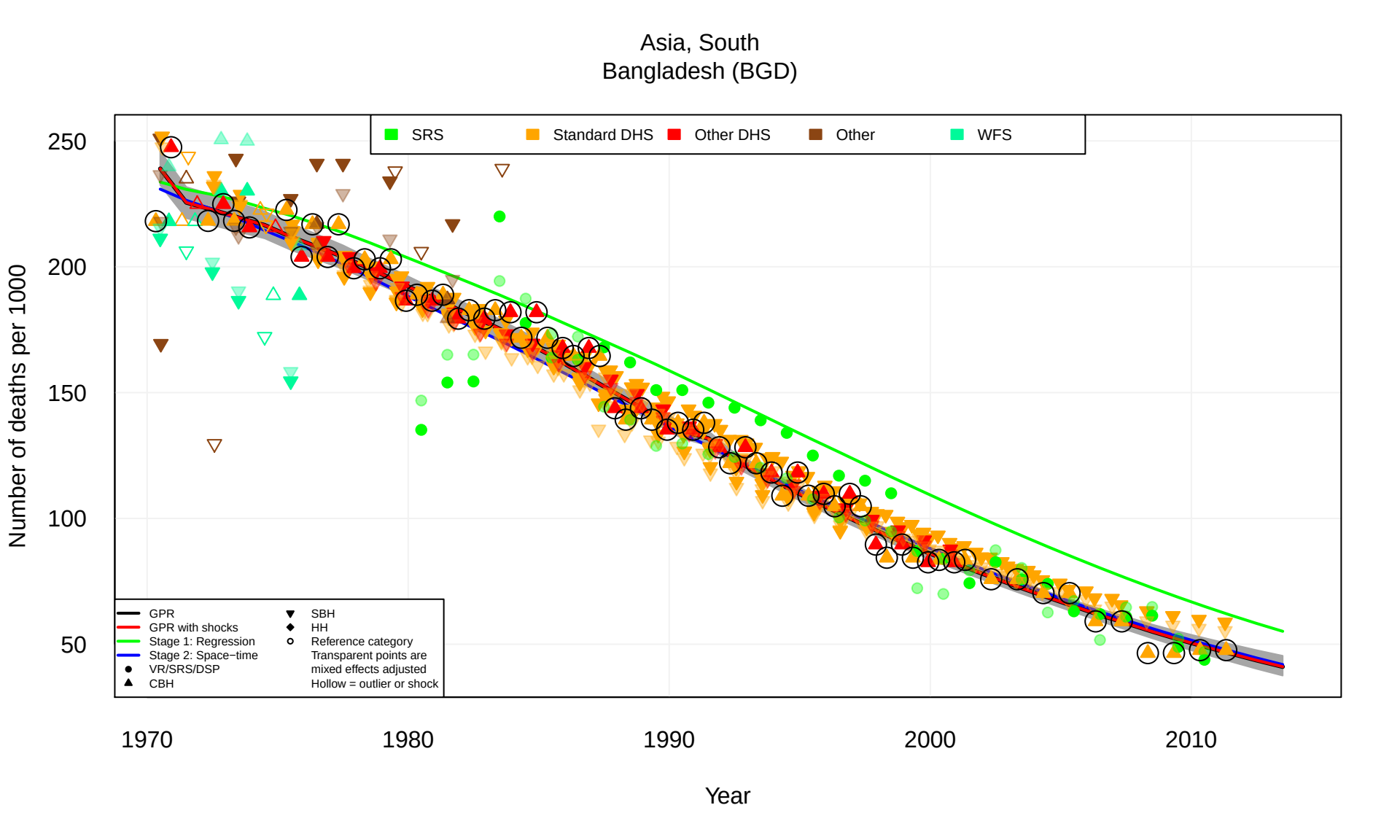

Asia, Central
Turkmenistan (TKM)
VR
Other DHS
Number of deaths per 1000
250
200
150
100
50
0
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

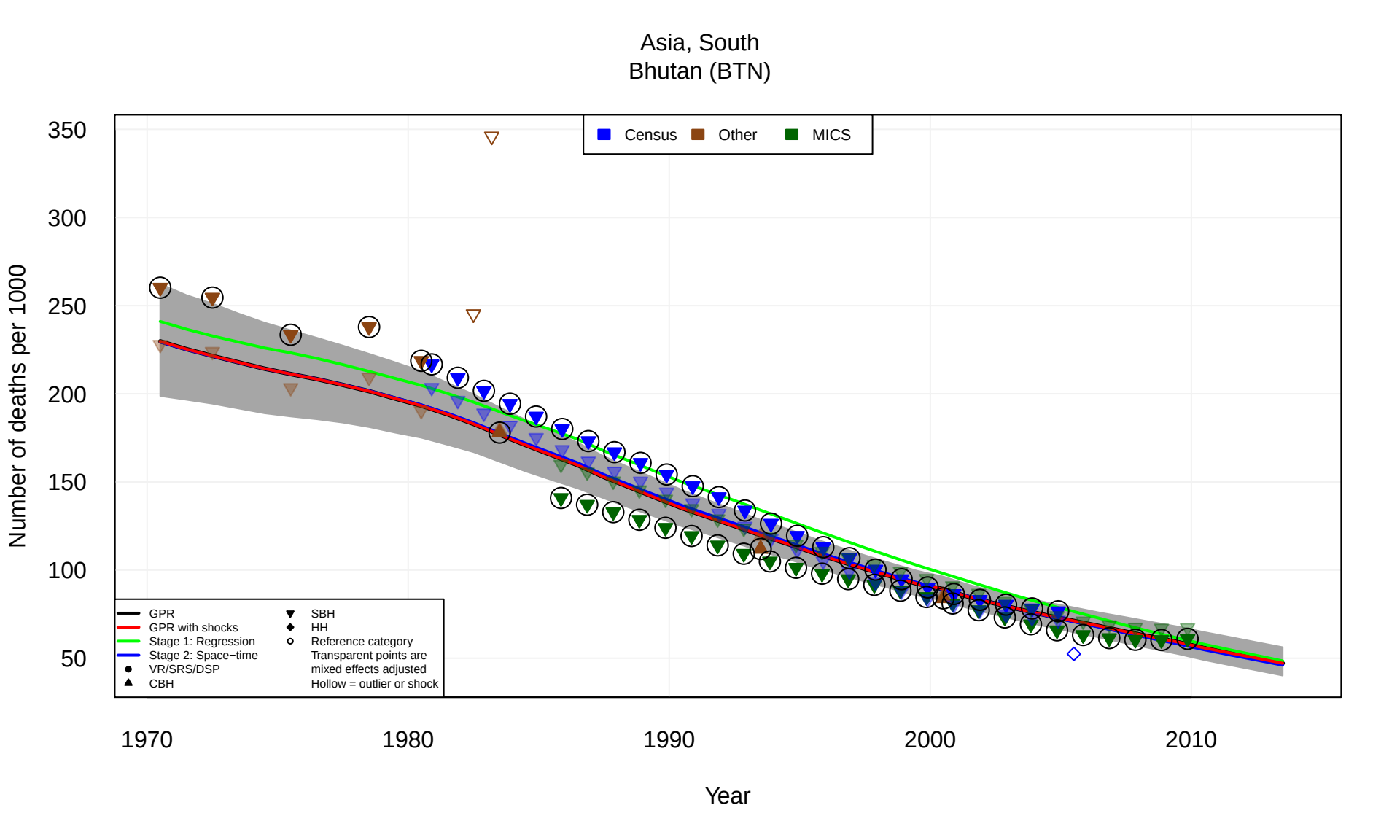

Asia, Central
Uzbekistan (UZB)
VR
Standard DHS
Other DHS
MICS
120
100
80
60
40
20
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

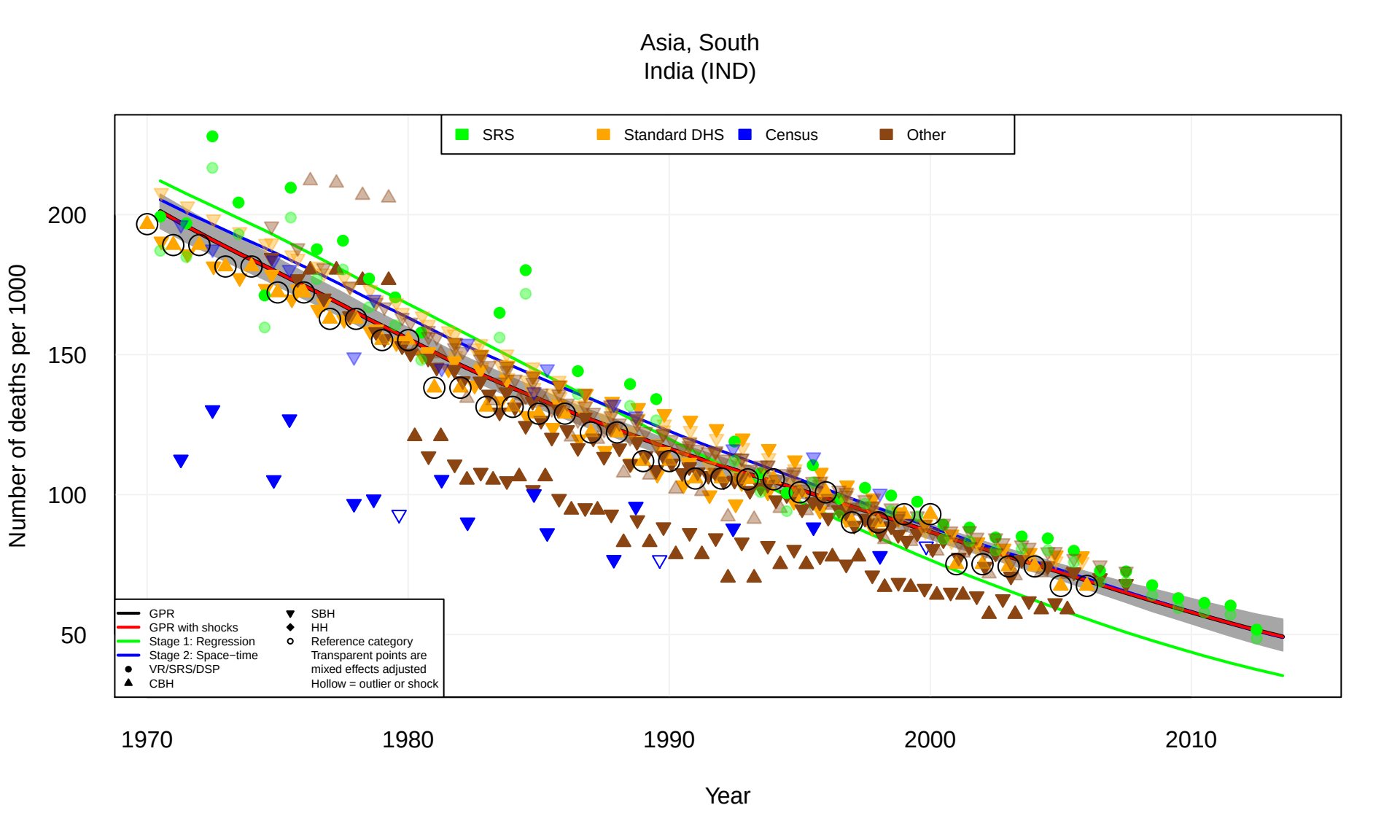

Asia, East
China (CHN)
DSP
Census
Other
MoH Routine Reporting
150
100
50
0
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

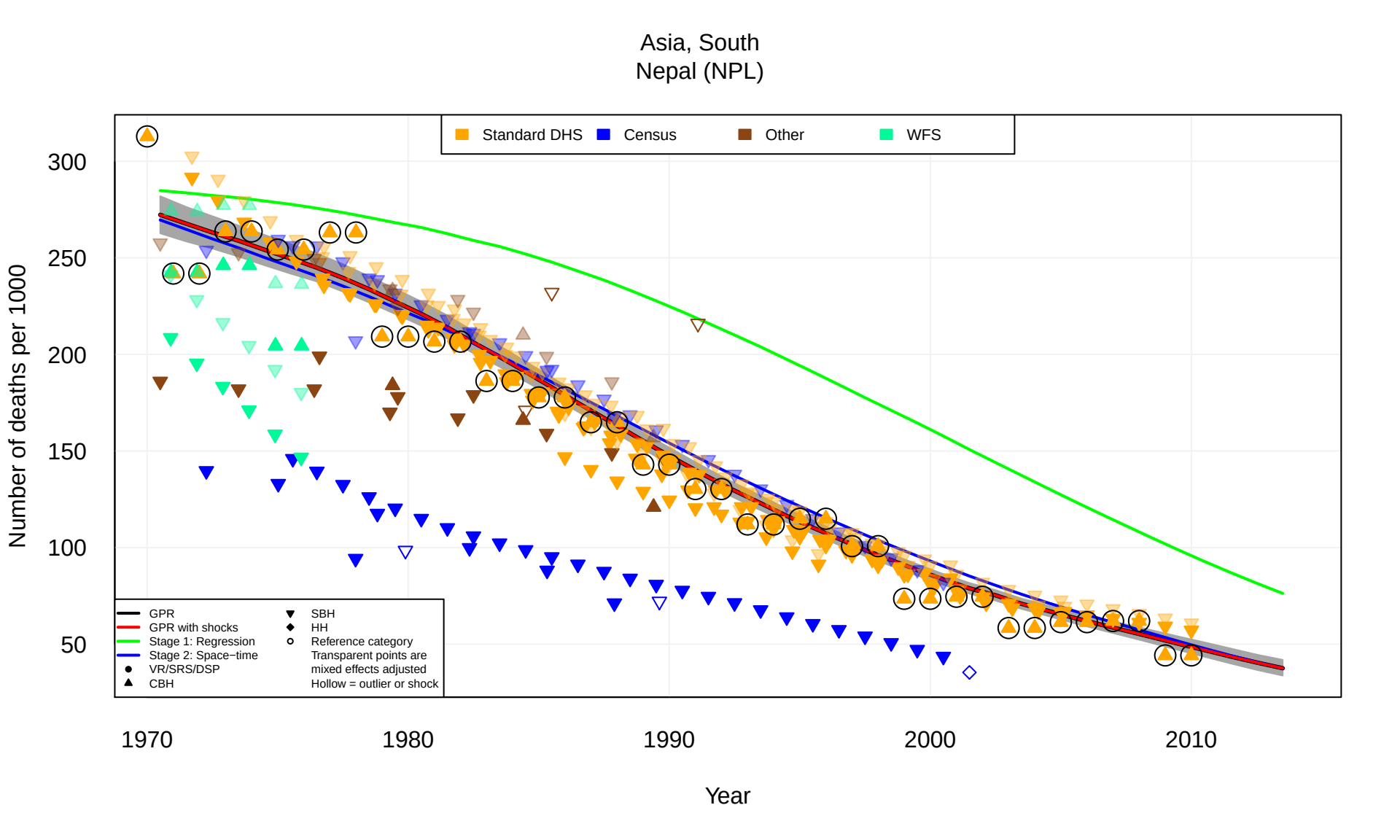

Asia, East
North Korea (PRK)
Census
Number of deaths per 1000
250
200
150
100
50
0
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

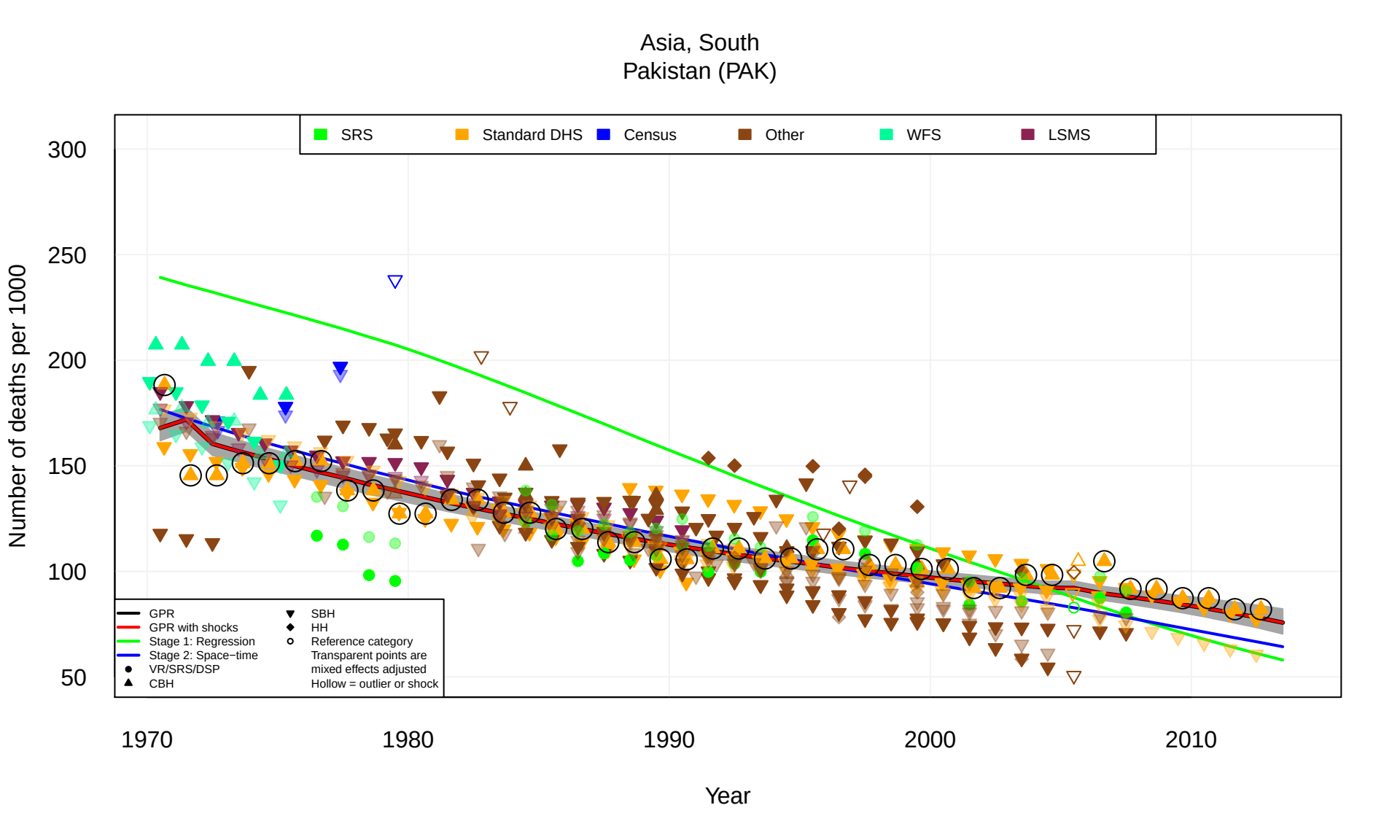

Asia, East
Taiwan (TWN)
VR
Number of deaths per 1000
60
50
40
30
20
10
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

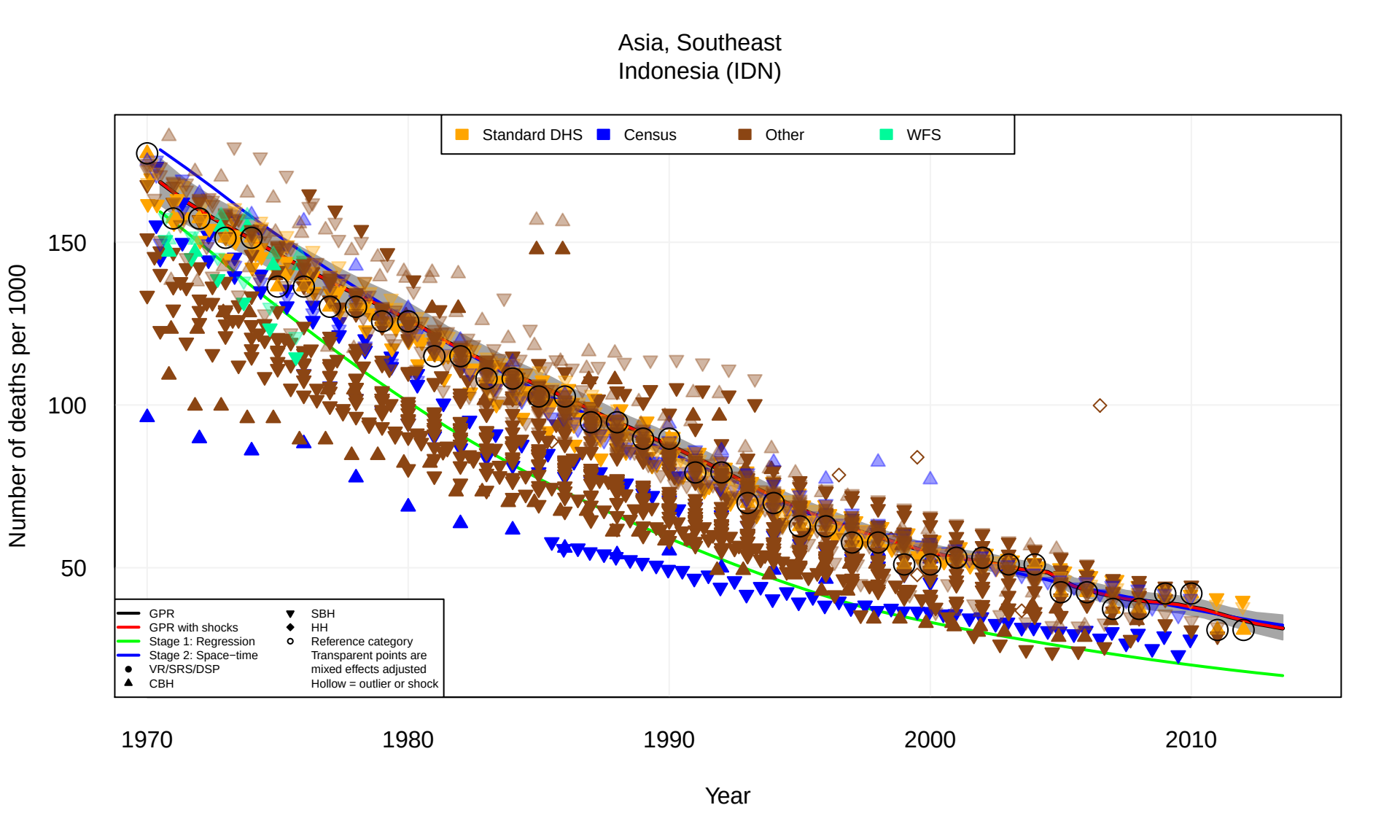

Asia, South
Bangladesh (BGD)
SRS
Standard DHS
Other DHS
Other
WFS
Number of deaths per 1000
250
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

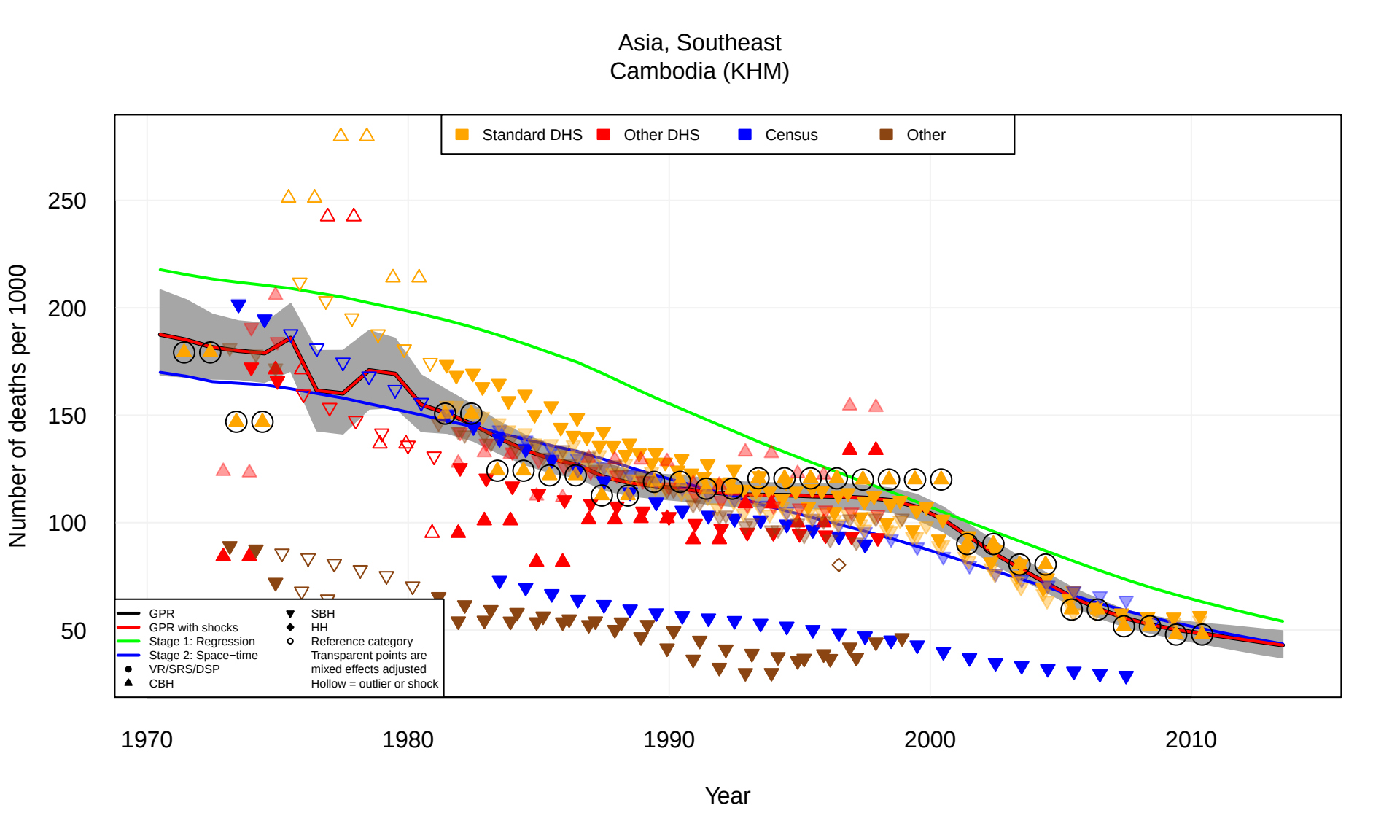

Asia, South
Bhutan (BTN)
Census
Other
MICS
Number of deaths per 1000
350
300
250
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

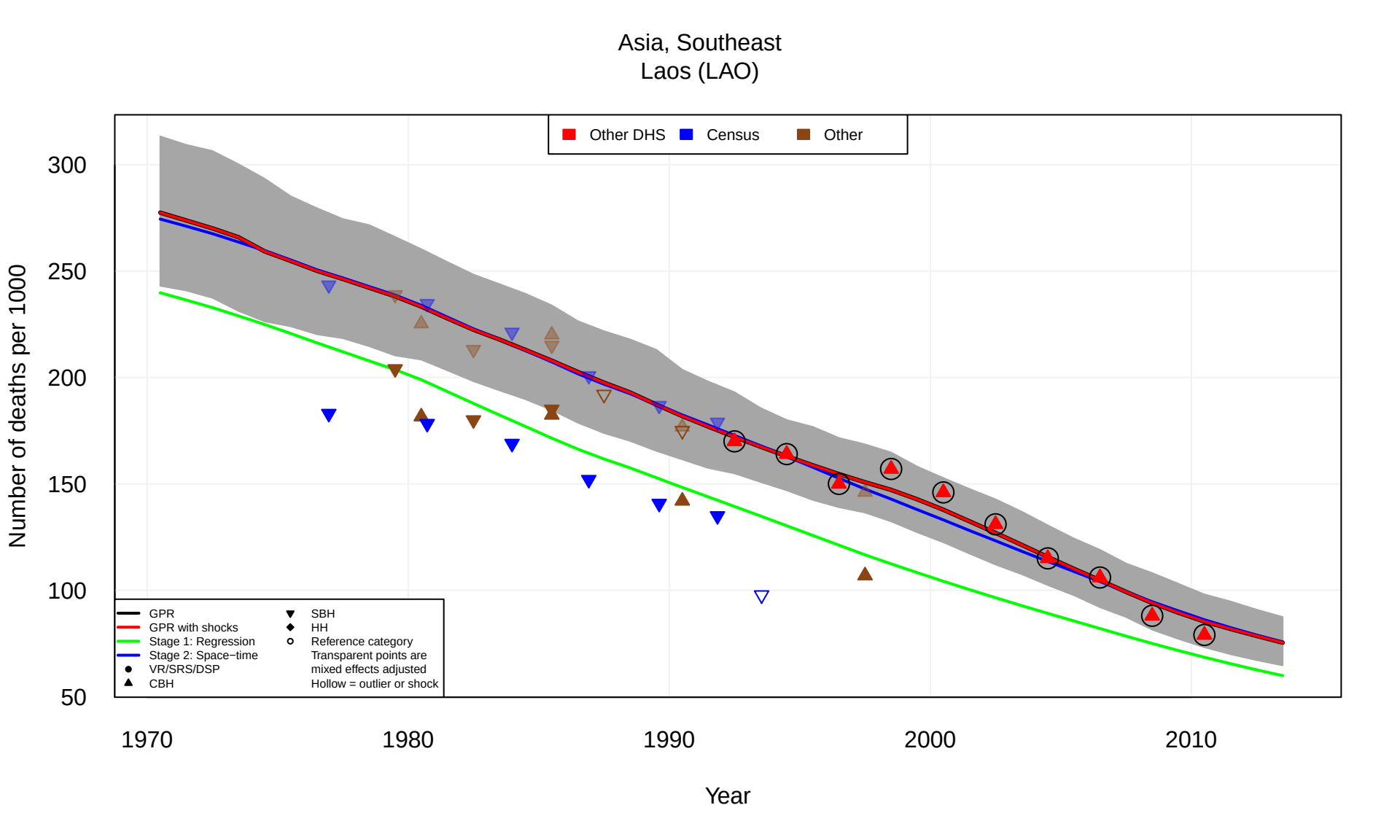

Asia, South
India (IND)
SRS
Standard DHS
Census
Other
Number of deaths per 1000
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

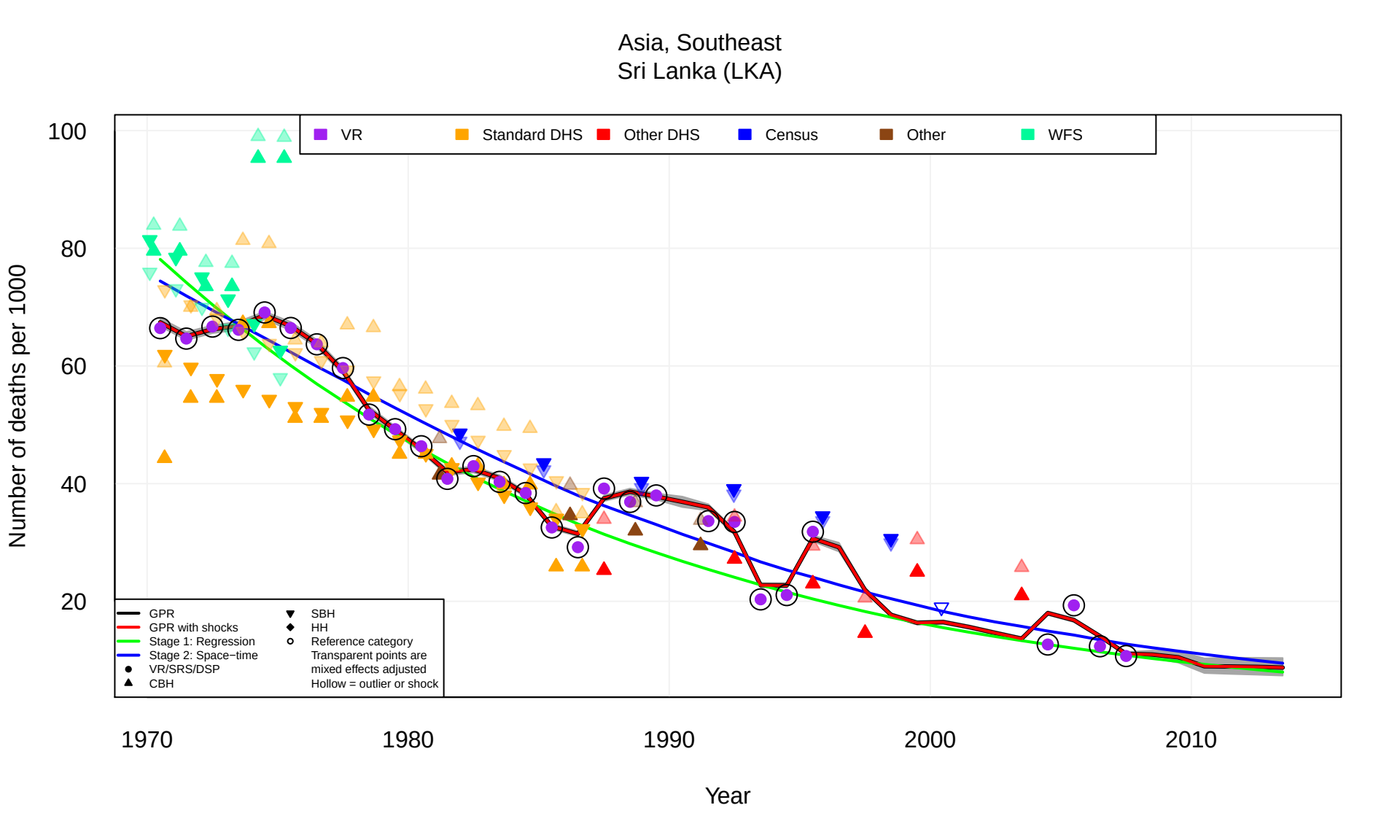

Asia, South
Nepal (NPL)
Standard DHS
Census
Other
WFS
Number of deaths per 1000
300
250
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

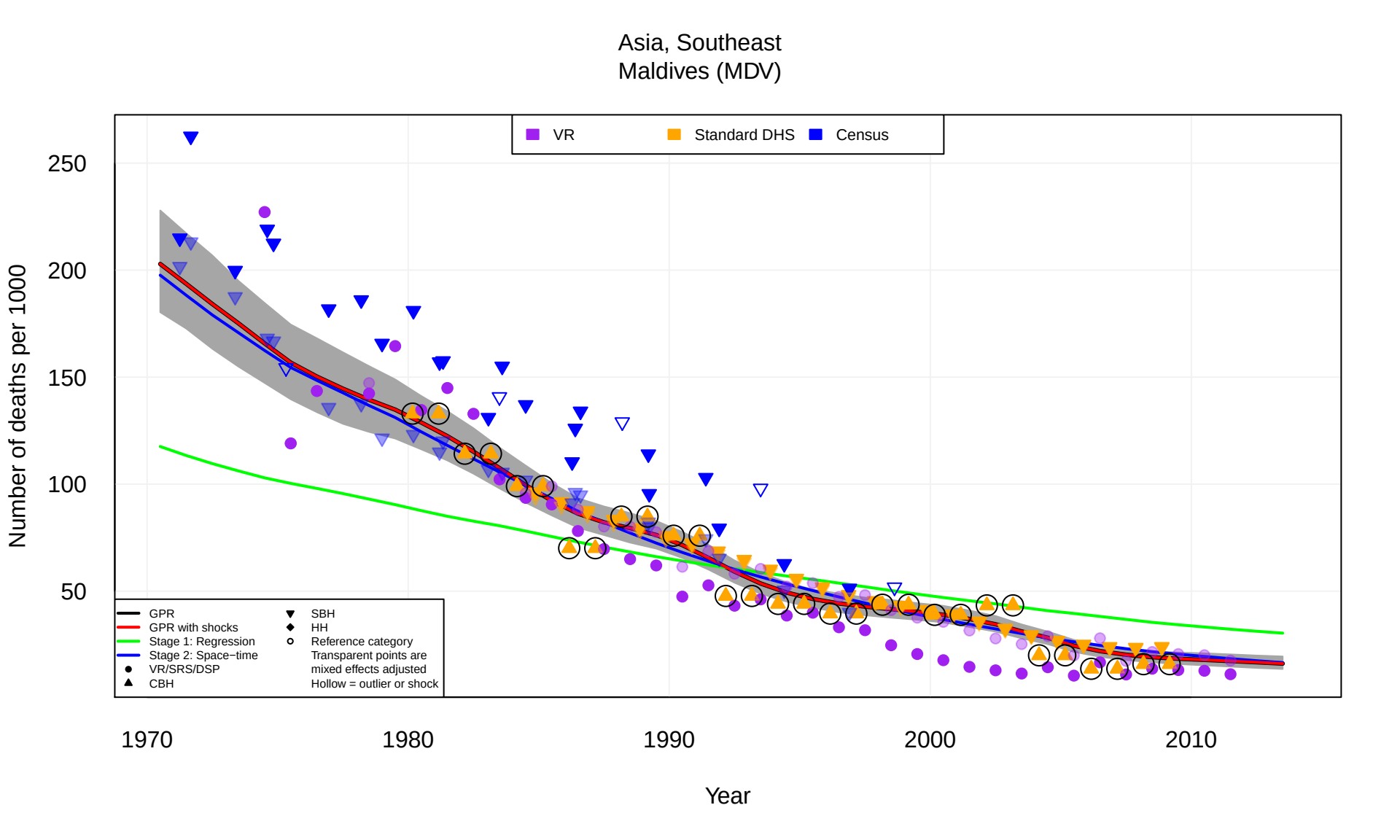

Asia, South
Pakistan (PAK)
SRS
Standard DHS
Census
Other
WFS
LSMS
300
250
200
150
100
50
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

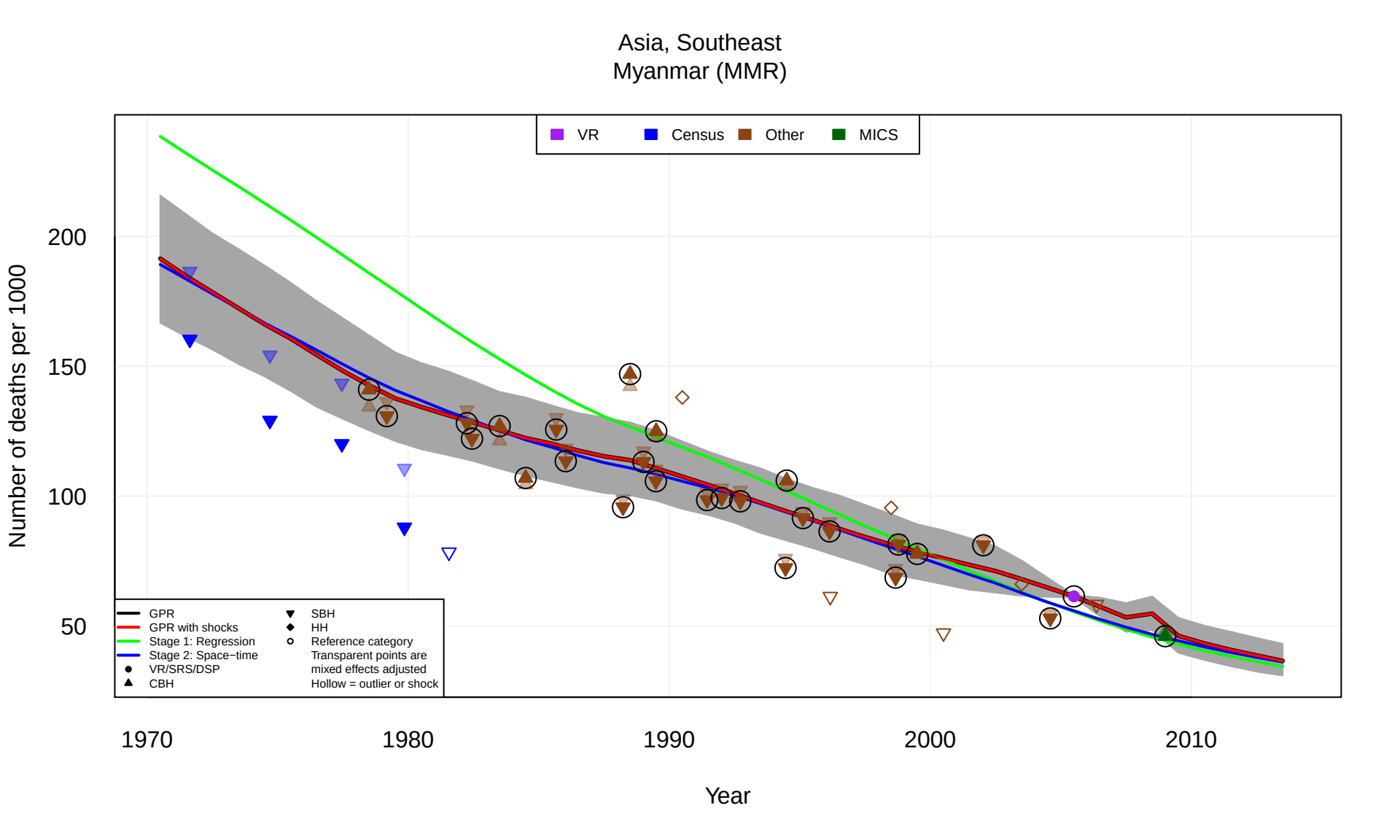

Asia, Southeast
Indonesia (IDN)
Standard DHS
Census
Other
WFS
Number of deaths per 1000
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

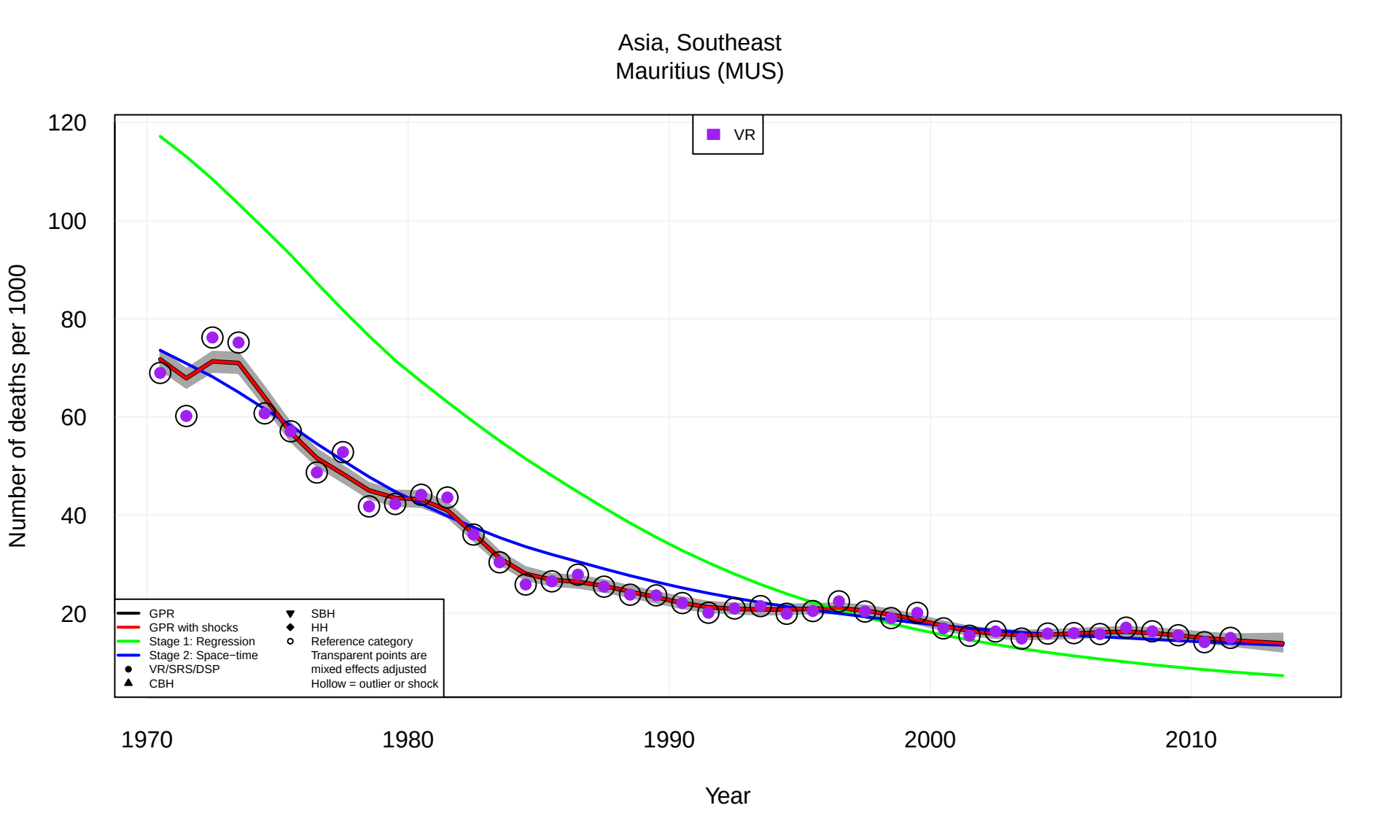

Asia, Southeast
Cambodia (KHM)
Standard DHS
Other DHS
Census
Other
Number of deaths per 1000
250
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

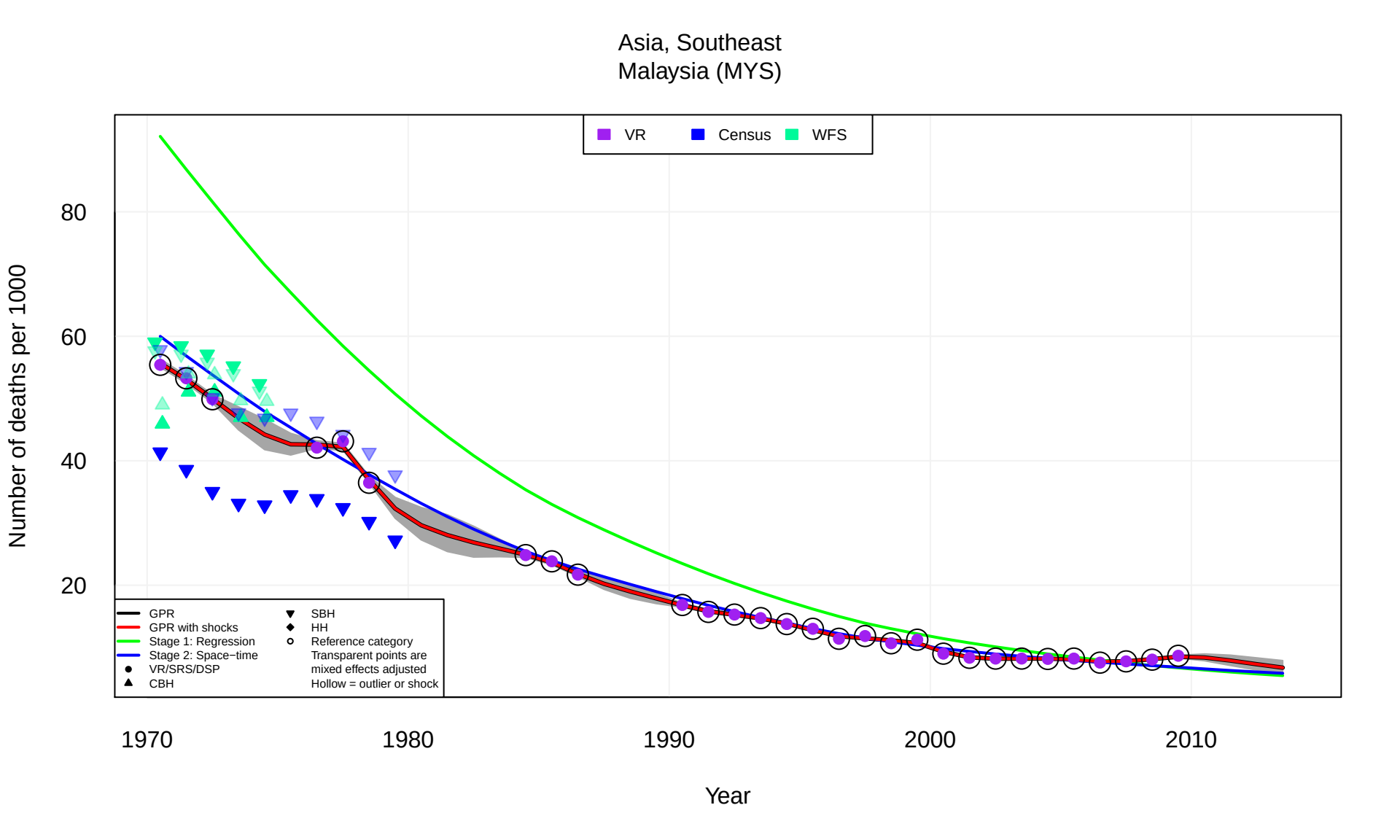

Asia, Southeast
Laos (LAO)
Other DHS
Census
Other
Number of deaths per 1000
300
250
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

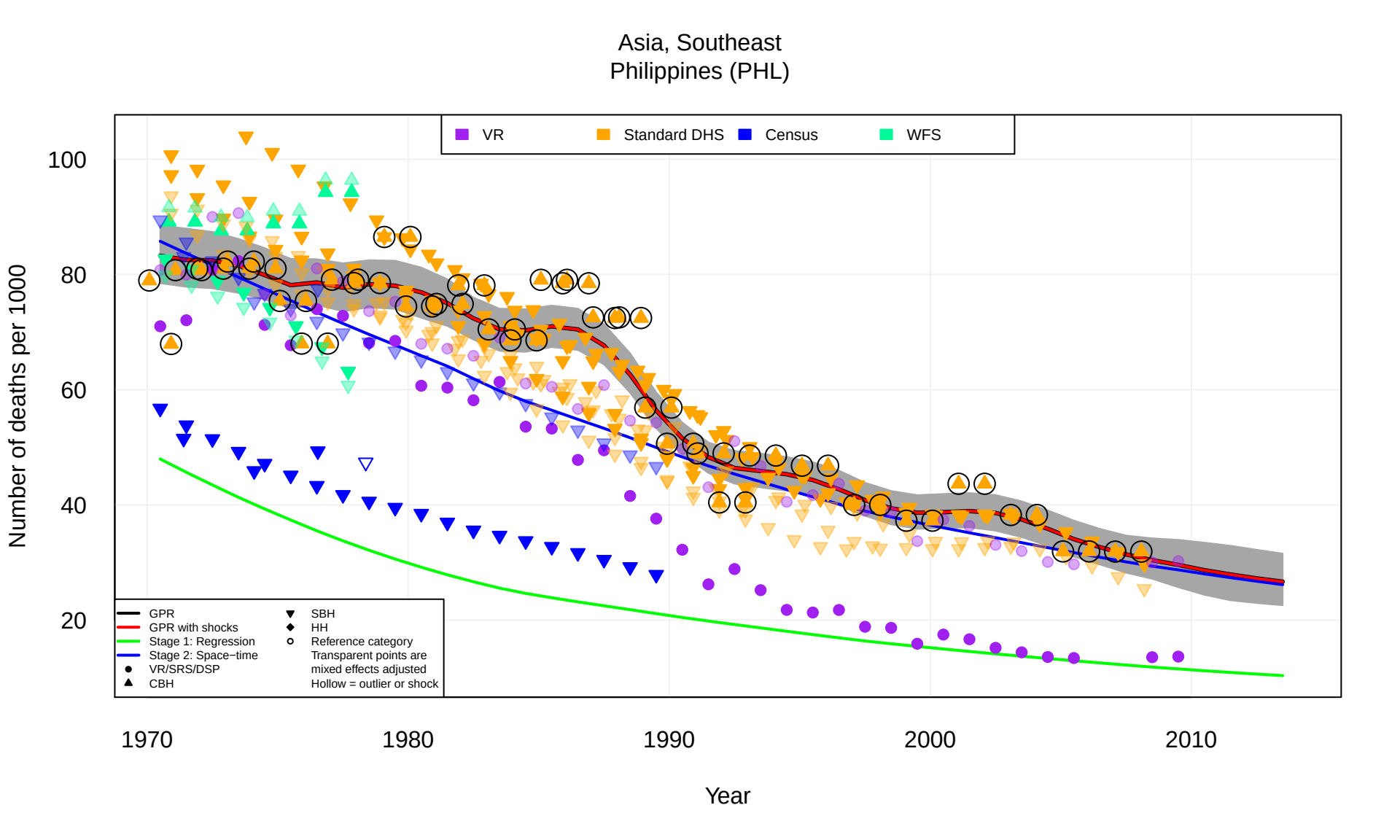

Asia, Southeast
Sri Lanka (LKA)
VR
Standard DHS
Other DHS
Census
Other
WFS
Number of deaths per 1000
100
80
60
40
20
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

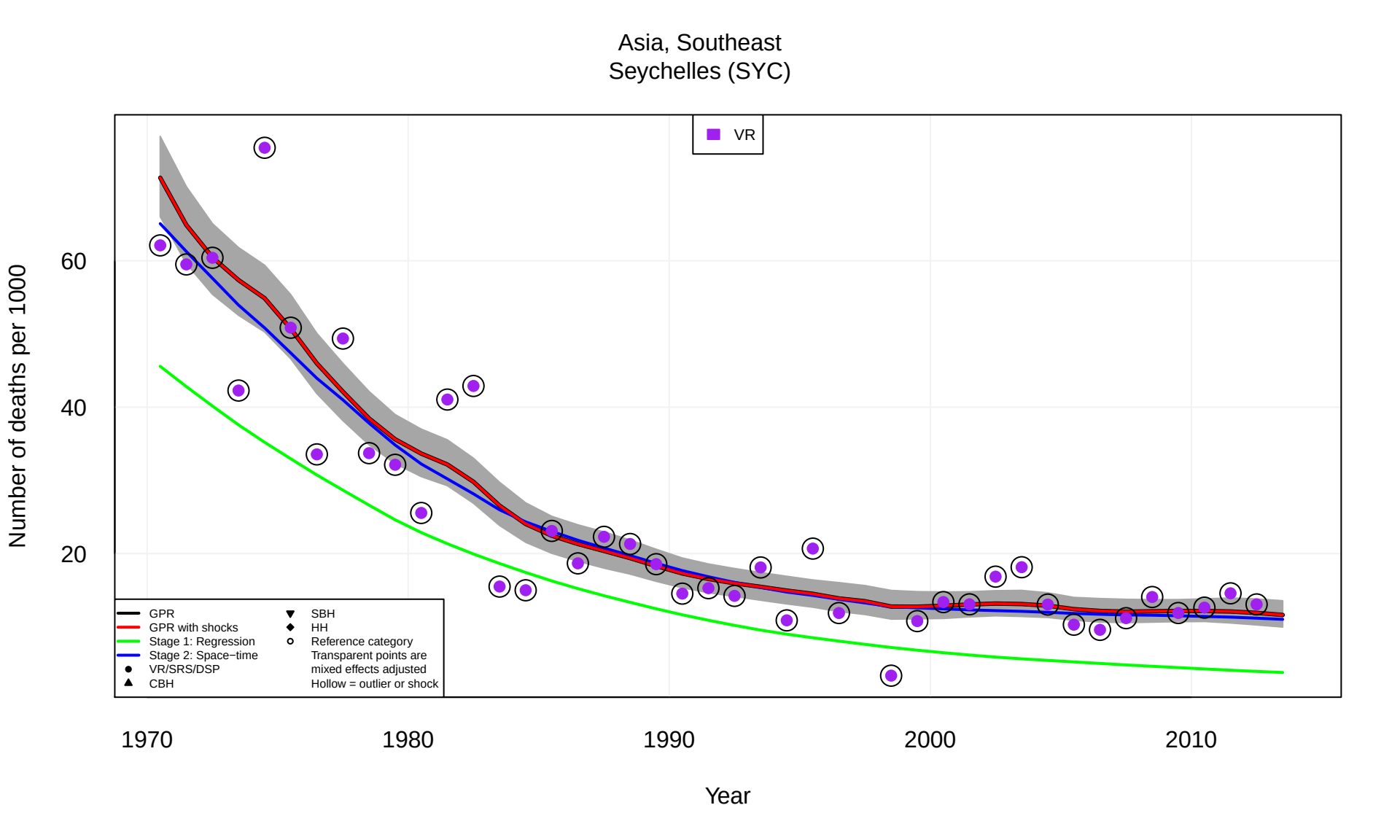

Asia, Southeast
Maldives (MDV)
VR
Standard DHS
Census
Number of deaths per 1000
250
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

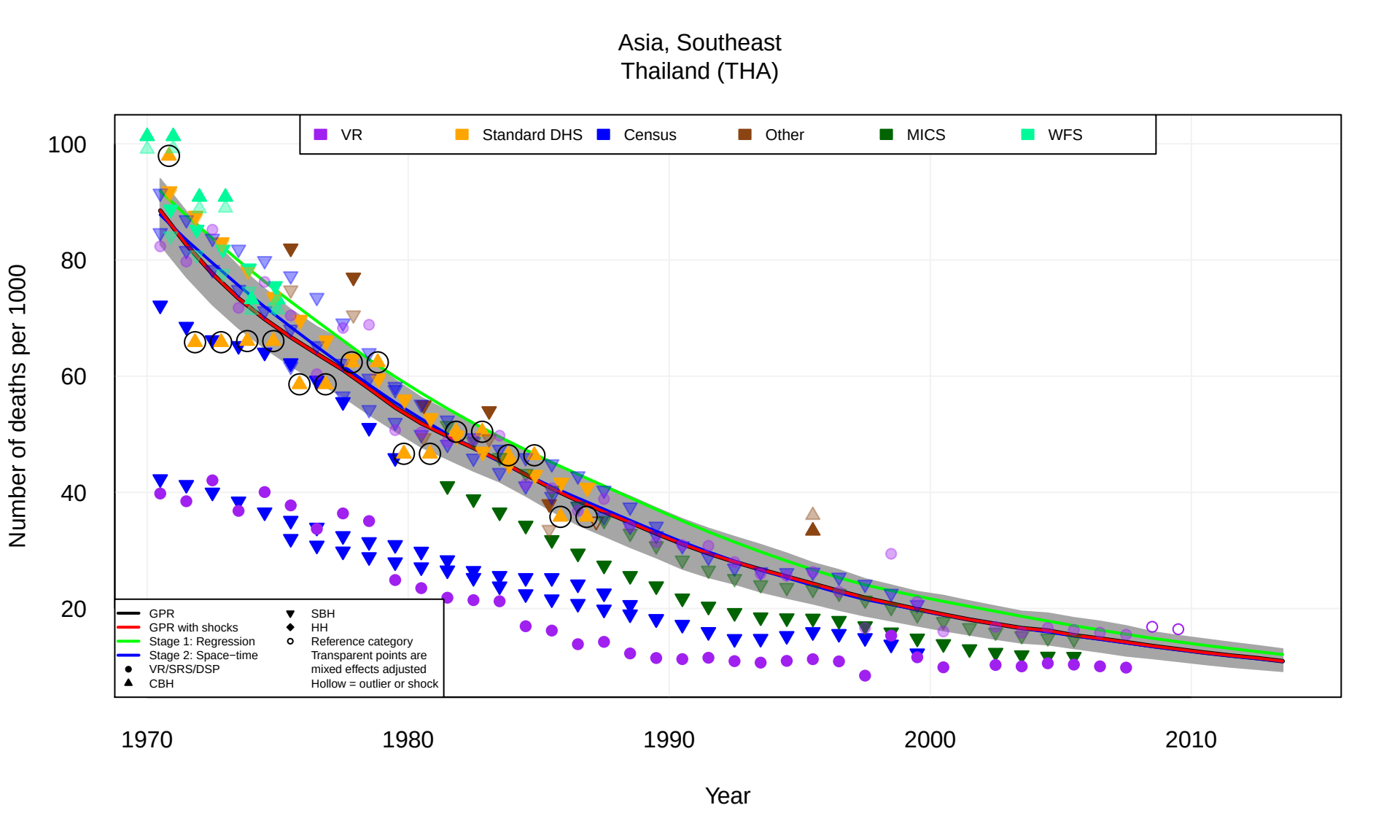

Asia, Southeast
Myanmar (MMR)
VR
Census
Other
MICS
Number of deaths per 1000
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

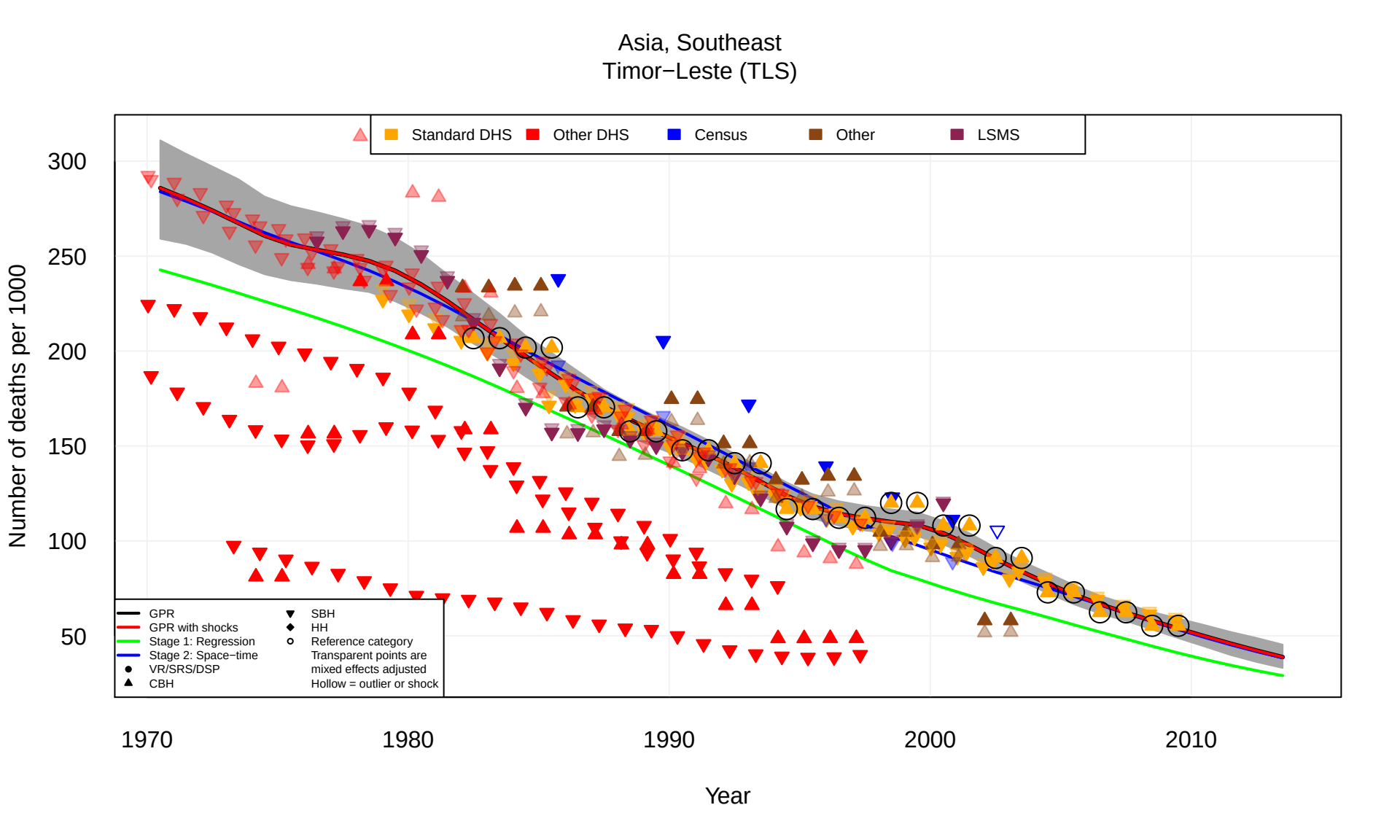

Asia, Southeast
Mauritius (MUS)
VR
120
100
80
60
40
20
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

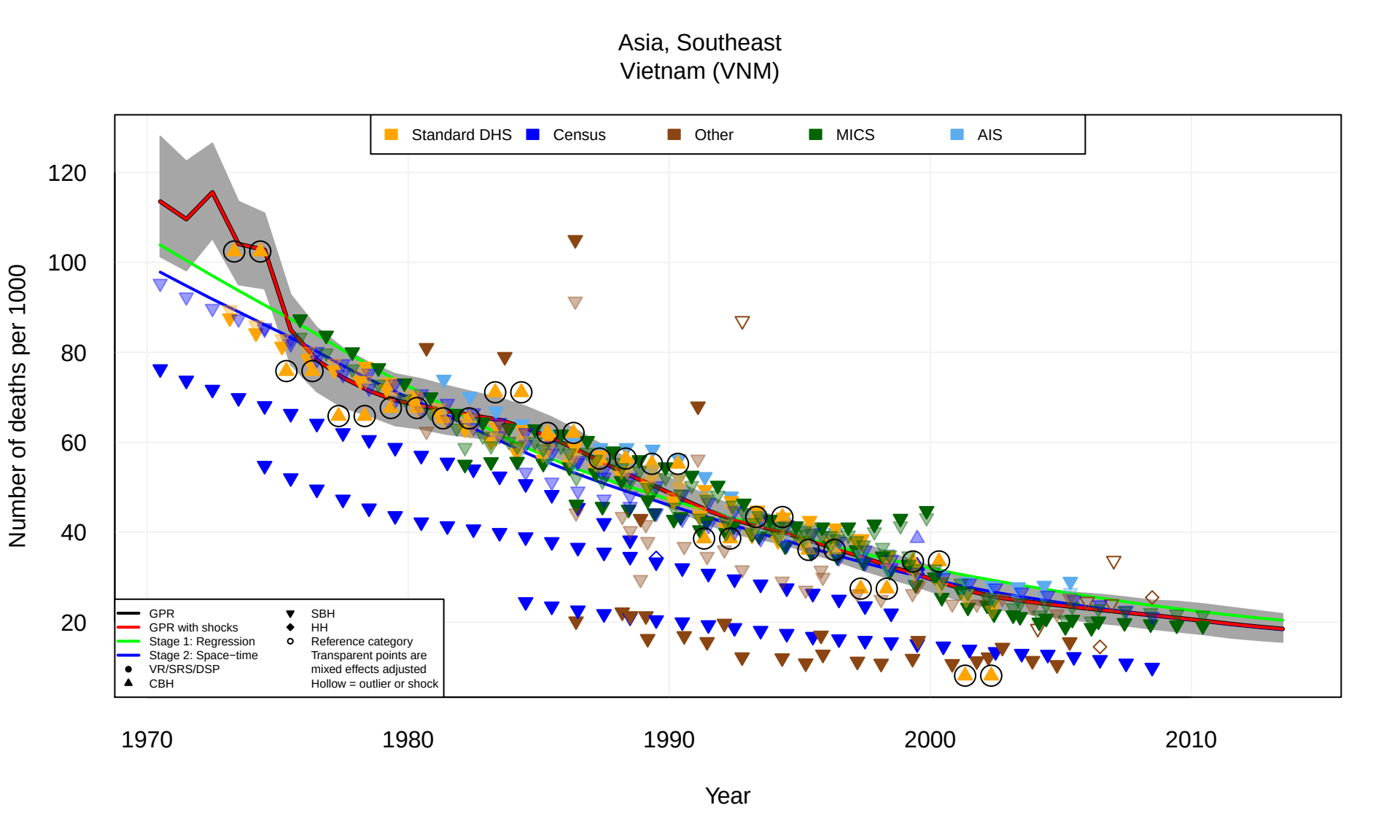

Asia, Southeast
Malaysia (MYS)
VR
Census
WFS
80
60
40
20
Number of deaths per 1000
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock
1970
1980
1990
2000
2010
Year

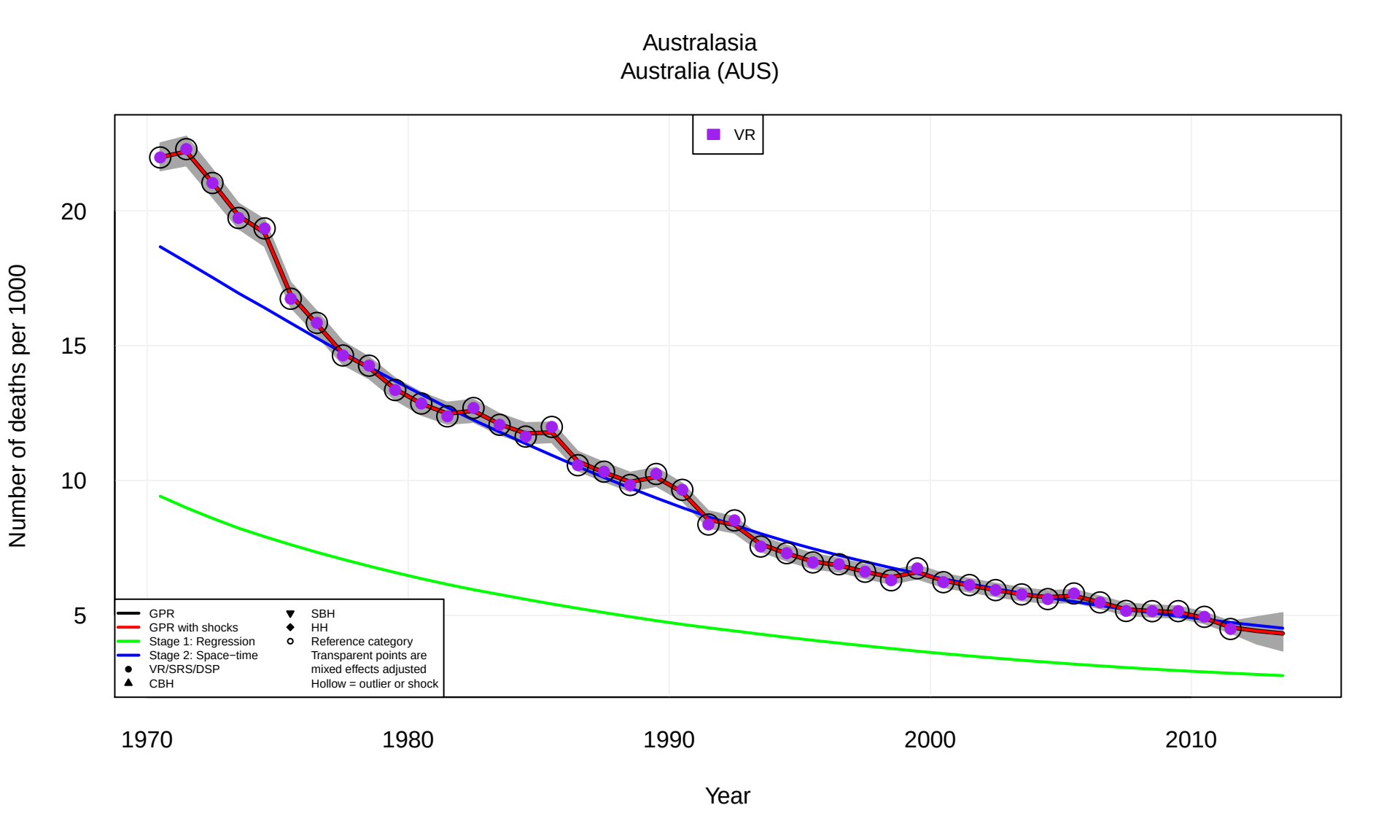

Asia, Southeast
Philippines (PHL)
VR
Standard DHS
Census
WFS
Number of deaths per 1000
100
80
60
40
20
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

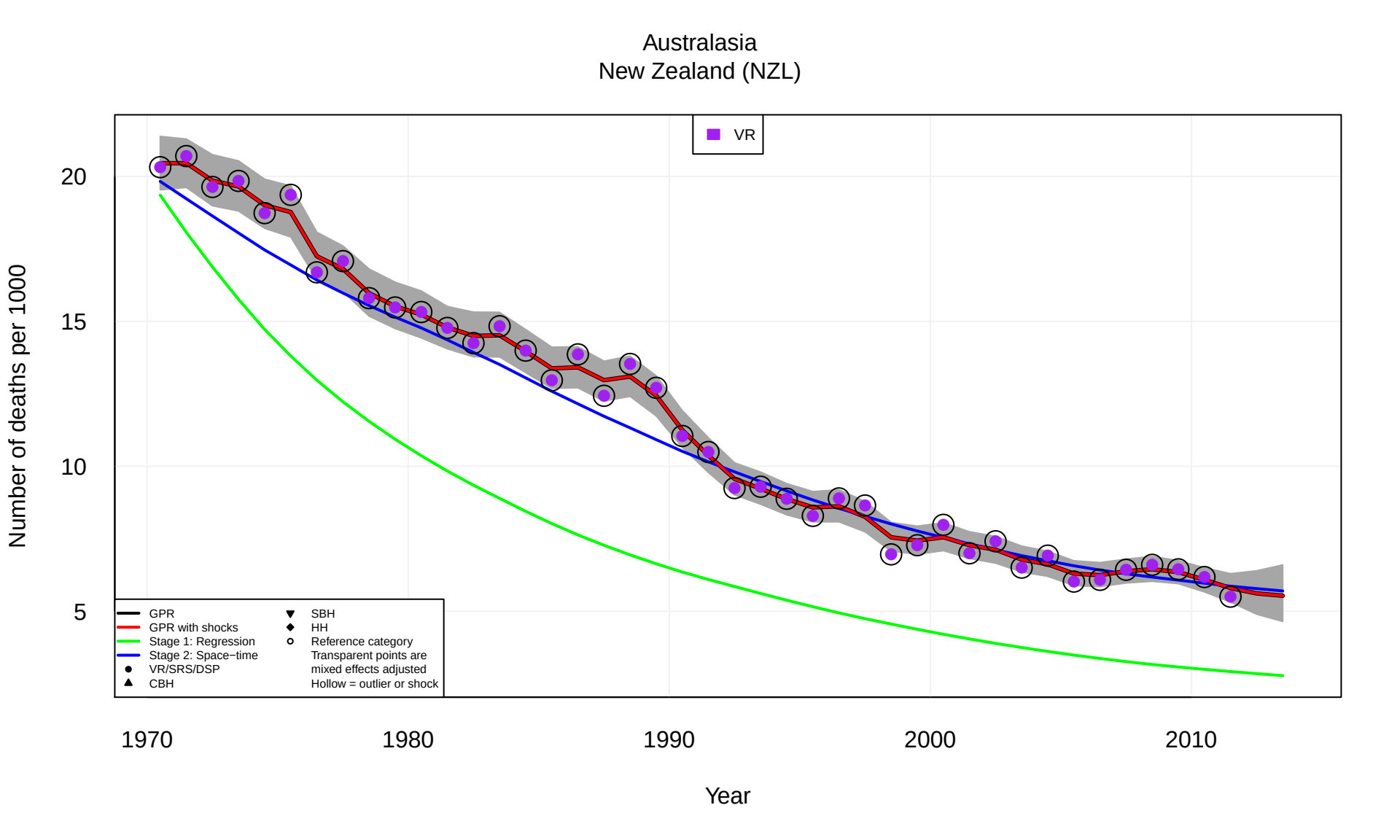

Asia, Southeast
Seychelles (SYC)
VR
Number of deaths per 1000
60
40
20
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

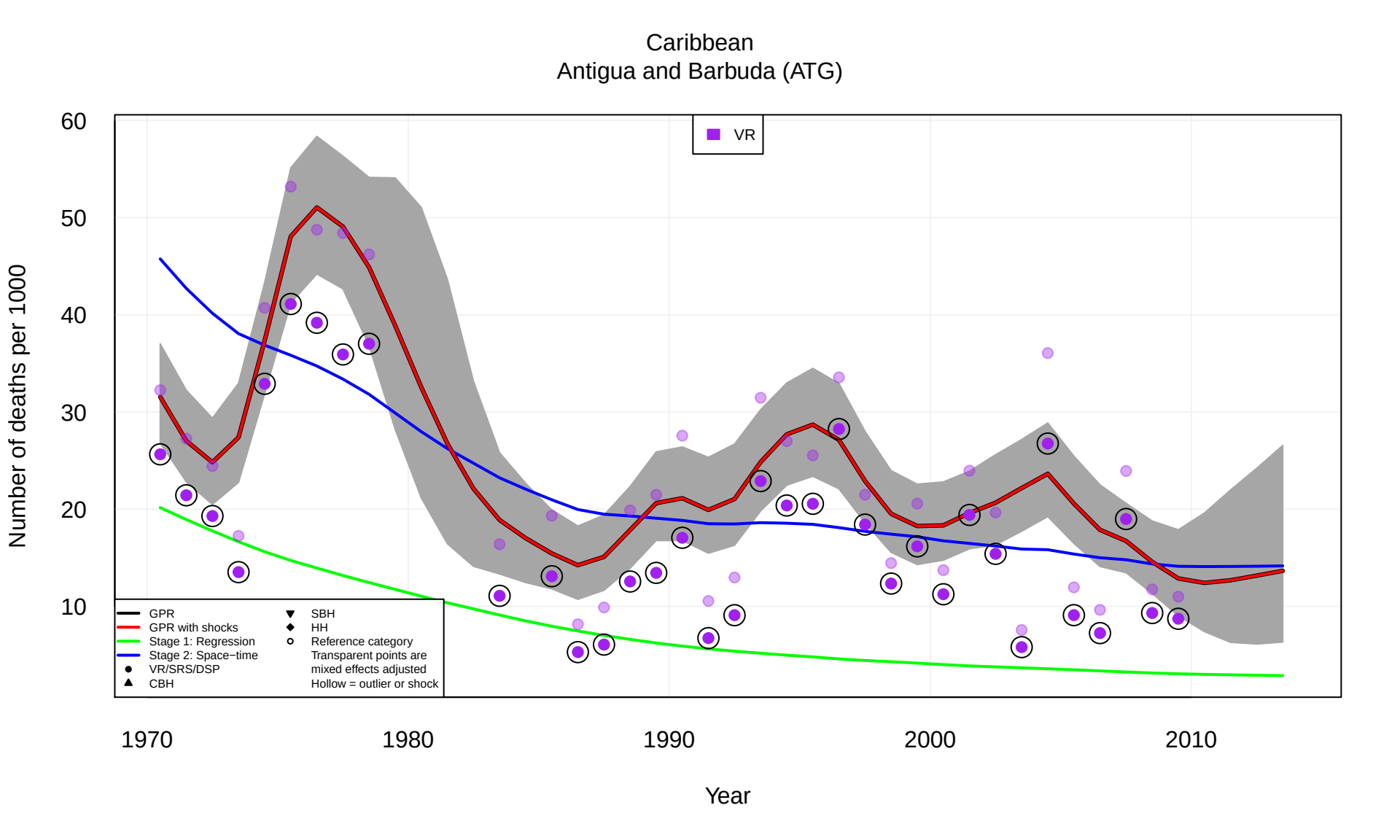

Asia, Southeast
Thailand (THA)
VR
Standard DHS
Census
Other
MICS
WFS
Number of deaths per 1000
100
80
60
40
20
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

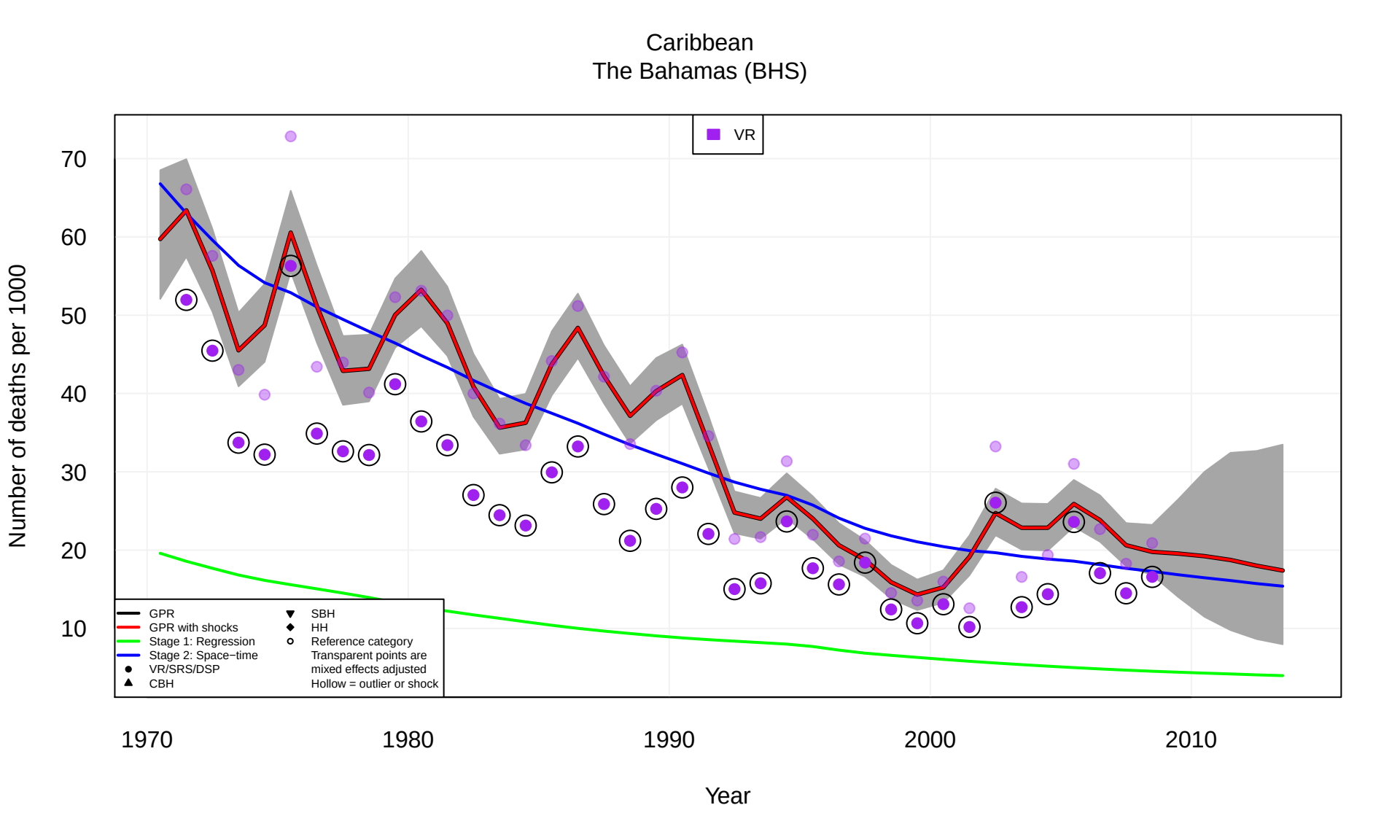

Asia, Southeast
Timor−Leste (TLS)
Standard DHS
Other DHS
Census
Other
LSMS
Number of deaths per 1000
300
250
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

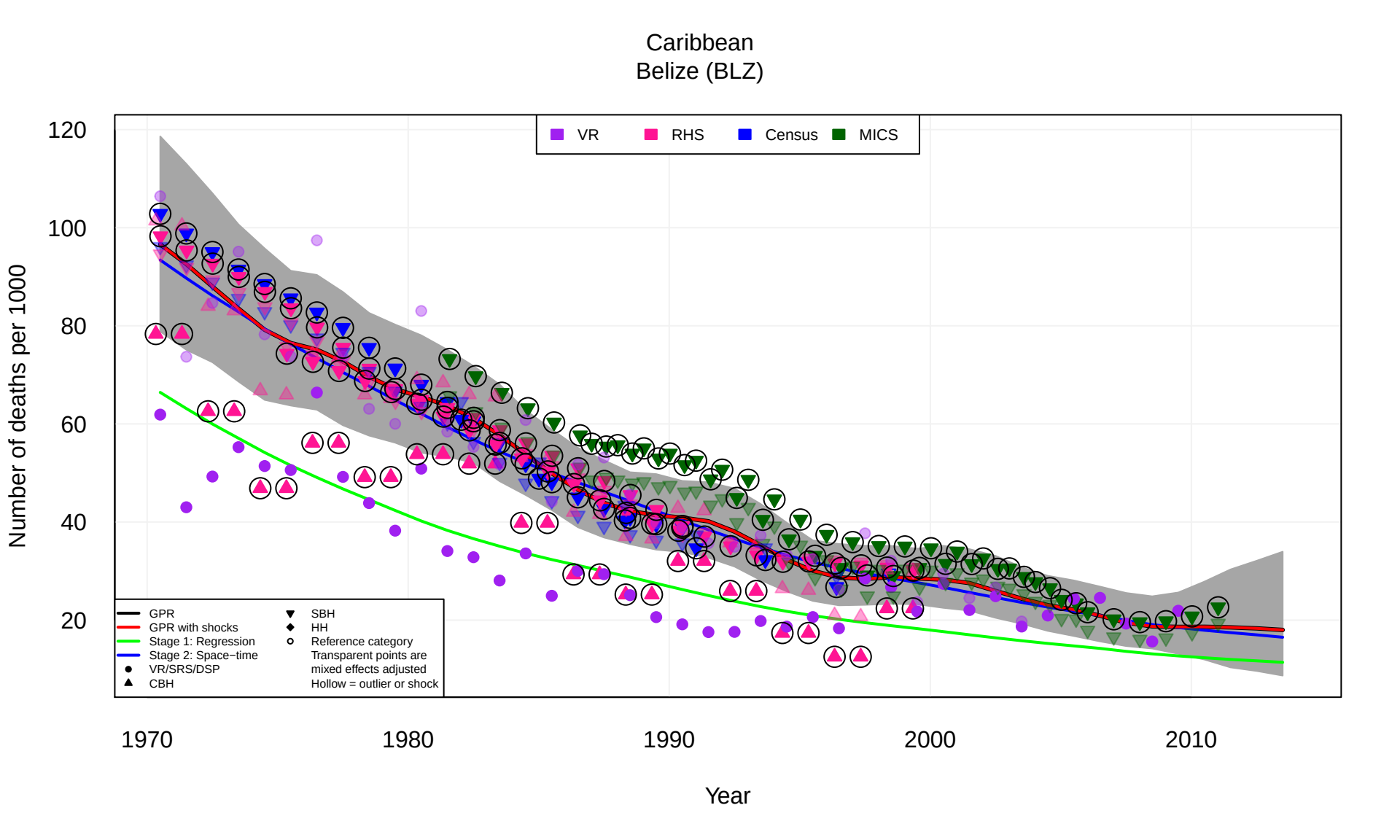

Asia, Southeast
Vietnam (VNM)
Standard DHS
Census
Other
MICS
AIS
Number of deaths per 1000
120
100
80
60
40
20
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

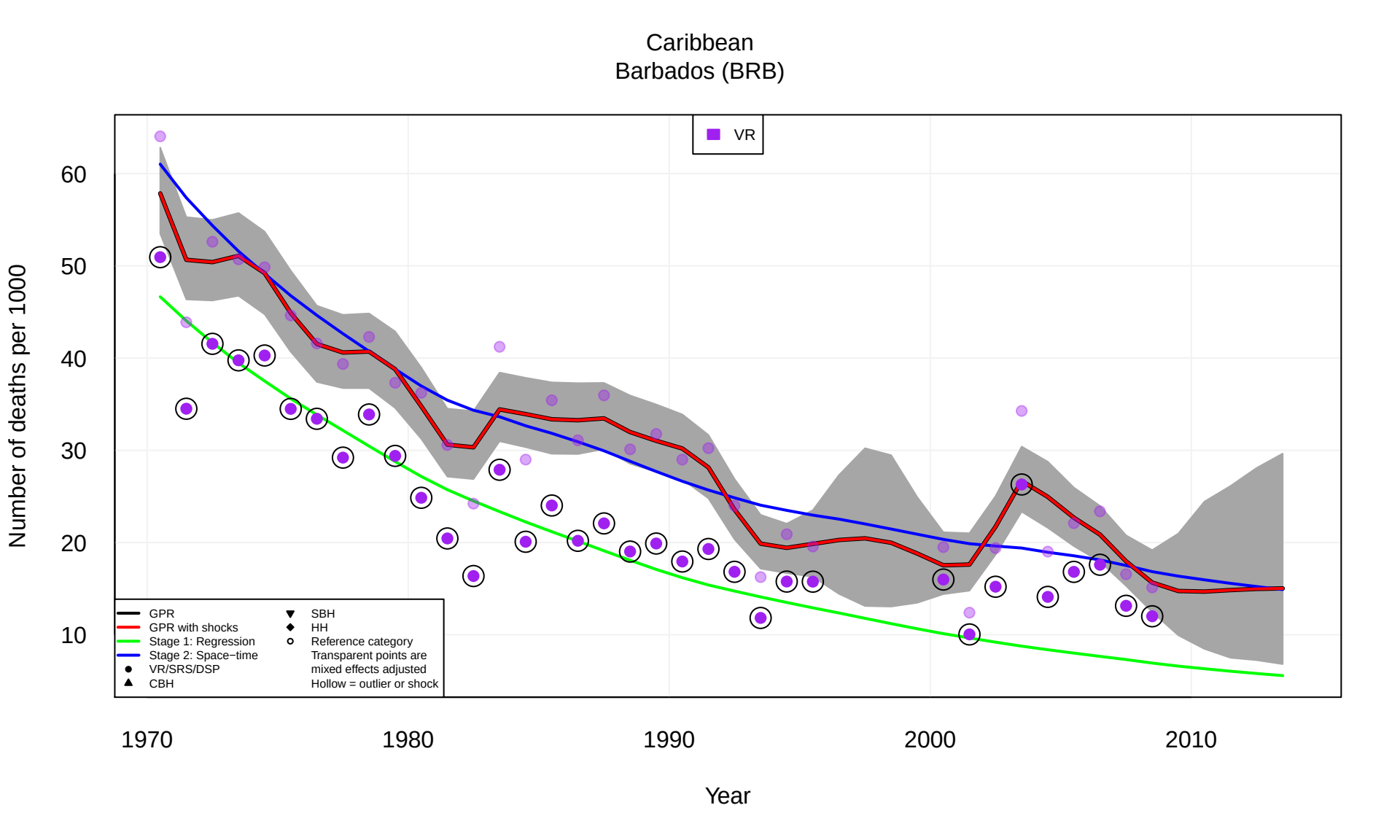

Australasia
Australia (AUS)
VR
Number of deaths per 1000
20
15
10
5
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

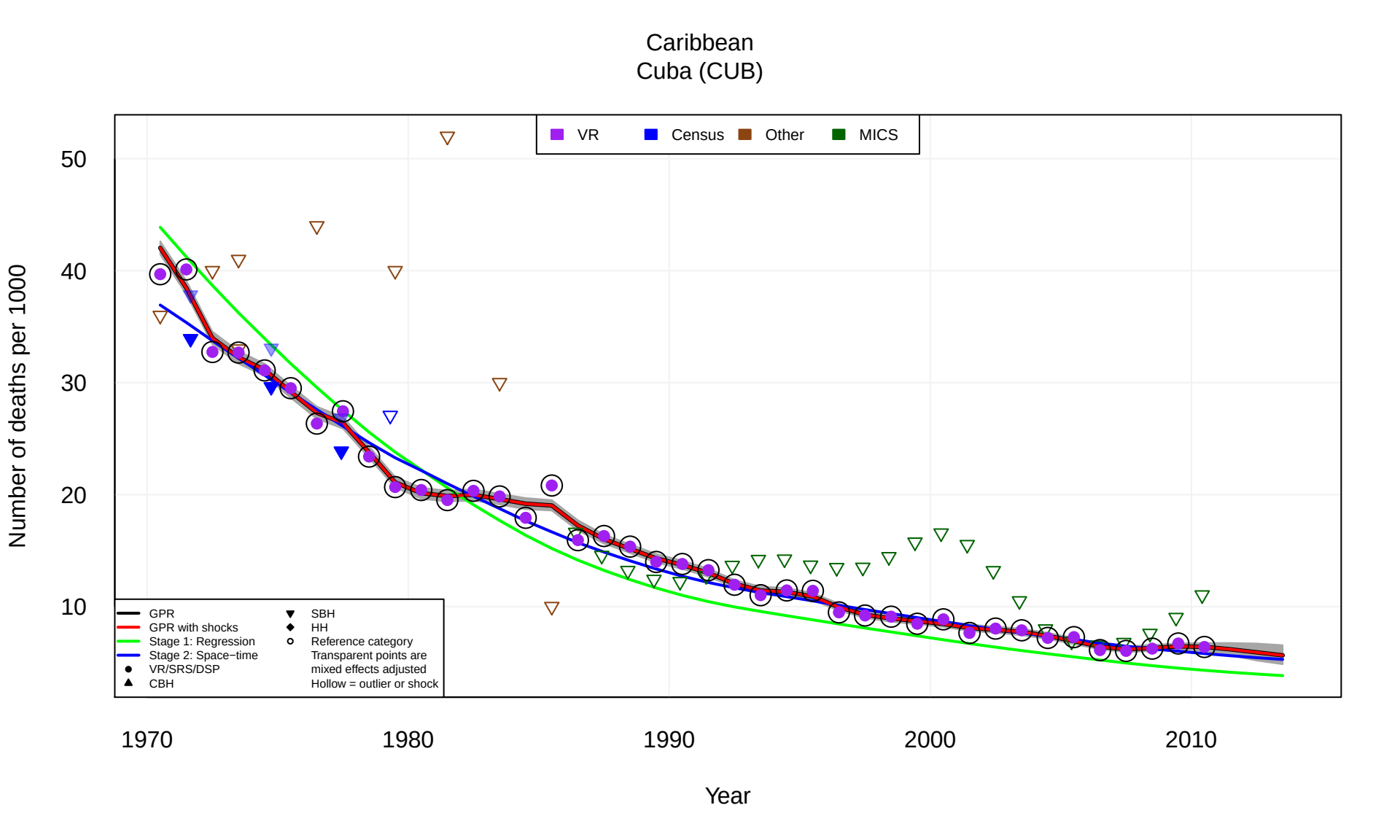

Australasia
New Zealand (NZL)
VR
Number of deaths per 1000
20
15
10
5
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

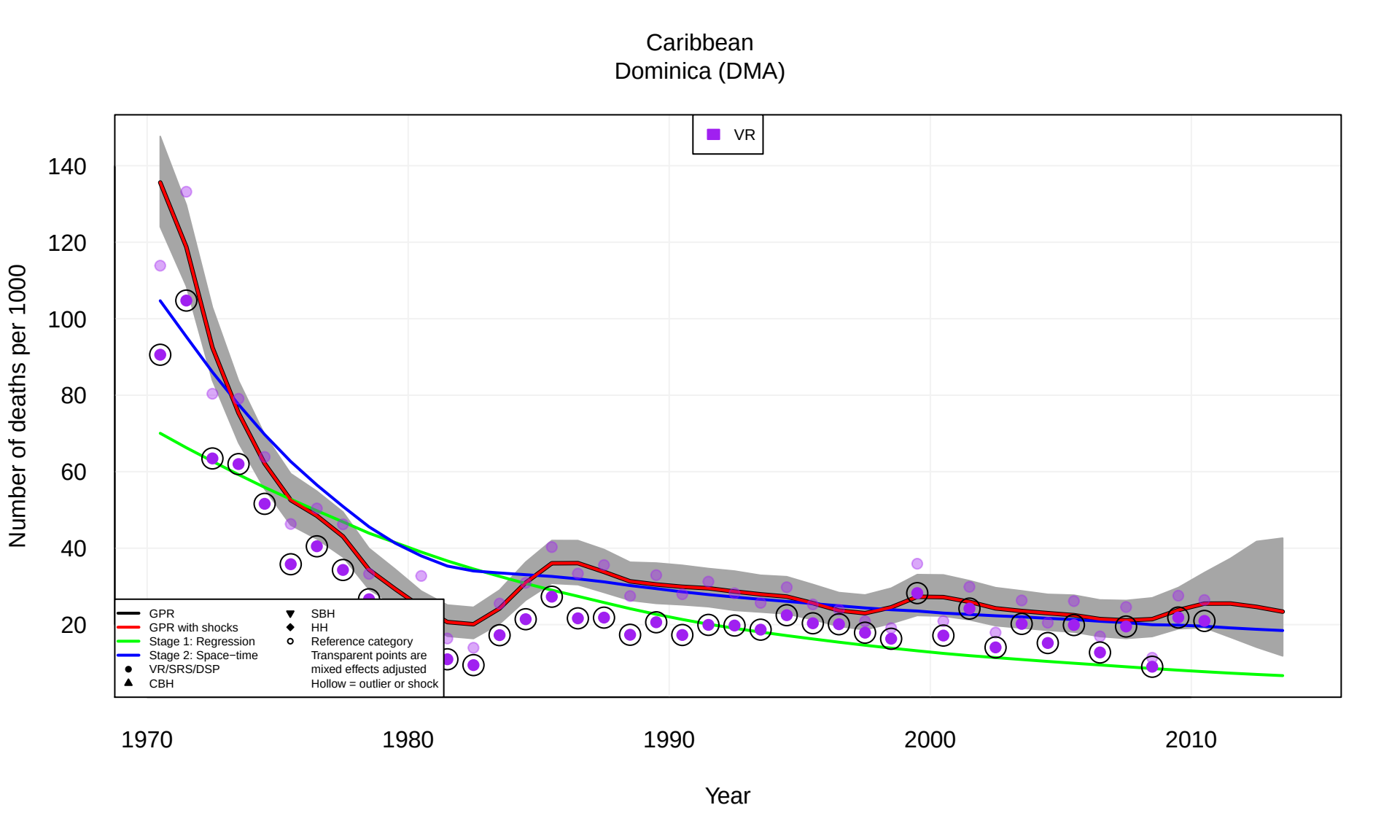

Caribbean
Antigua and Barbuda (ATG)
VR
Number of deaths per 1000
60
50
40
30
20
10
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

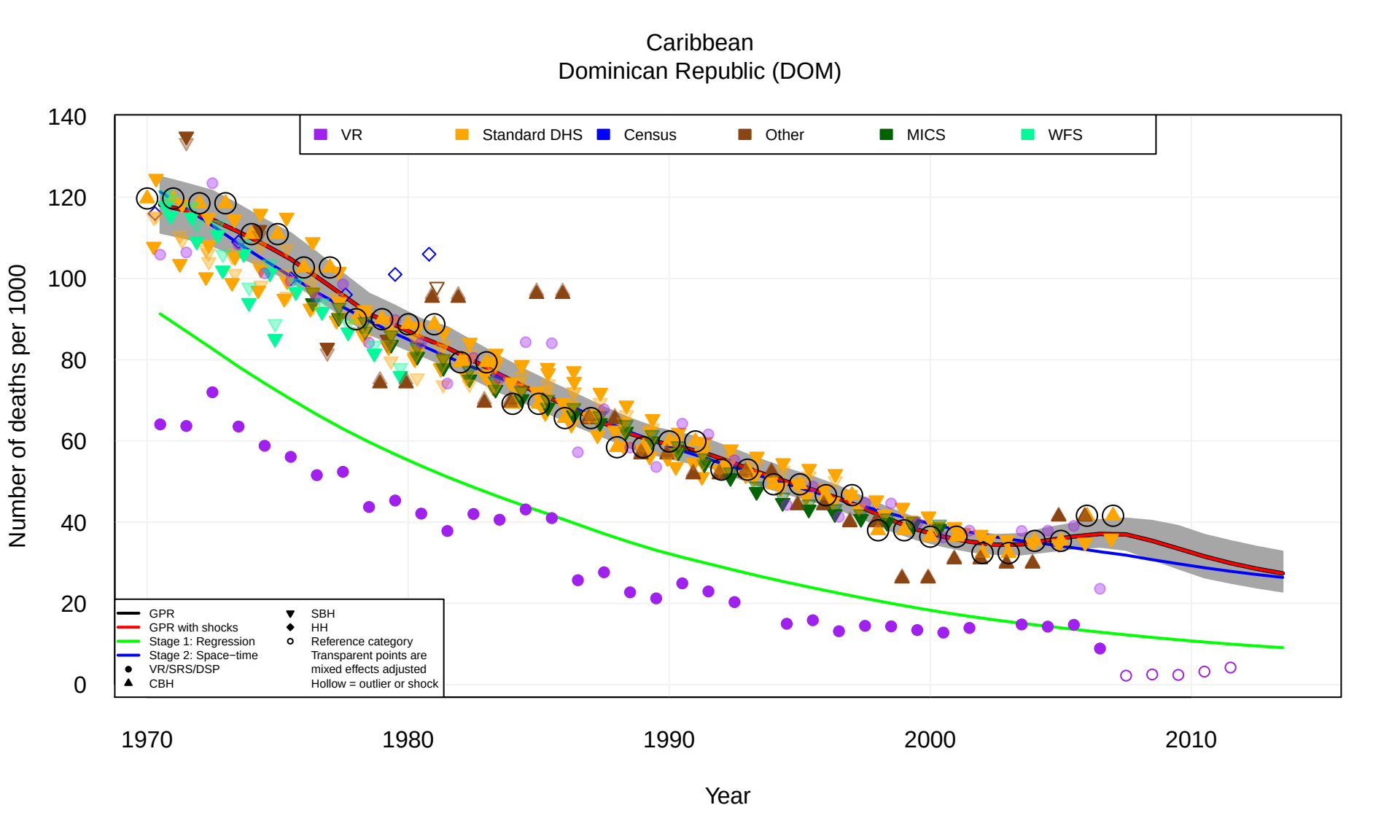

Caribbean
The Bahamas (BHS)
VR
Number of deaths per 1000
70
60
50
40
30
20
10
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

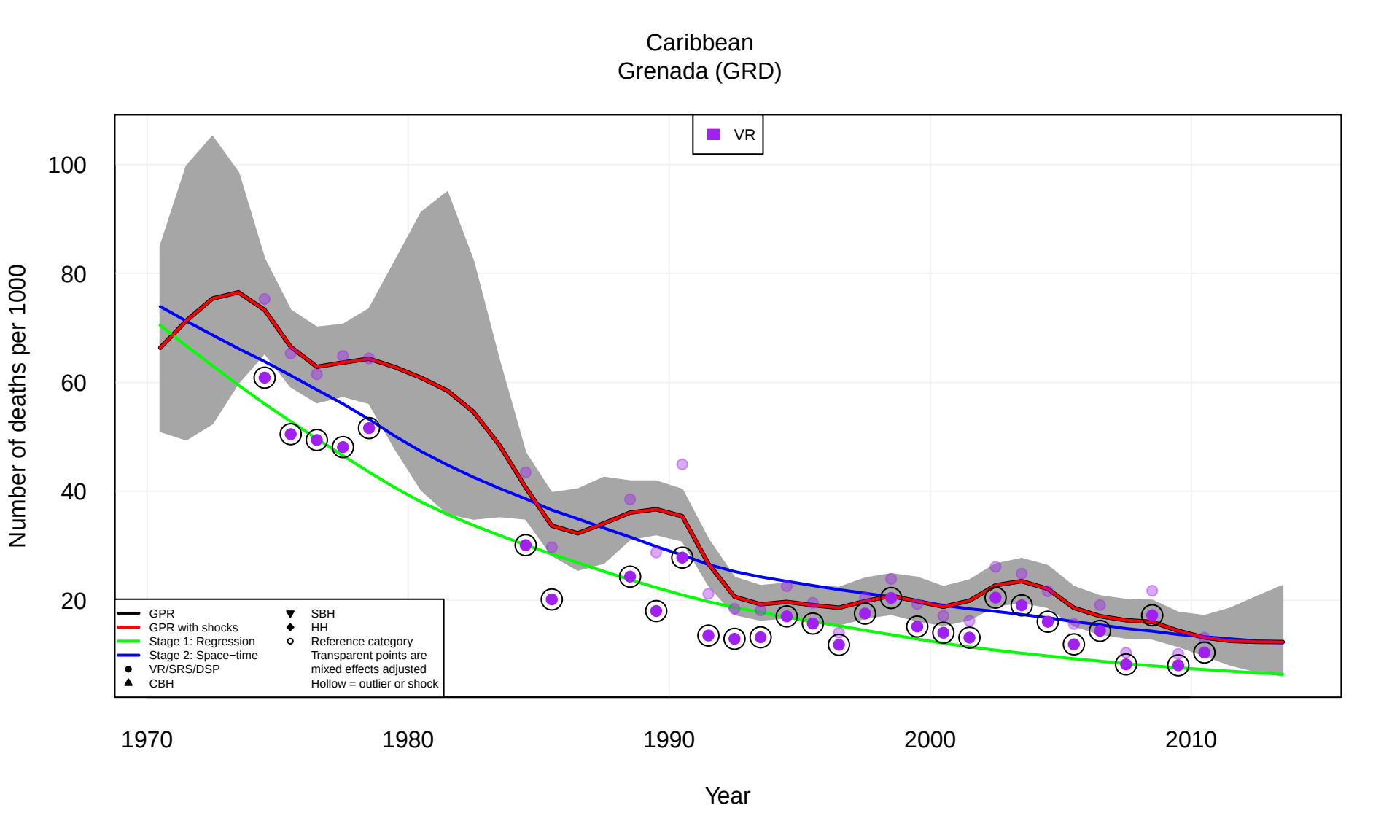

Caribbean
Belize (BLZ)
VR
RHS
Census
MICS
120
100
80
60
40
20
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

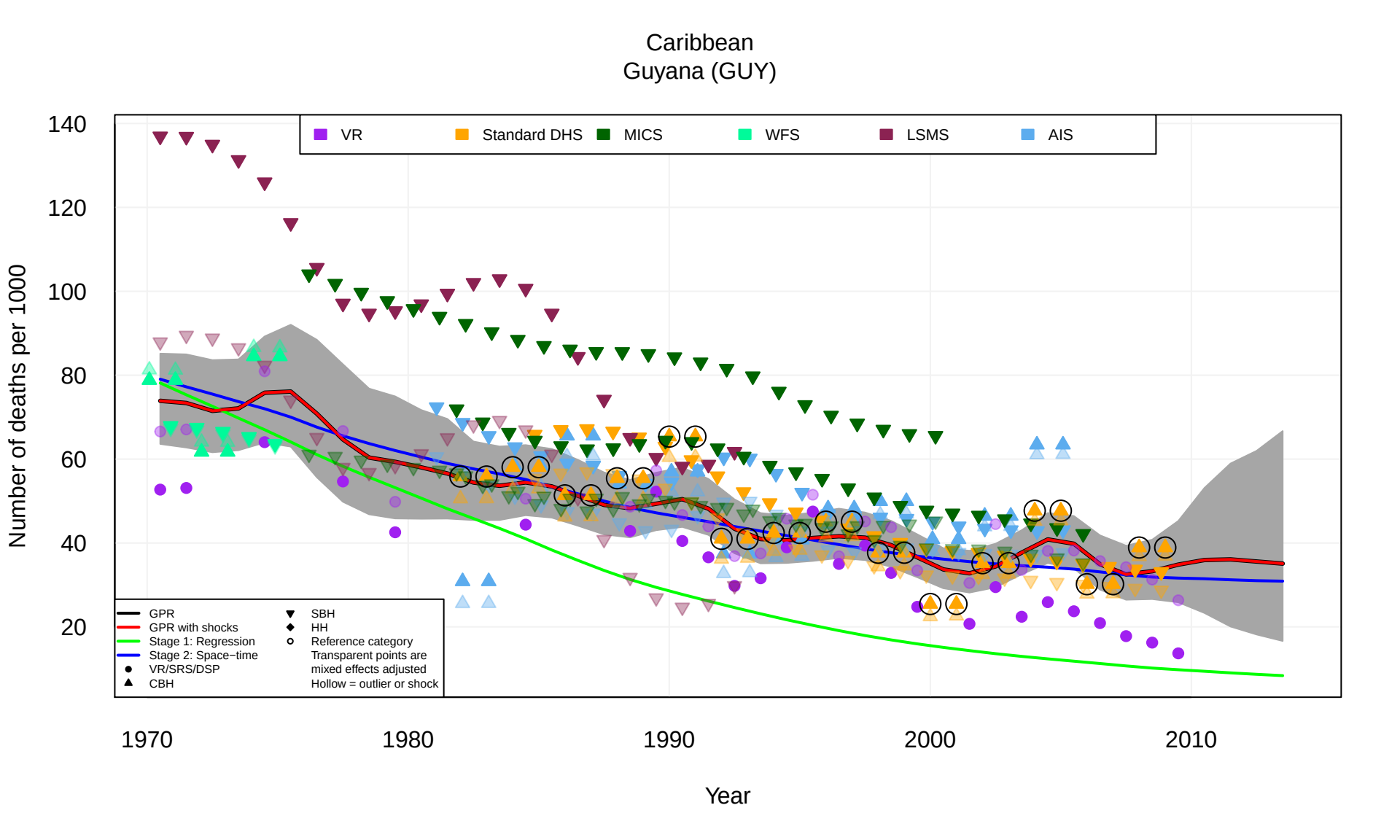

Caribbean
Barbados (BRB)
VR
Number of deaths per 1000
60
50
40
30
20
10
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

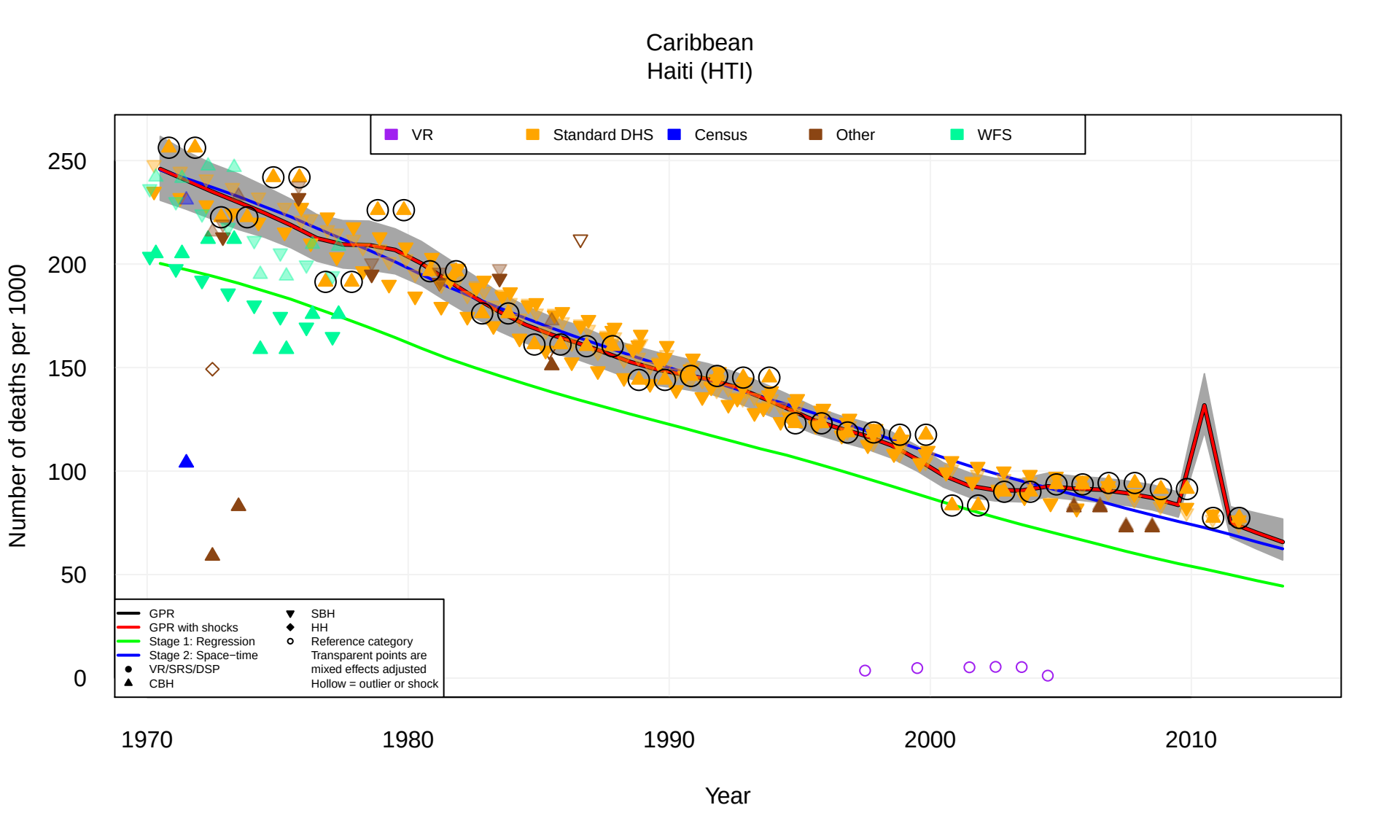

Caribbean
Cuba (CUB)
VR
Census
Other
MICS
Number of deaths per 1000
50
40
30
20
10
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

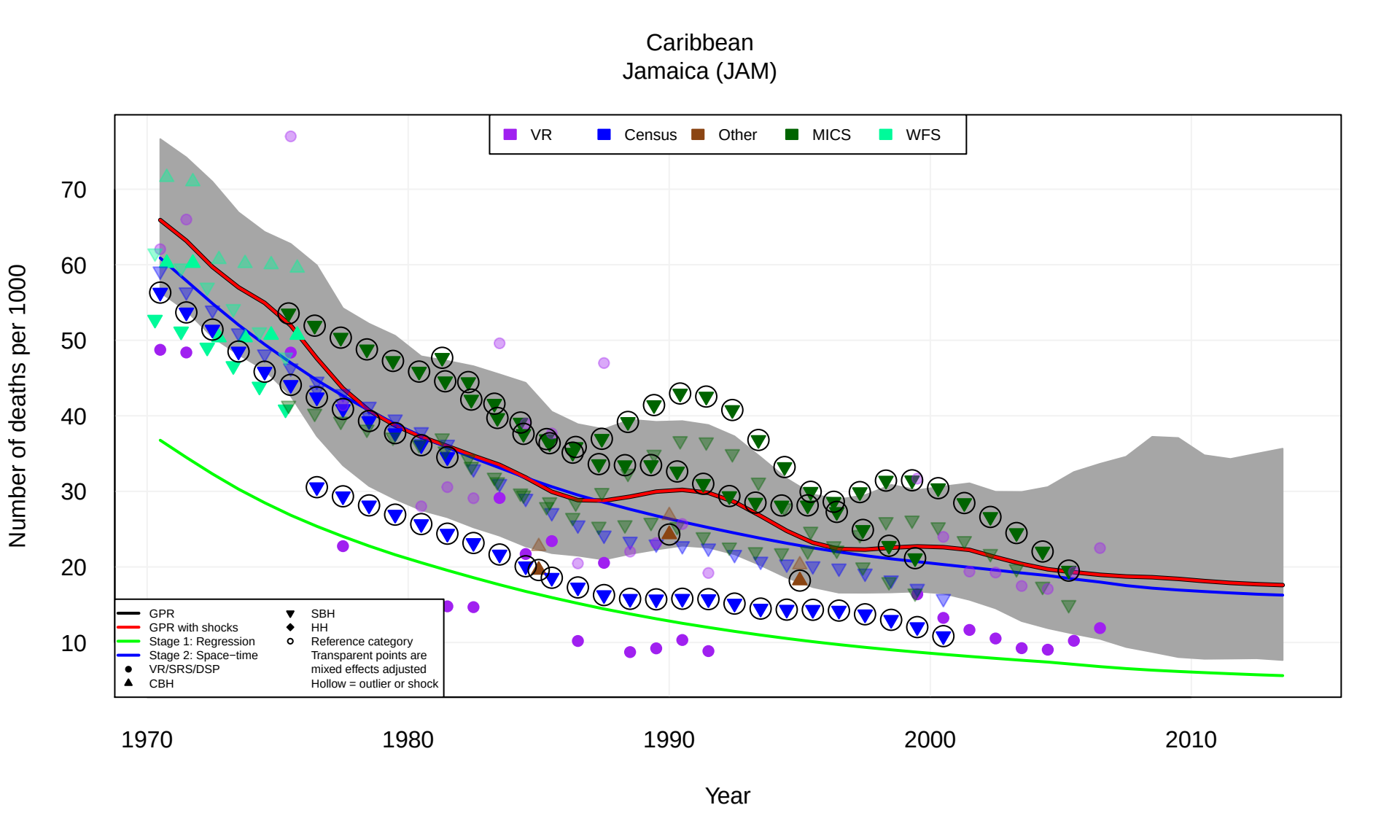

Caribbean
Dominica (DMA)
VR
Number of deaths per 1000
140
120
100
80
60
40
20
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

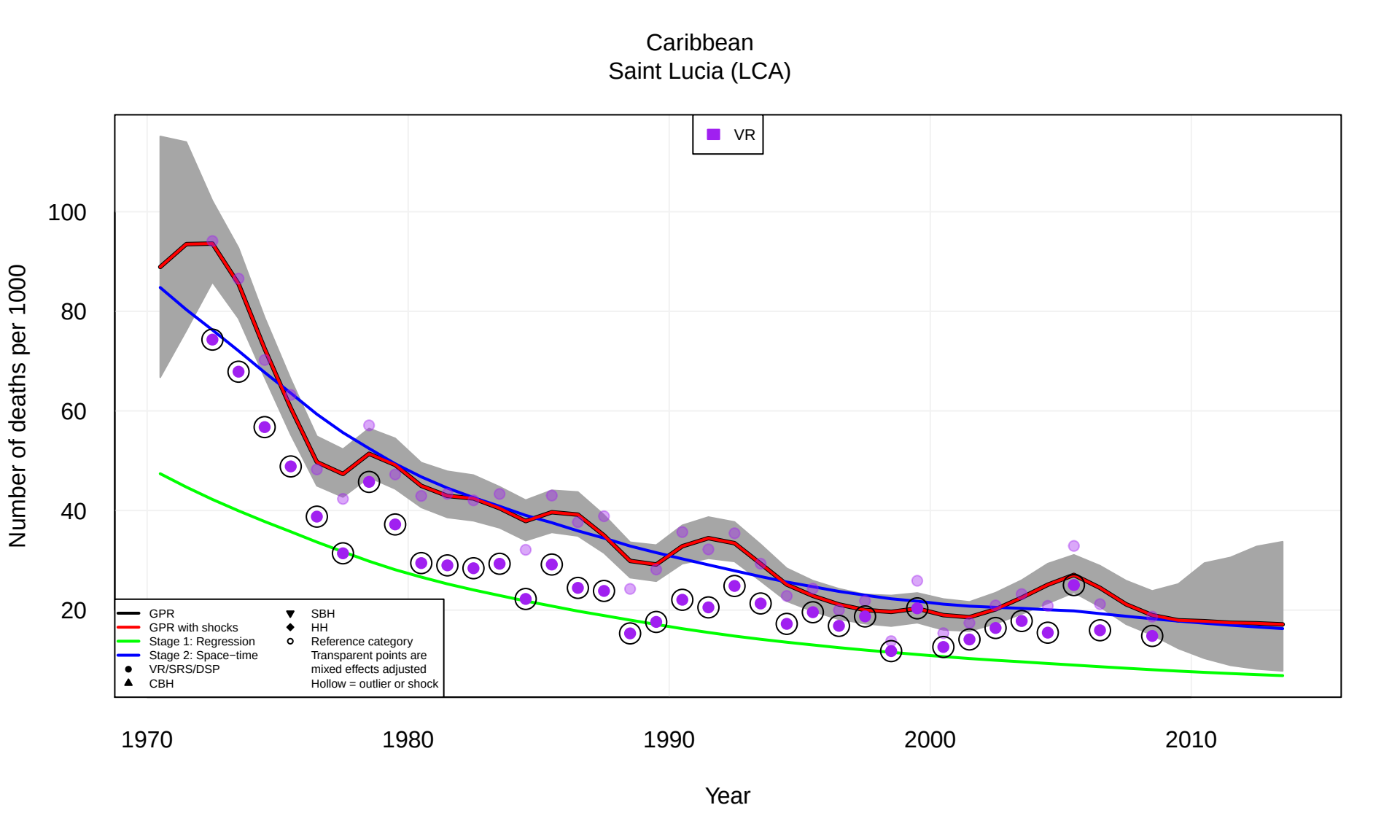

Caribbean
Dominican Republic (DOM)
VR
Standard DHS
Census
Other
MICS
WFS
Number of deaths per 1000
140
120
100
80
60
40
20
0
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

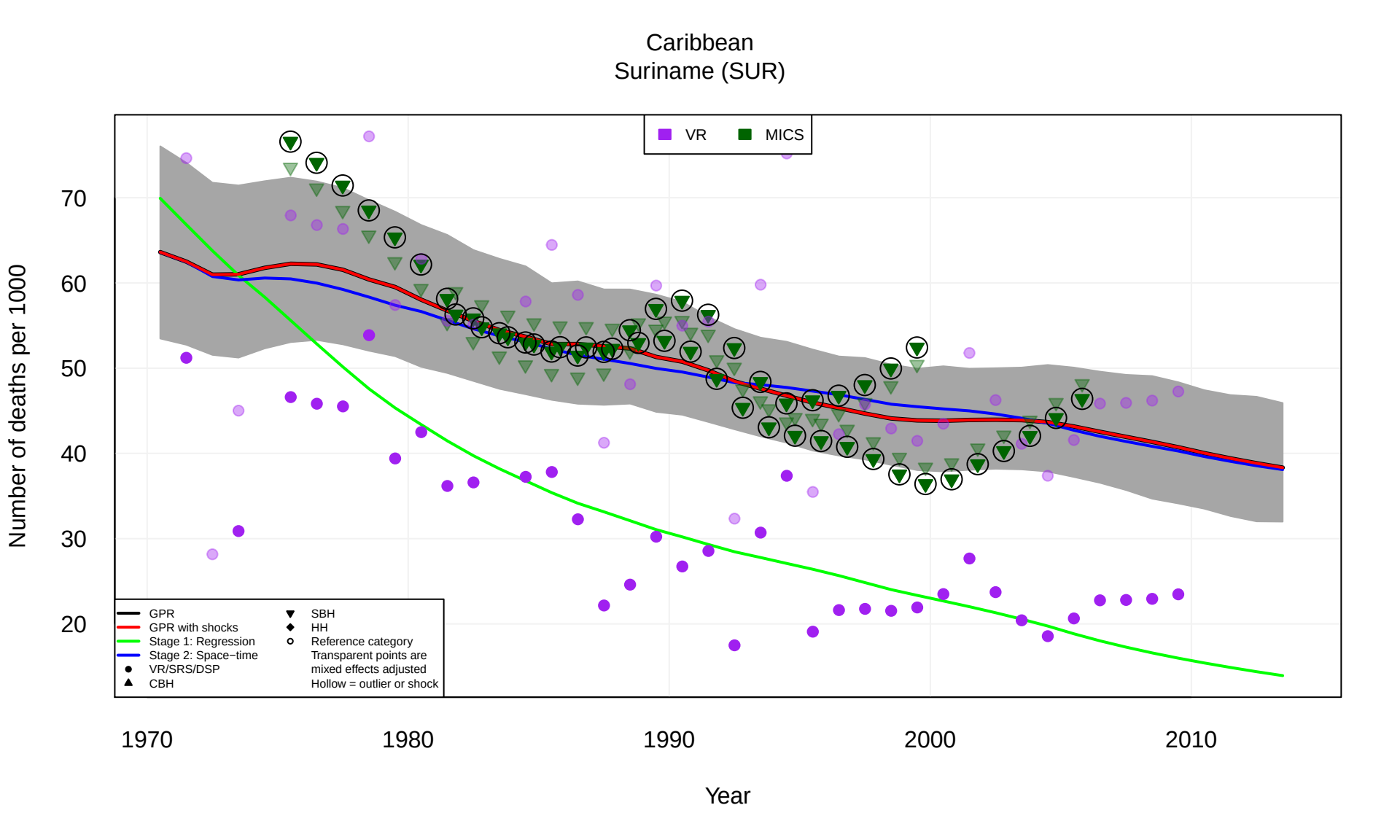

Caribbean
Grenada (GRD)
VR
100
80
60
40
20
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

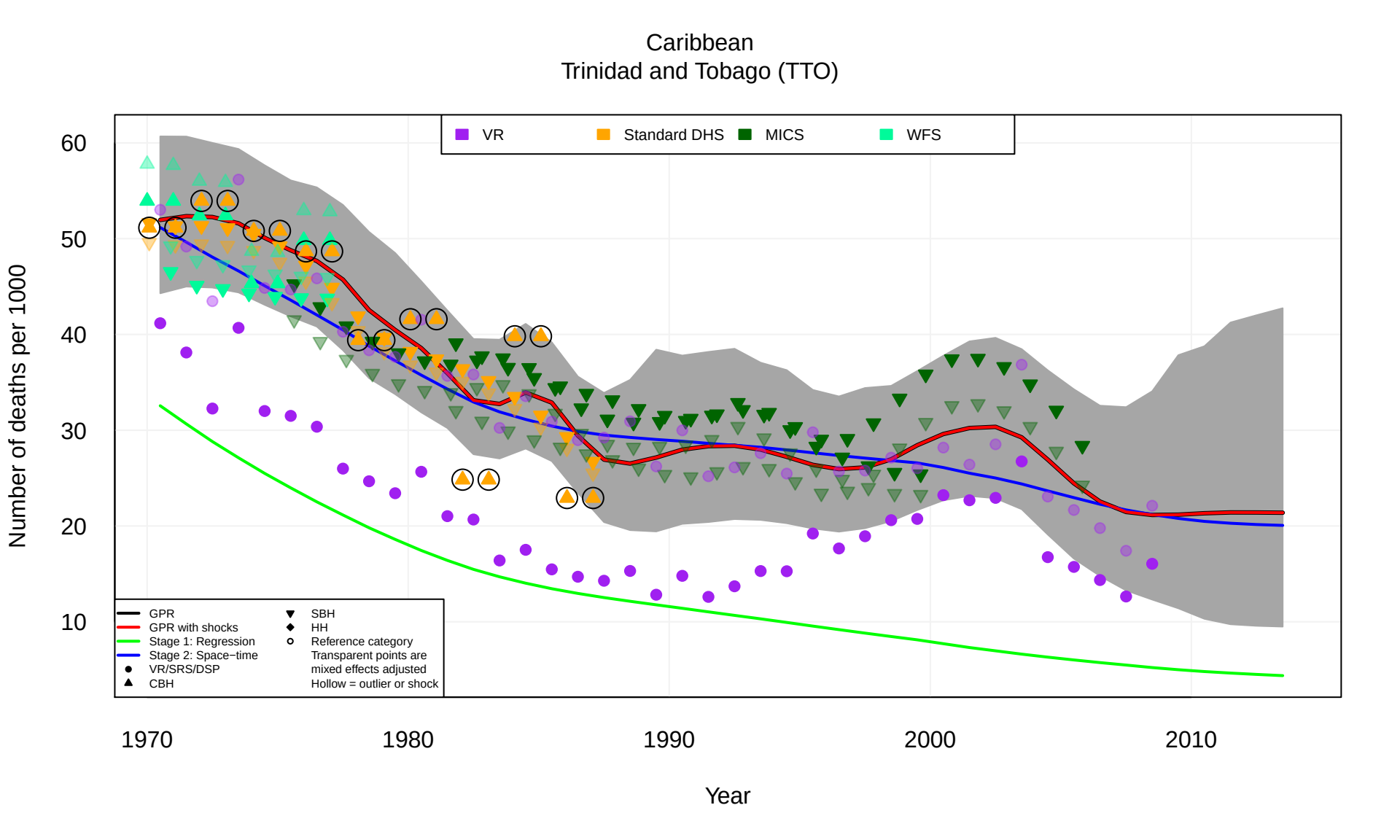

Caribbean
Guyana (GUY)
VR
Standard DHS
MICS
WFS
LSMS
AIS
Number of deaths per 1000
140
120
100
80
60
40
20
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

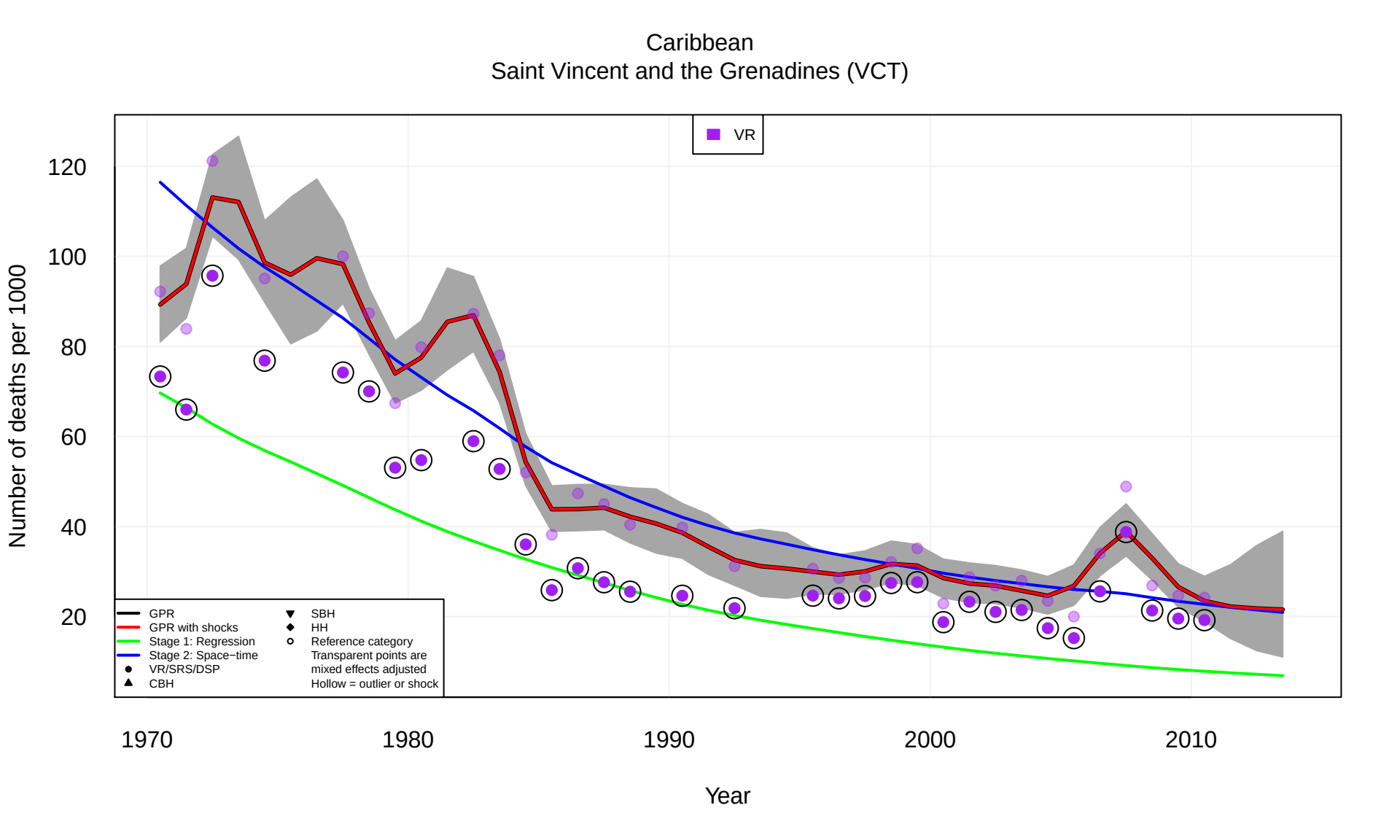

Caribbean
Haiti (HTI)
VR
Standard DHS
Census
Other
WFS
Number of deaths per 1000
250
200
150
100
50
0
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

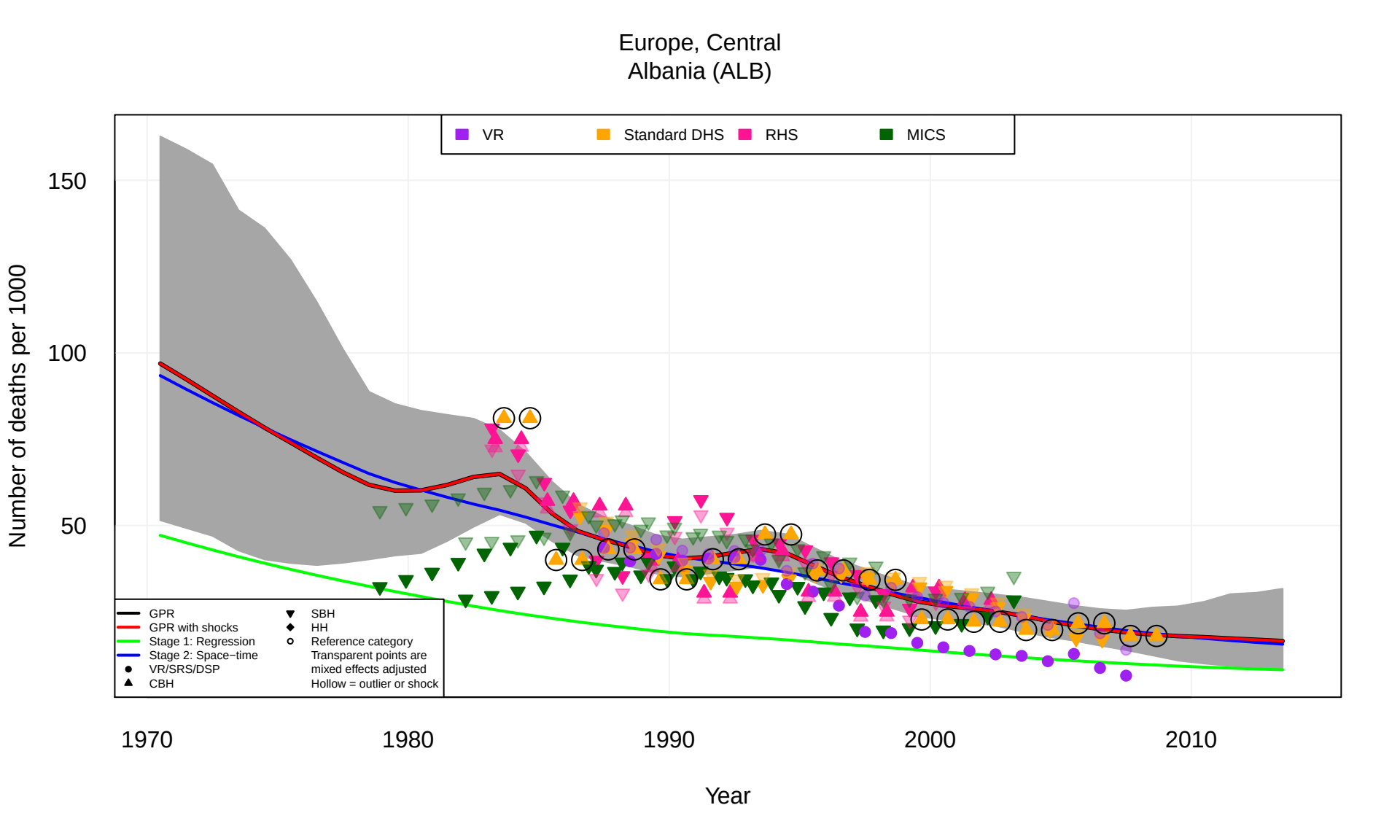

Caribbean
Jamaica (JAM)
VR
Census
Other
MICS
WFS
Number of deaths per 1000
70
60
50
40
30
20
10
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

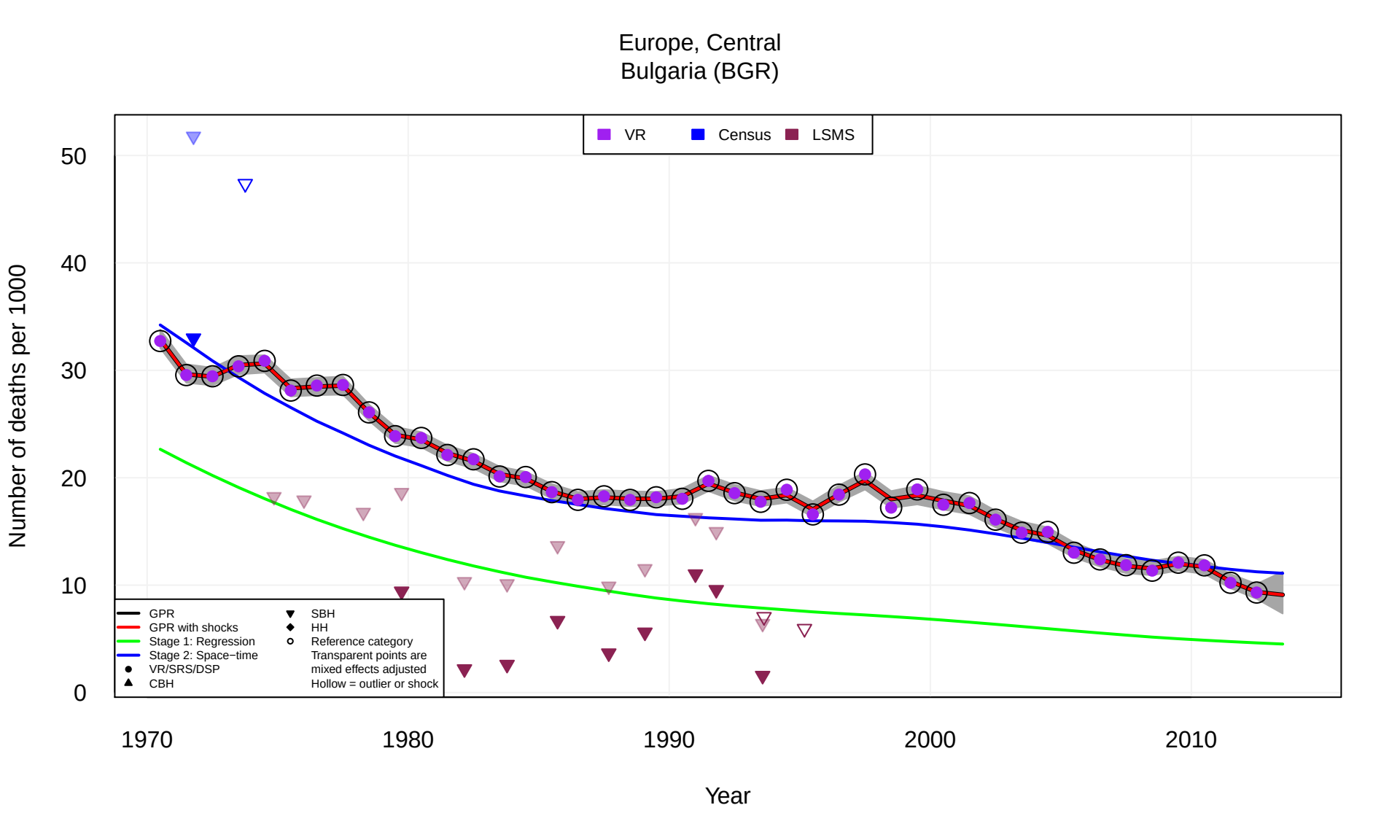

Caribbean
Saint Lucia (LCA)
VR
Number of deaths per 1000
100
80
60
40
20
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

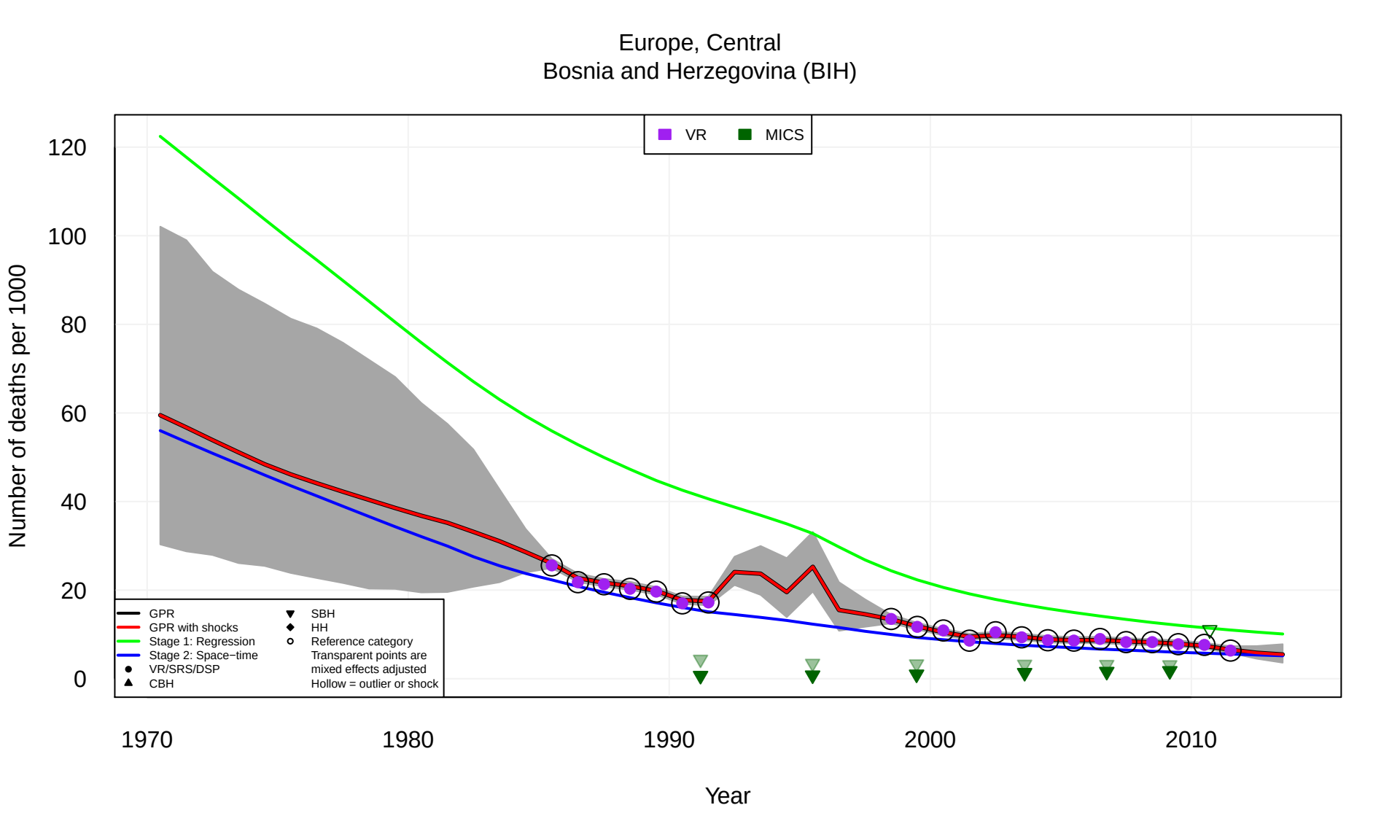

Caribbean
Suriname (SUR)
VR
MICS
Number of deaths per 1000
70
60
50
40
30
20
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

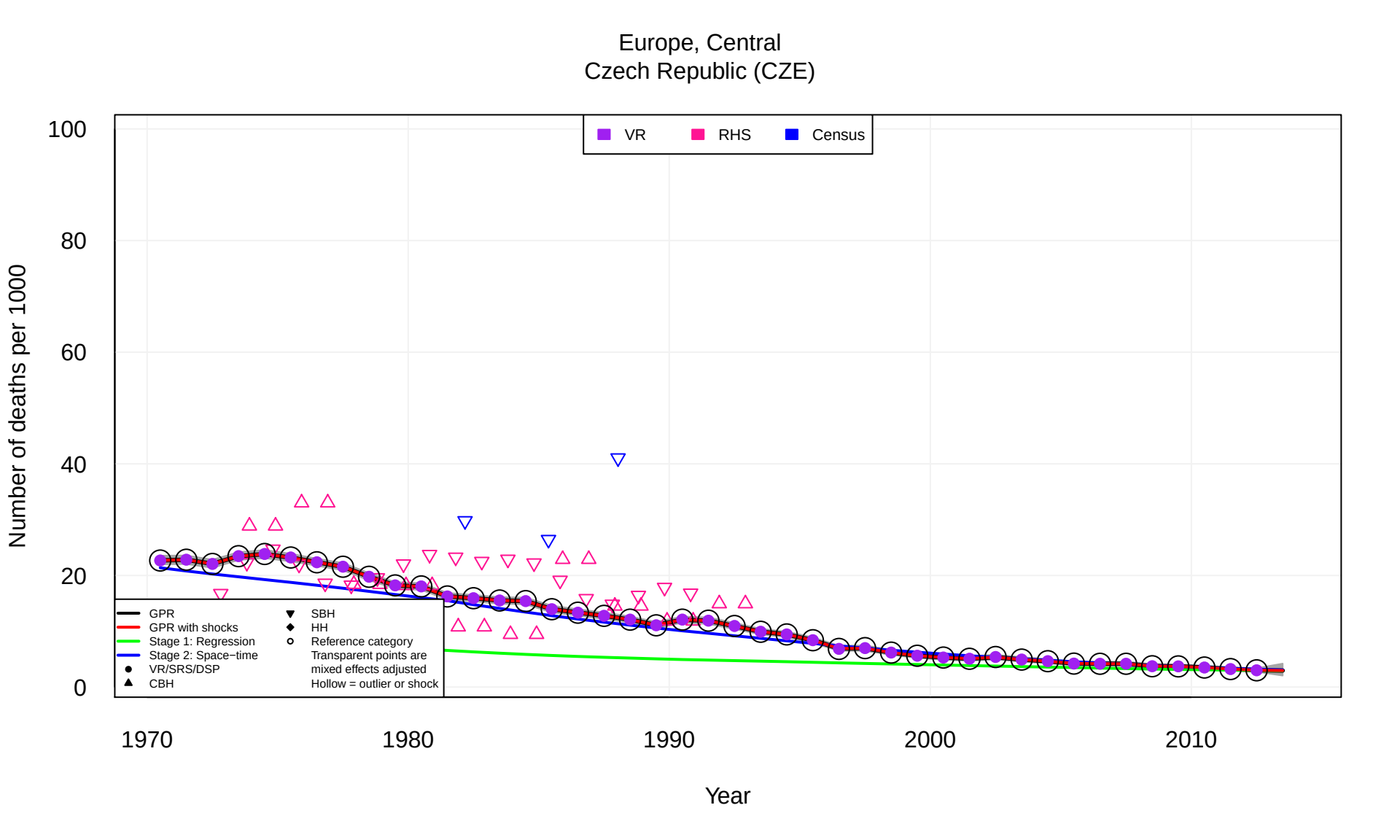

Caribbean
Trinidad and Tobago (TTO)
VR
Standard DHS
MICS
WFS
Number of deaths per 1000
60
50
40
30
20
10
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

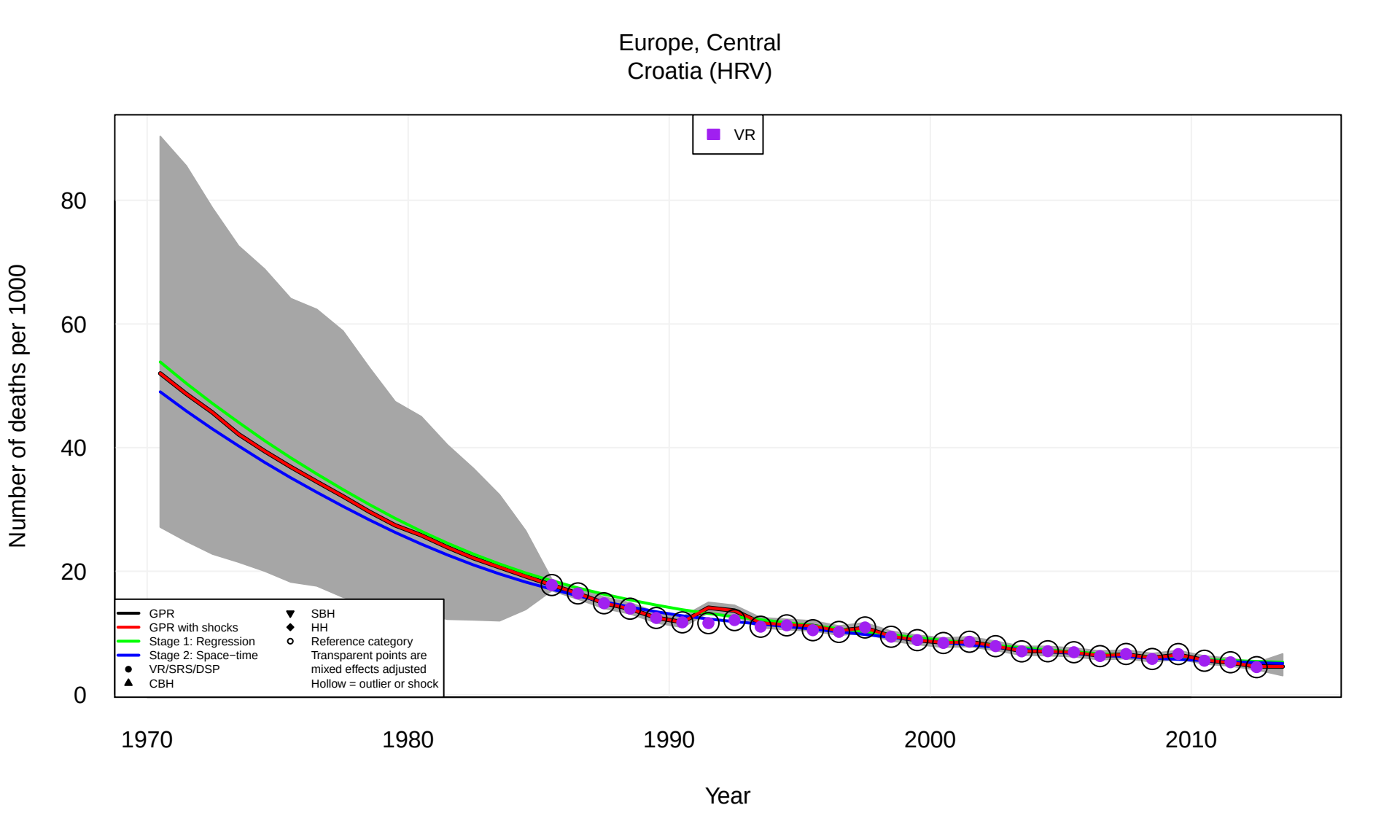

Caribbean
Saint Vincent and the Grenadines (VCT)
VR
Number of deaths per 1000
120
100
80
60
40
20
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

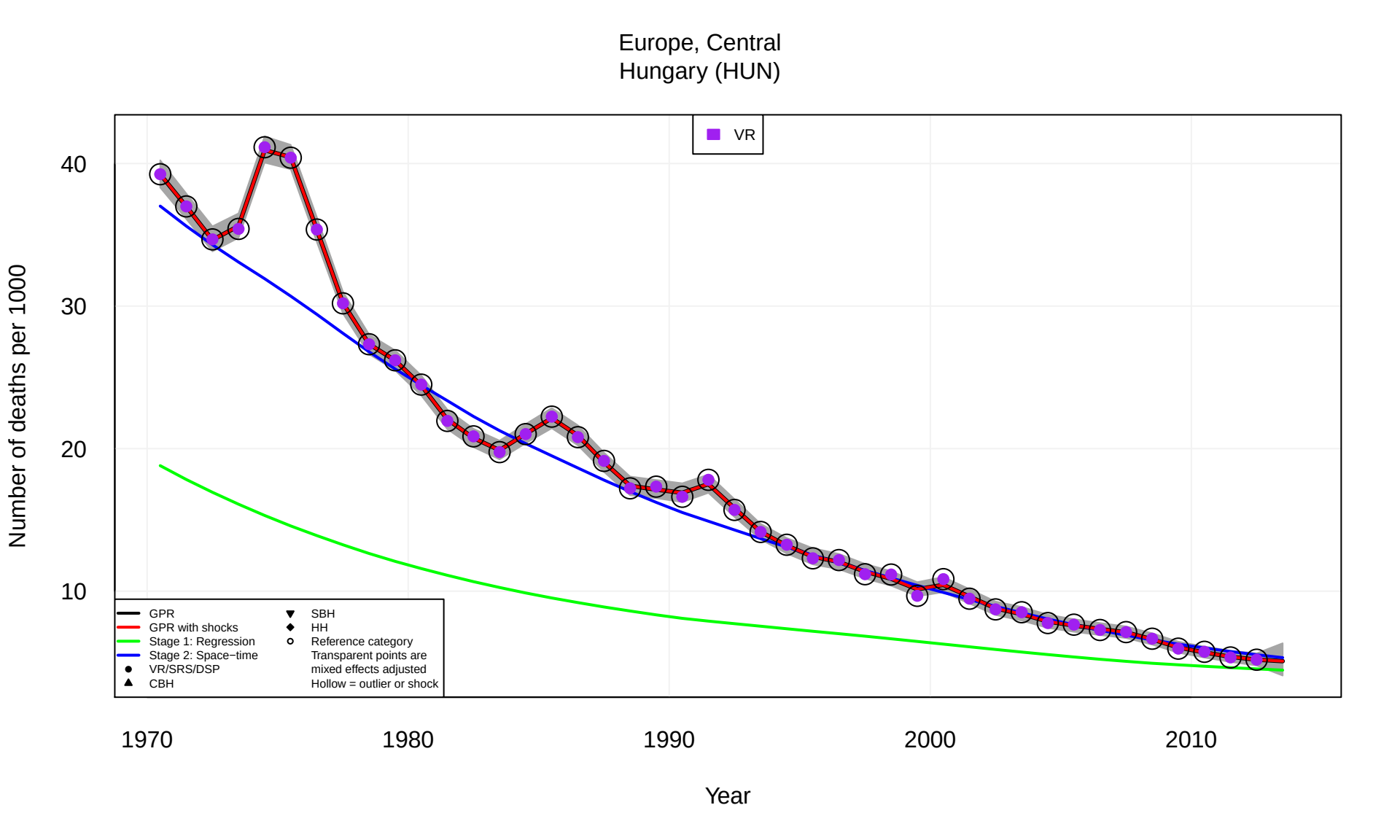

Europe, Central
Albania (ALB)
VR
Standard DHS
RHS
MICS
Number of deaths per 1000
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

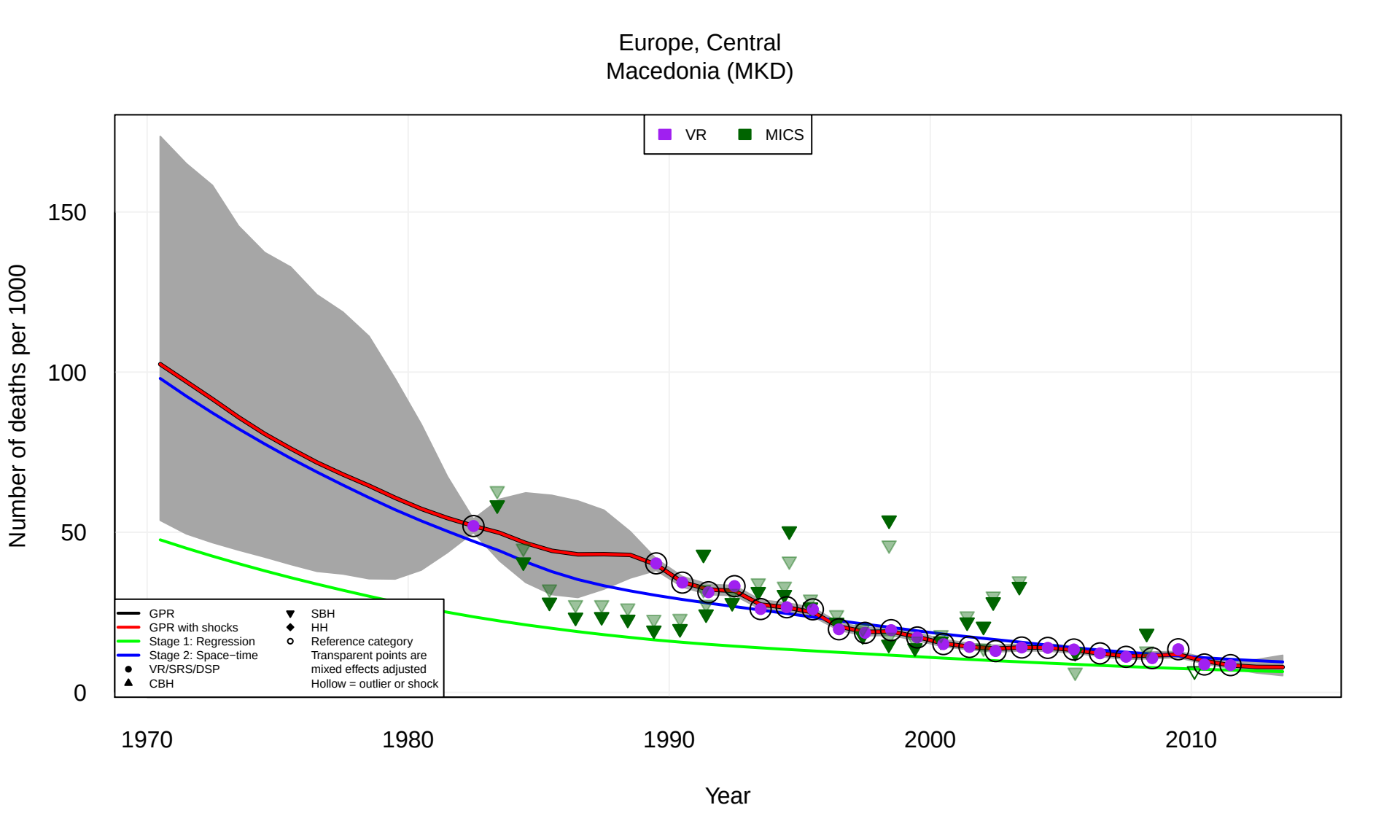

Europe, Central
Bulgaria (BGR)
VR
Census
LSMS
Number of deaths per 1000
0
10
20
30
40
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

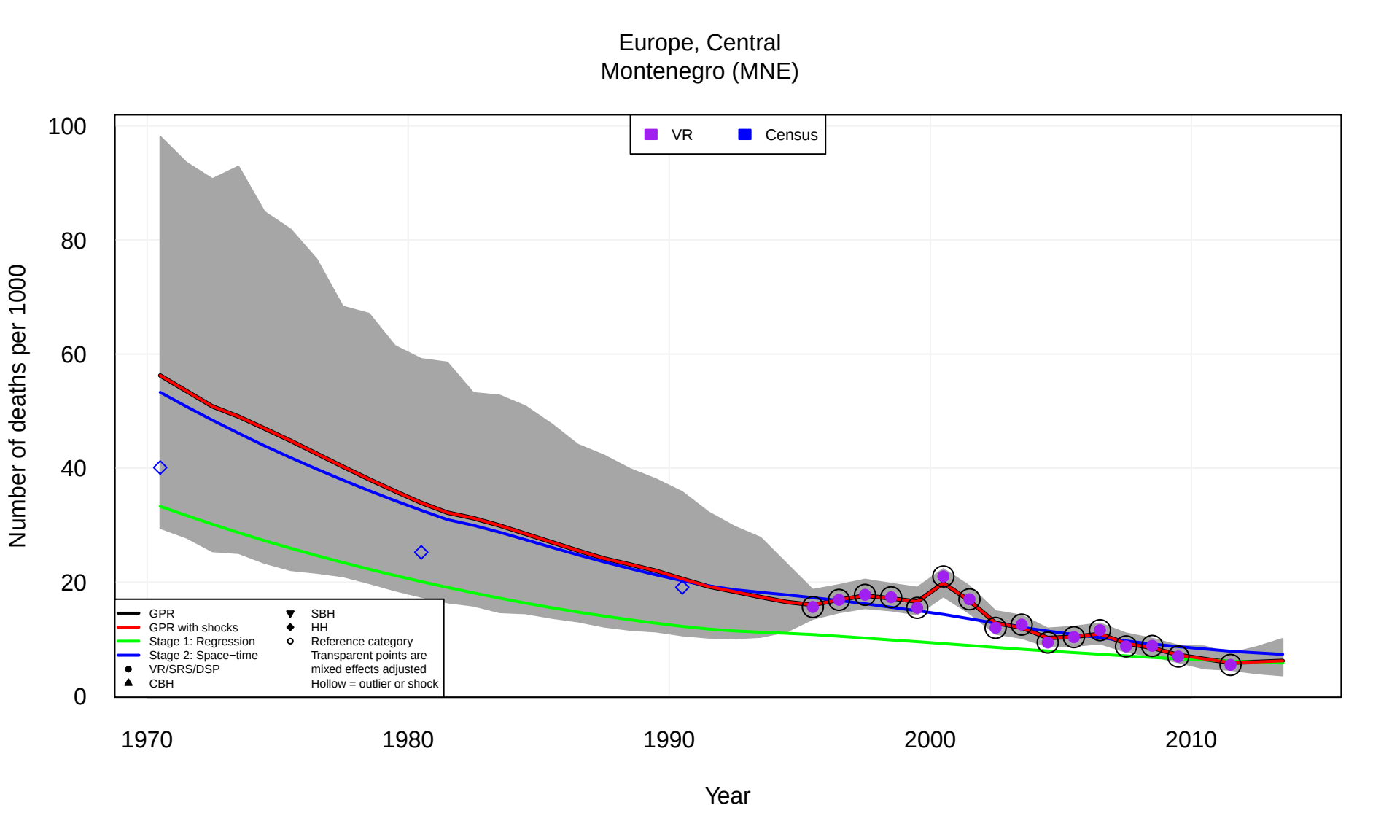

Europe, Central
Bosnia and Herzegovina (BIH)
VR
MICS
Number of deaths per 1000
120
100
80
60
40
20
0
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

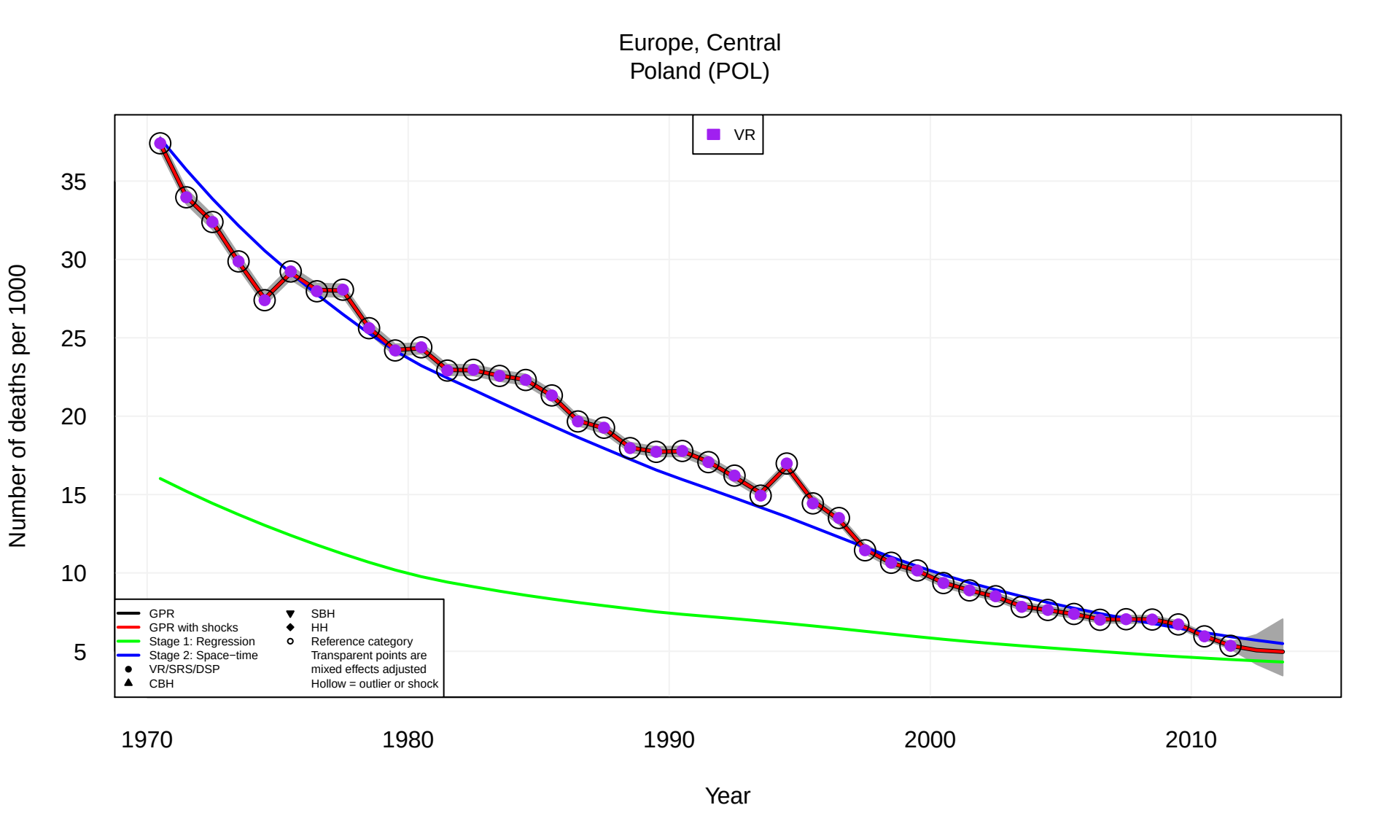

Europe, Central
Czech Republic (CZE)
VR
RHS
Census
Number of deaths per 1000
100
80
60
40
20
0
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

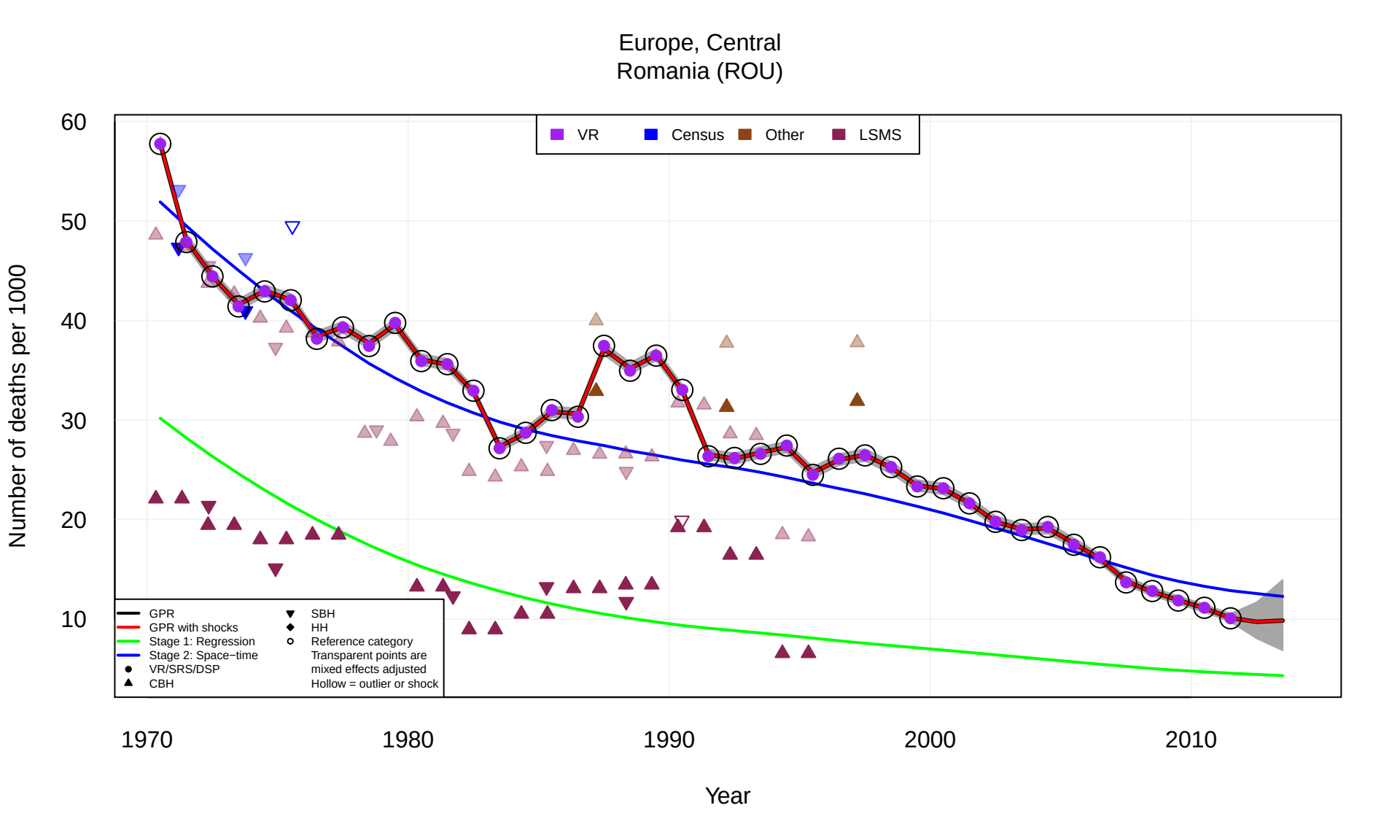

Europe, Central
Croatia (HRV)
VR
Number of deaths per 1000
0
20
40
60
80
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

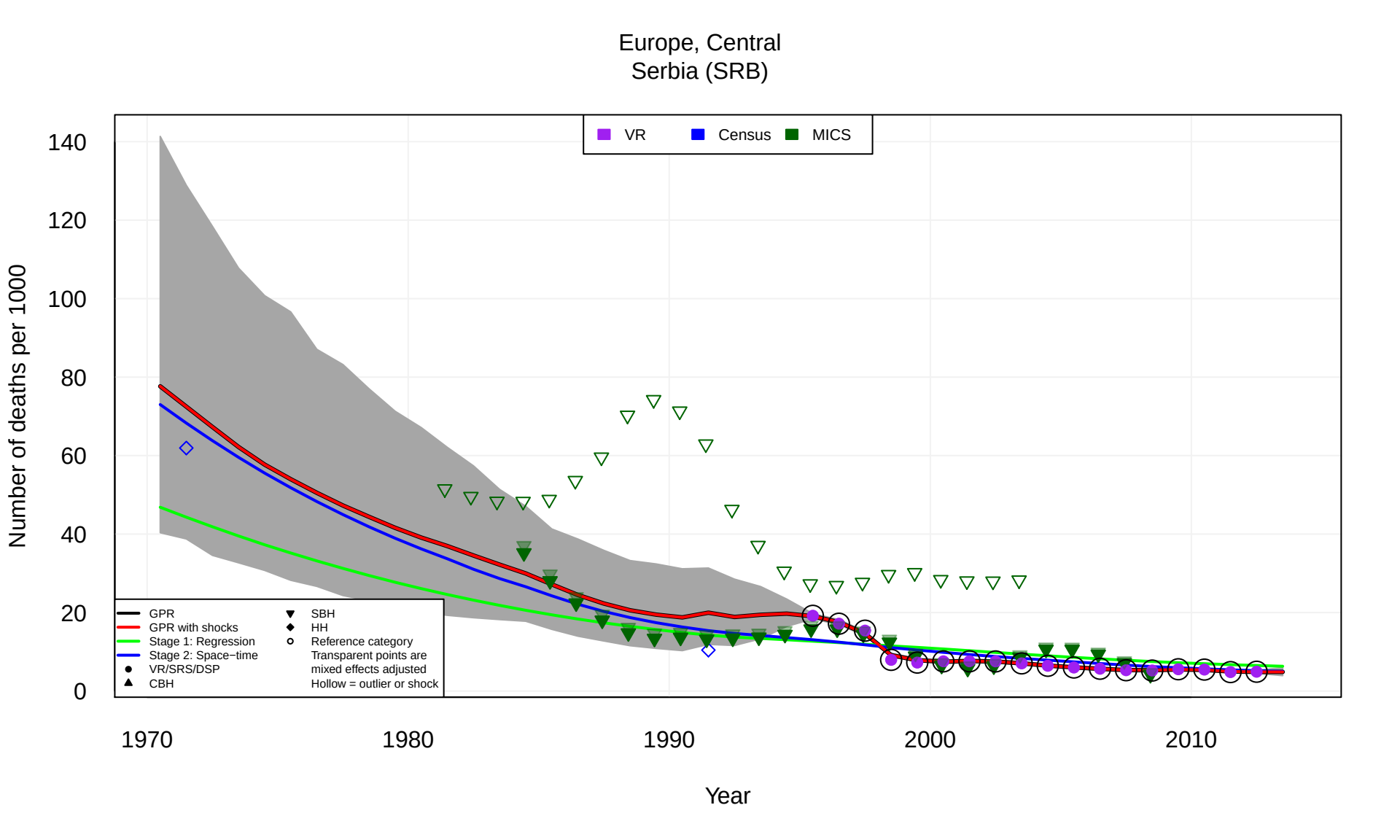

Europe, Central
Hungary (HUN)
VR
40
30
20
10
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

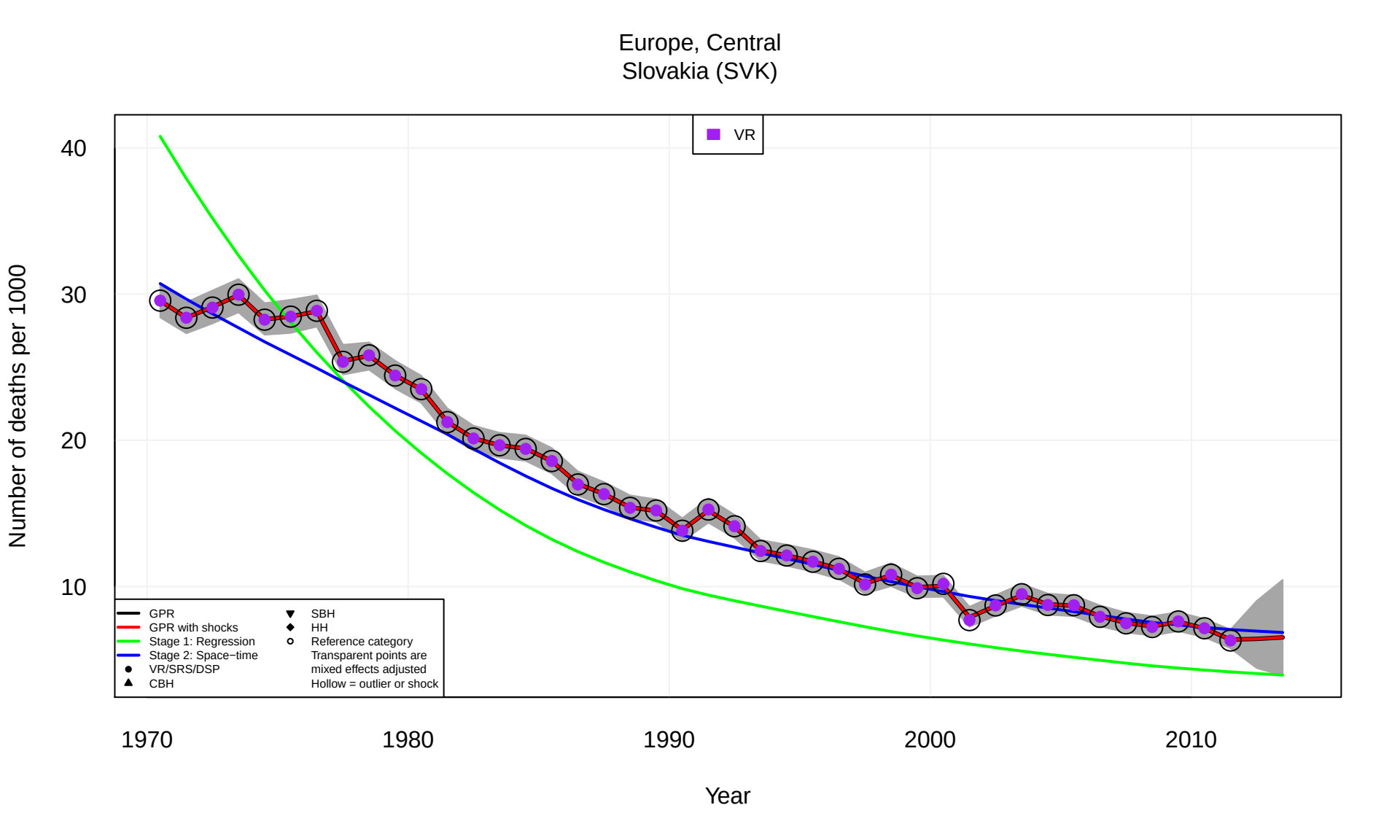

Europe, Central
Macedonia (MKD)
VR
MICS
150
100
50
0
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

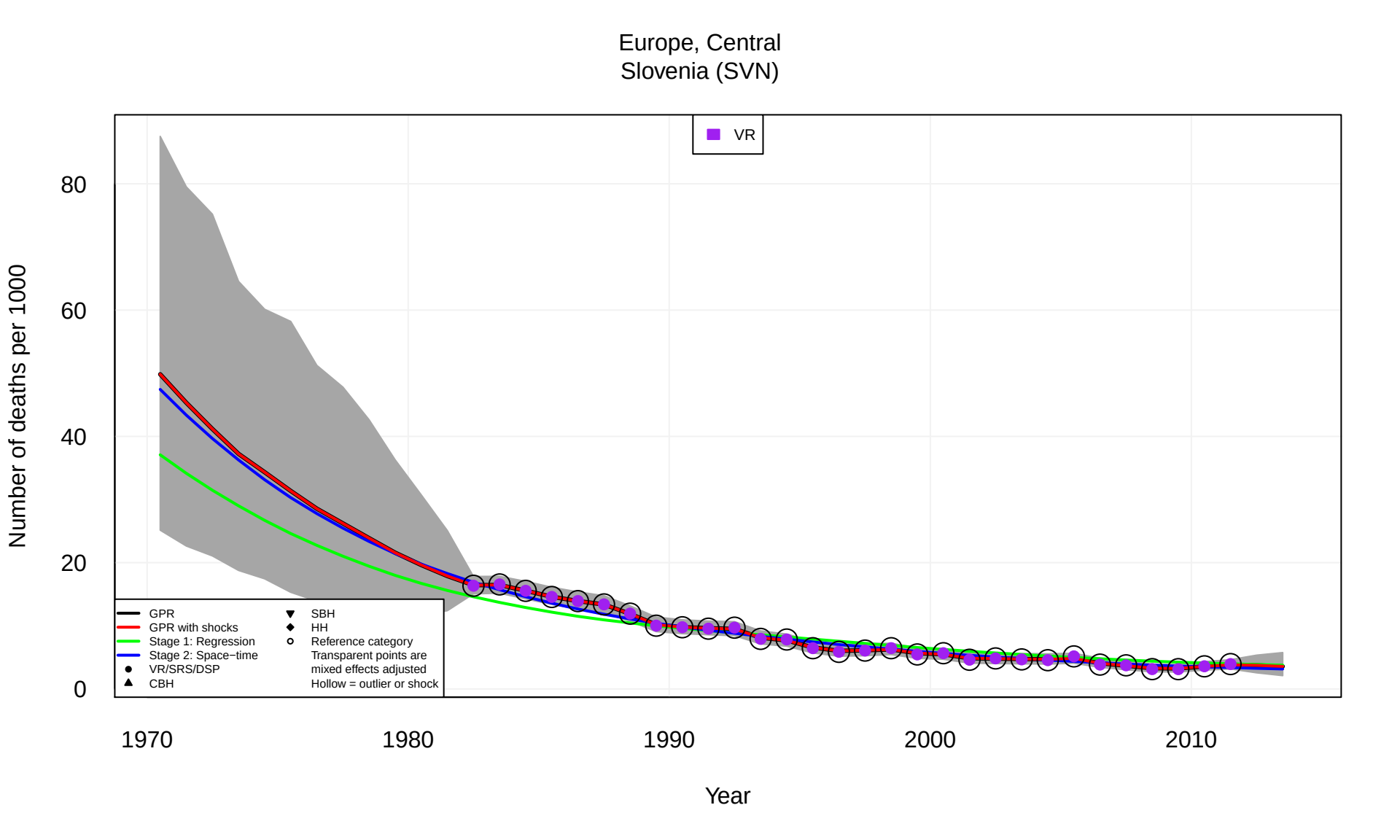

Europe, Central
Montenegro (MNE)
VR
Census
Number of deaths per 1000
100
80
60
40
20
0
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

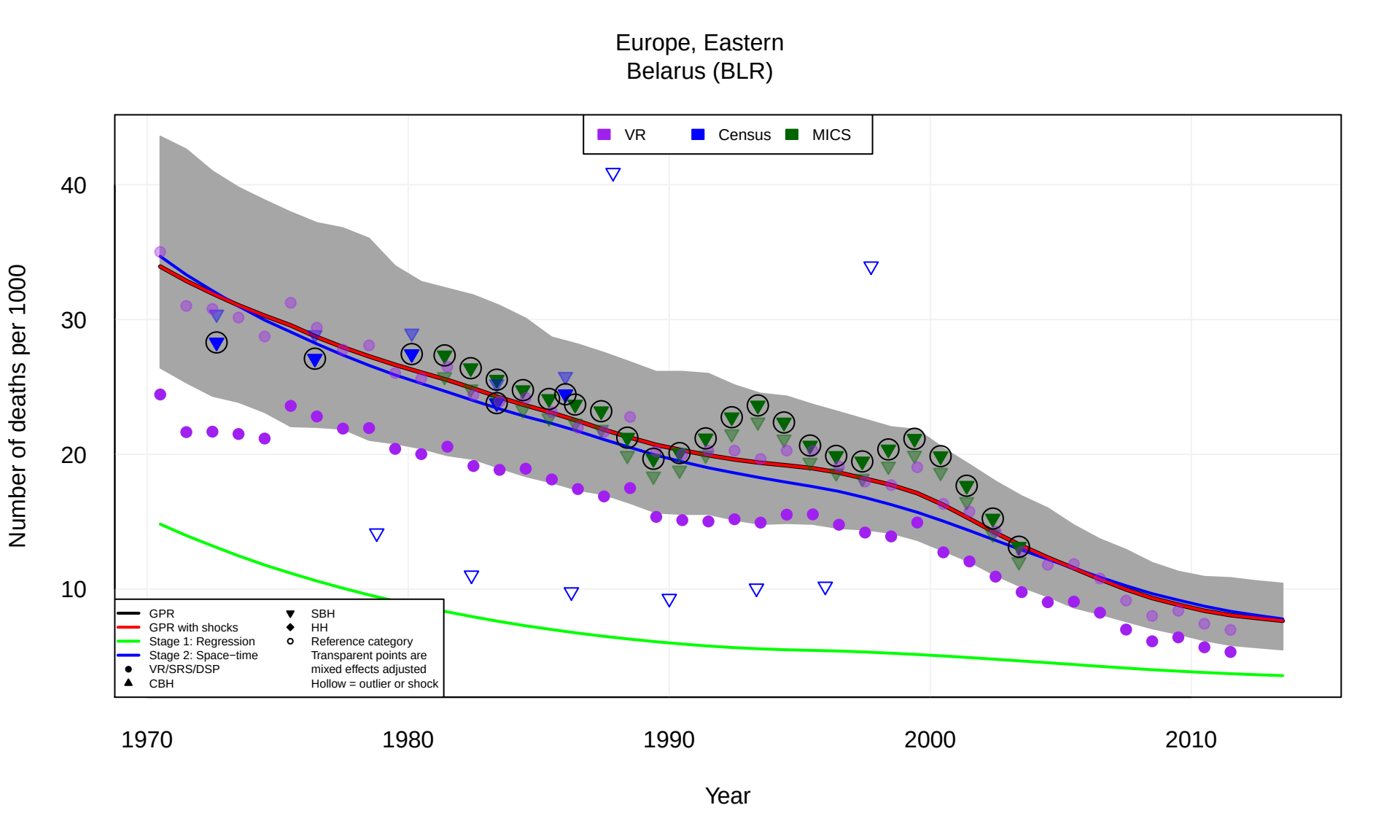

Europe, Central
Poland (POL)
VR
Number of deaths per 1000
35
30
25
20
15
10
5
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

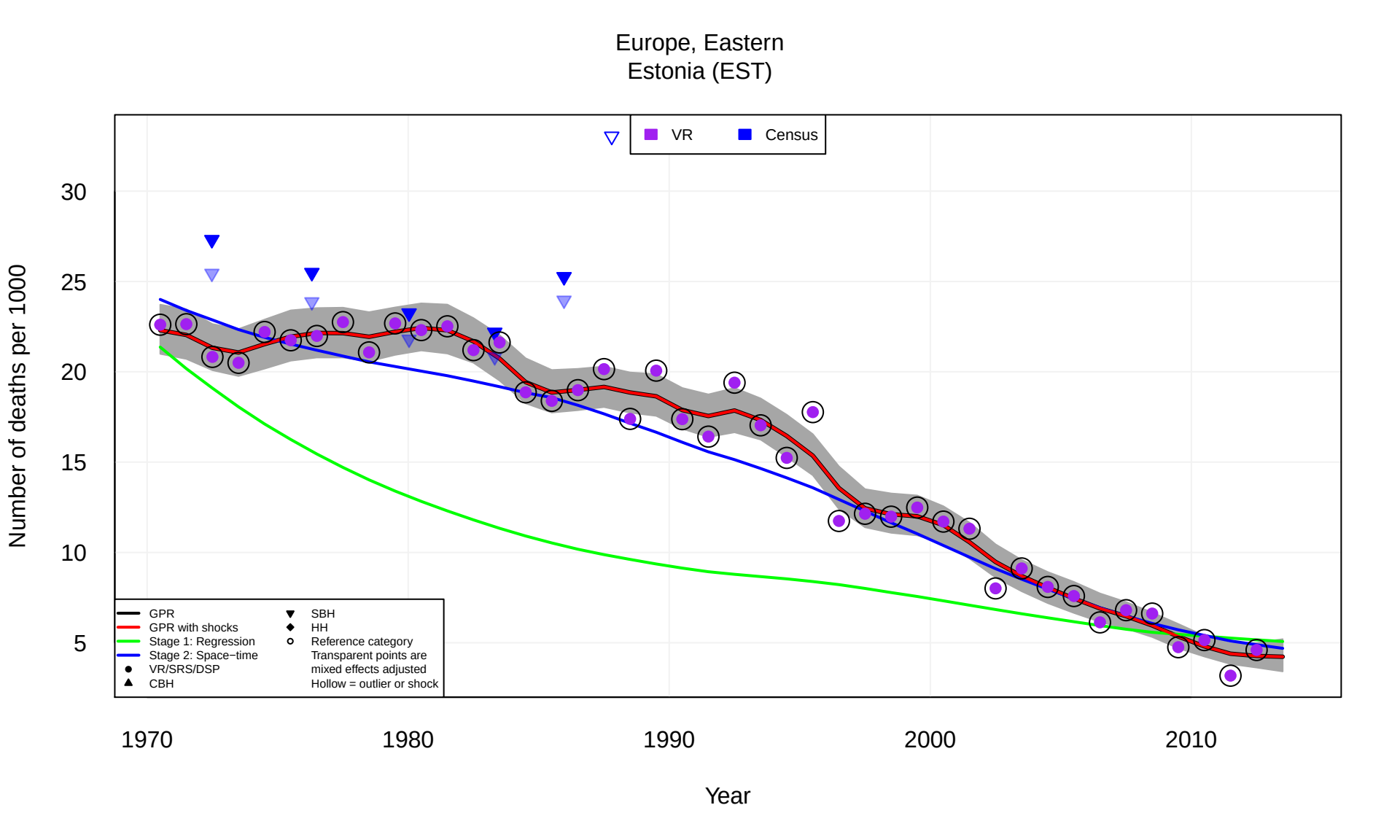

Europe, Central
Romania (ROU)
VR
Census
Other
LSMS
Number of deaths per 1000
60
50
40
30
20
10
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

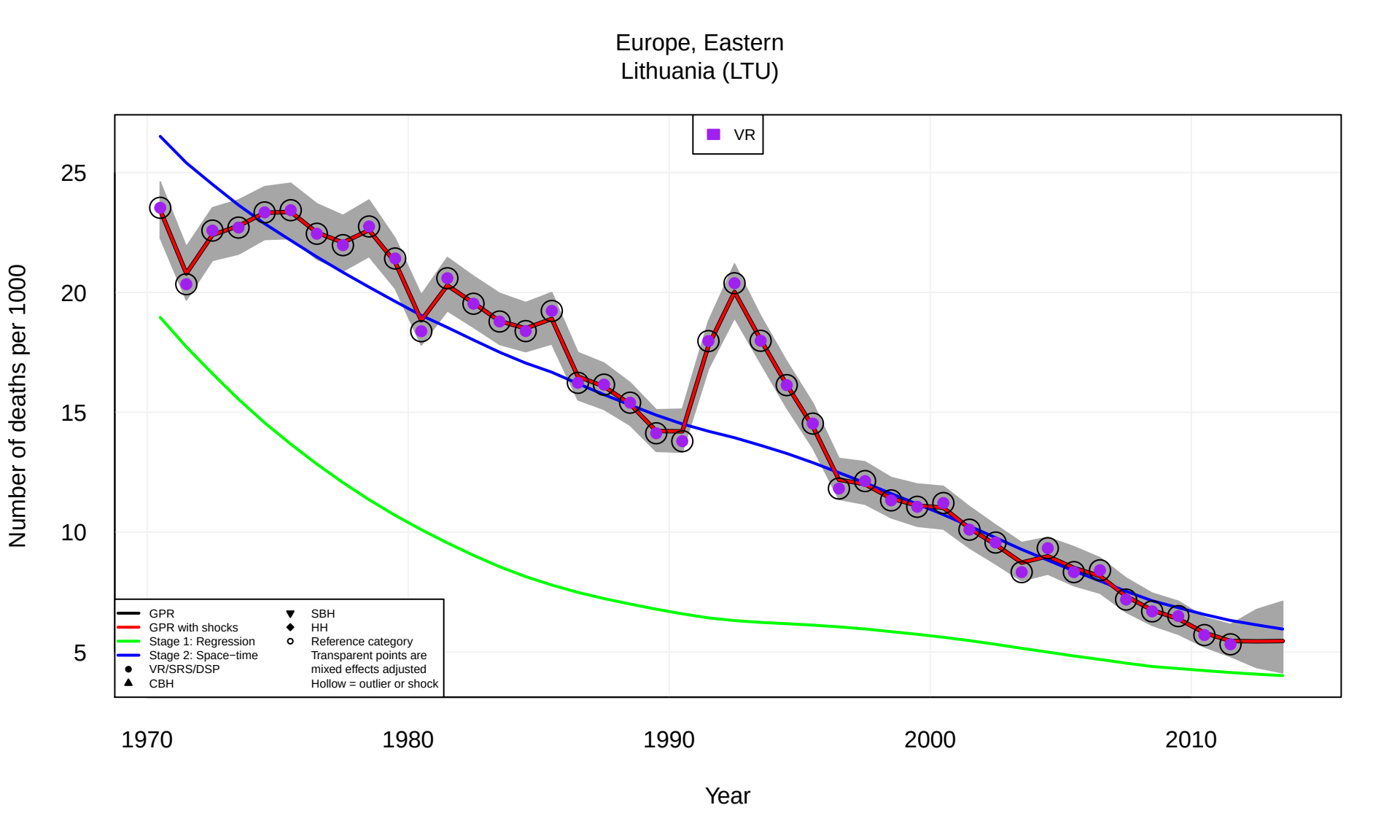

Europe, Central
Serbia (SRB)
VR
Census
MICS
Number of deaths per 1000
0
20
40
60
80
100
120
140
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

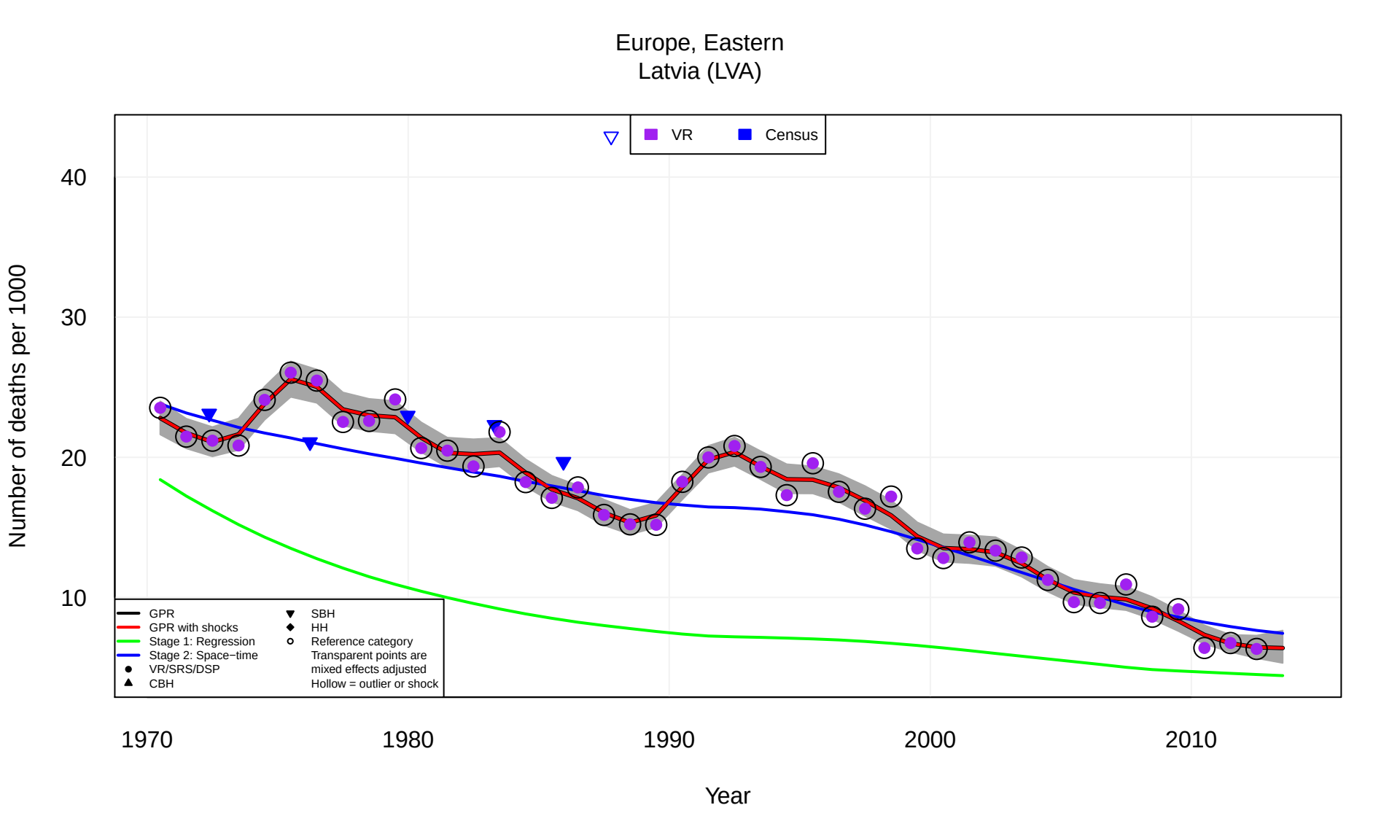

Europe, Central
Slovakia (SVK)
VR
40
30
20
10
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

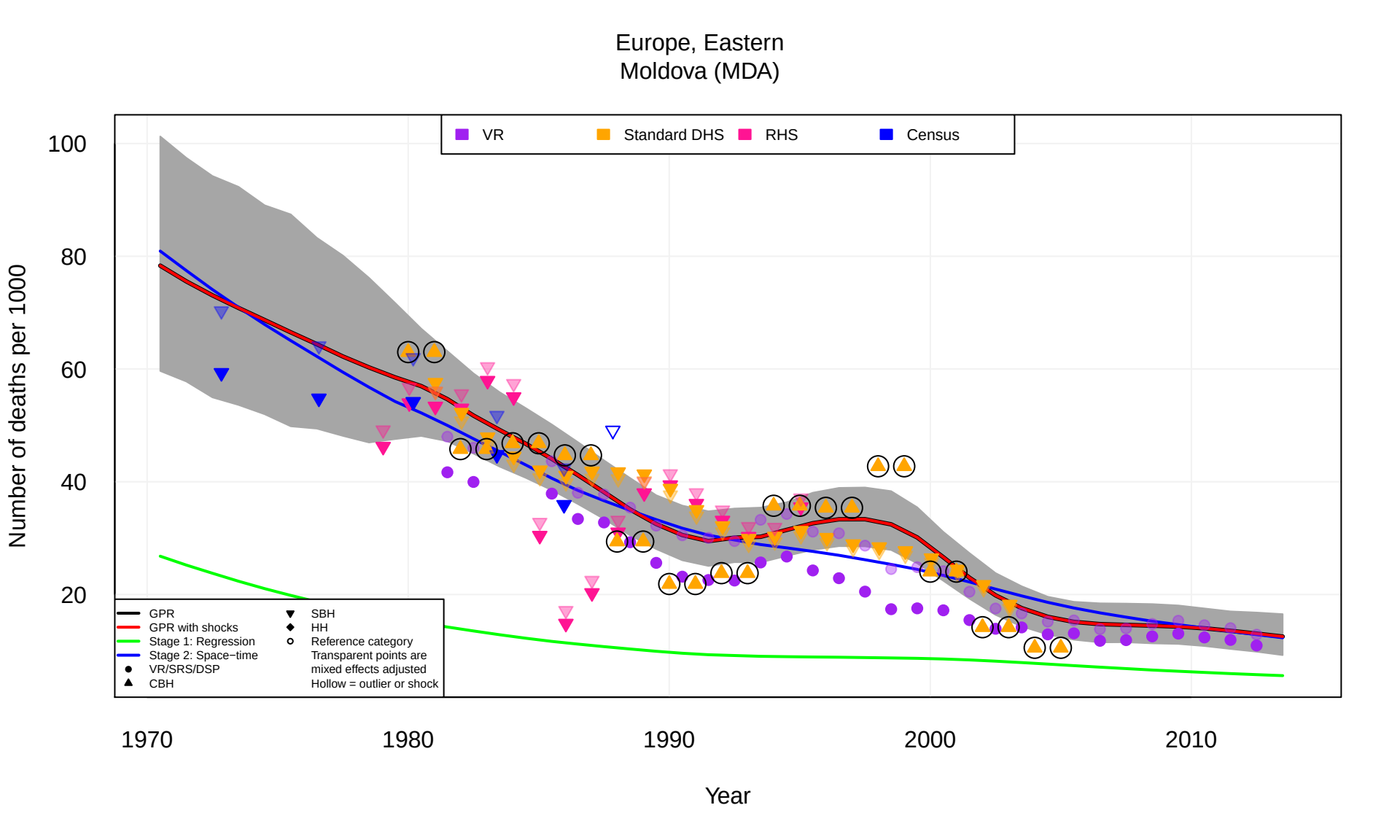

Europe, Central
Slovenia (SVN)
VR
80
60
40
20
0
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

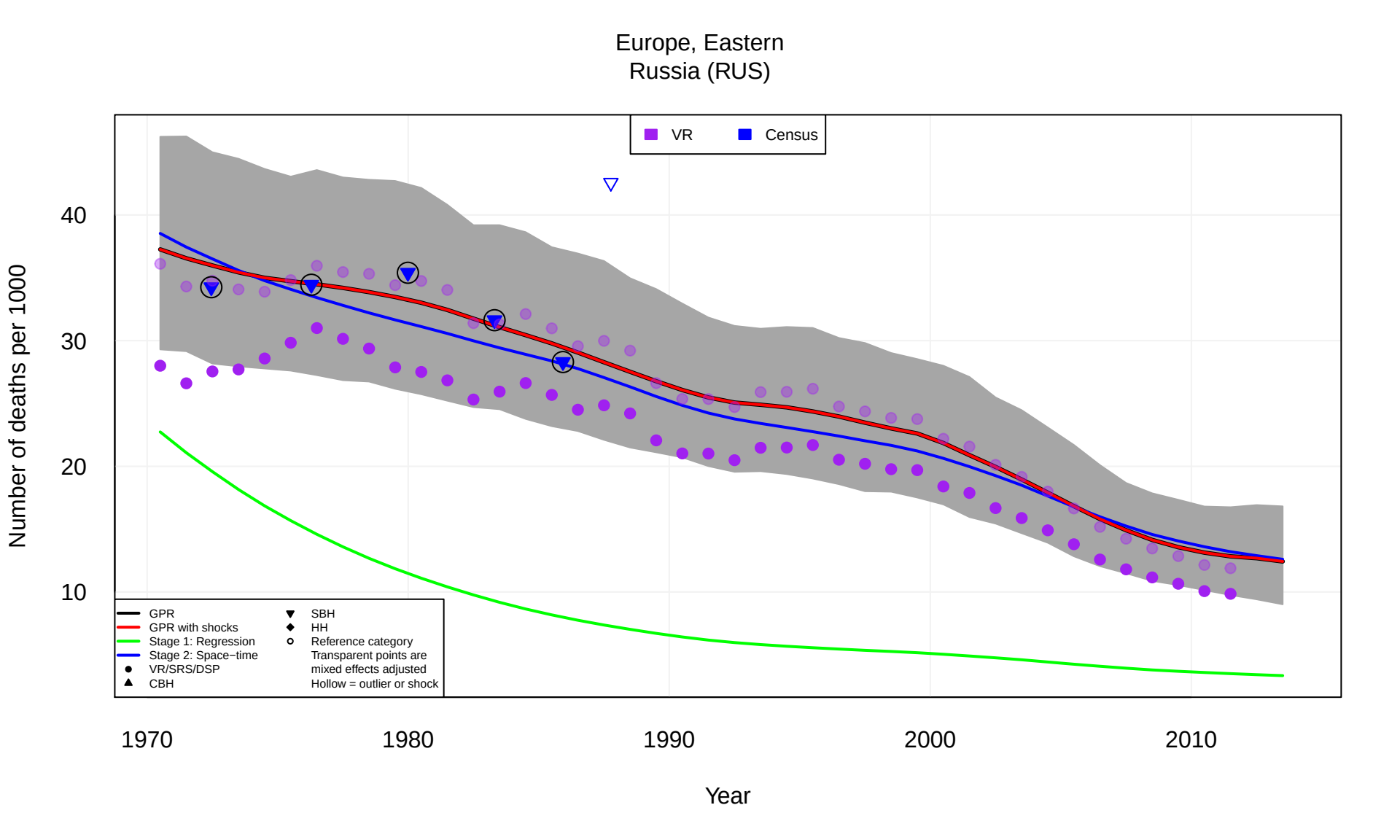

Europe, Eastern
Belarus (BLR)
VR
Census
MICS
40
30
20
10
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

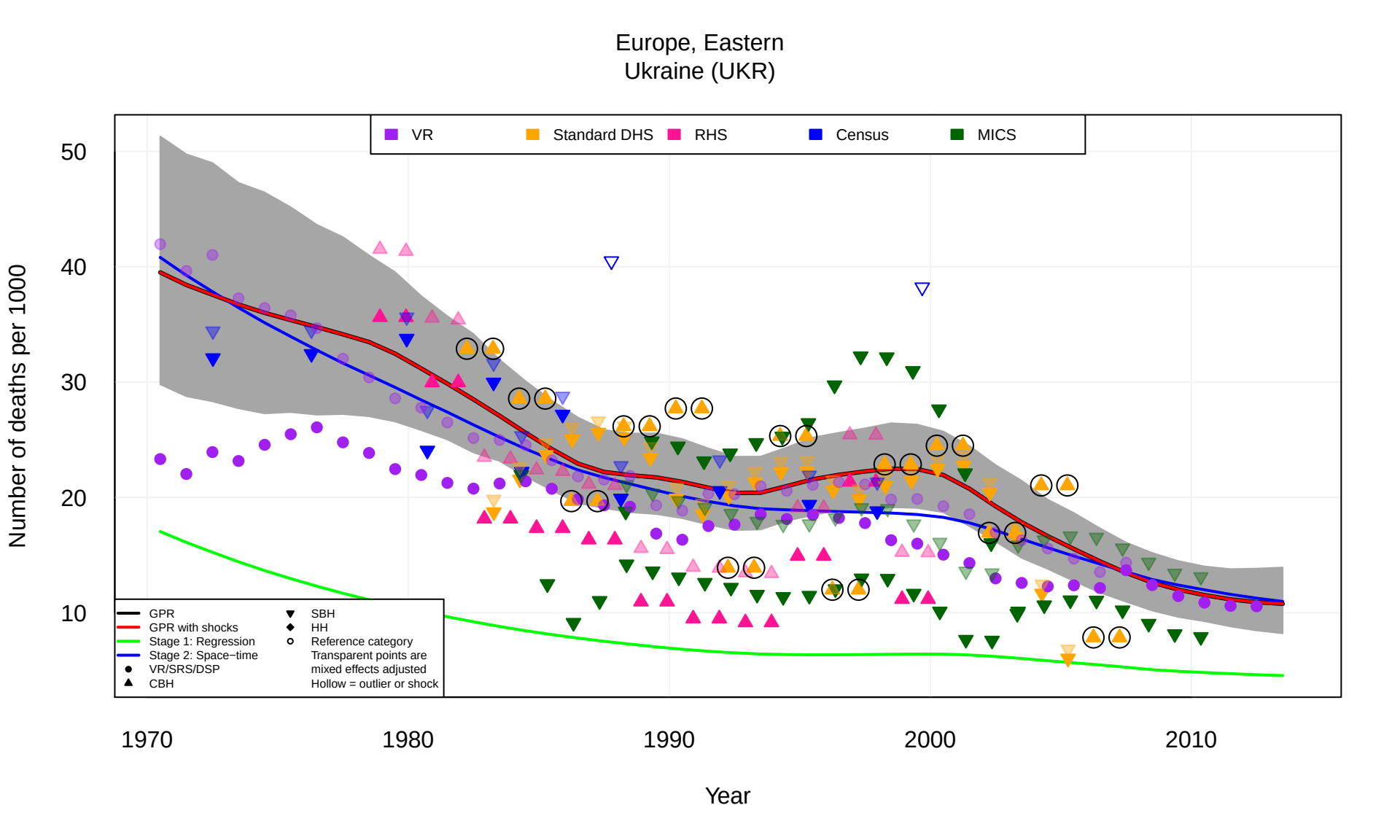

Europe, Eastern
Estonia (EST)
VR
Census
30
25
20
15
10
5
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

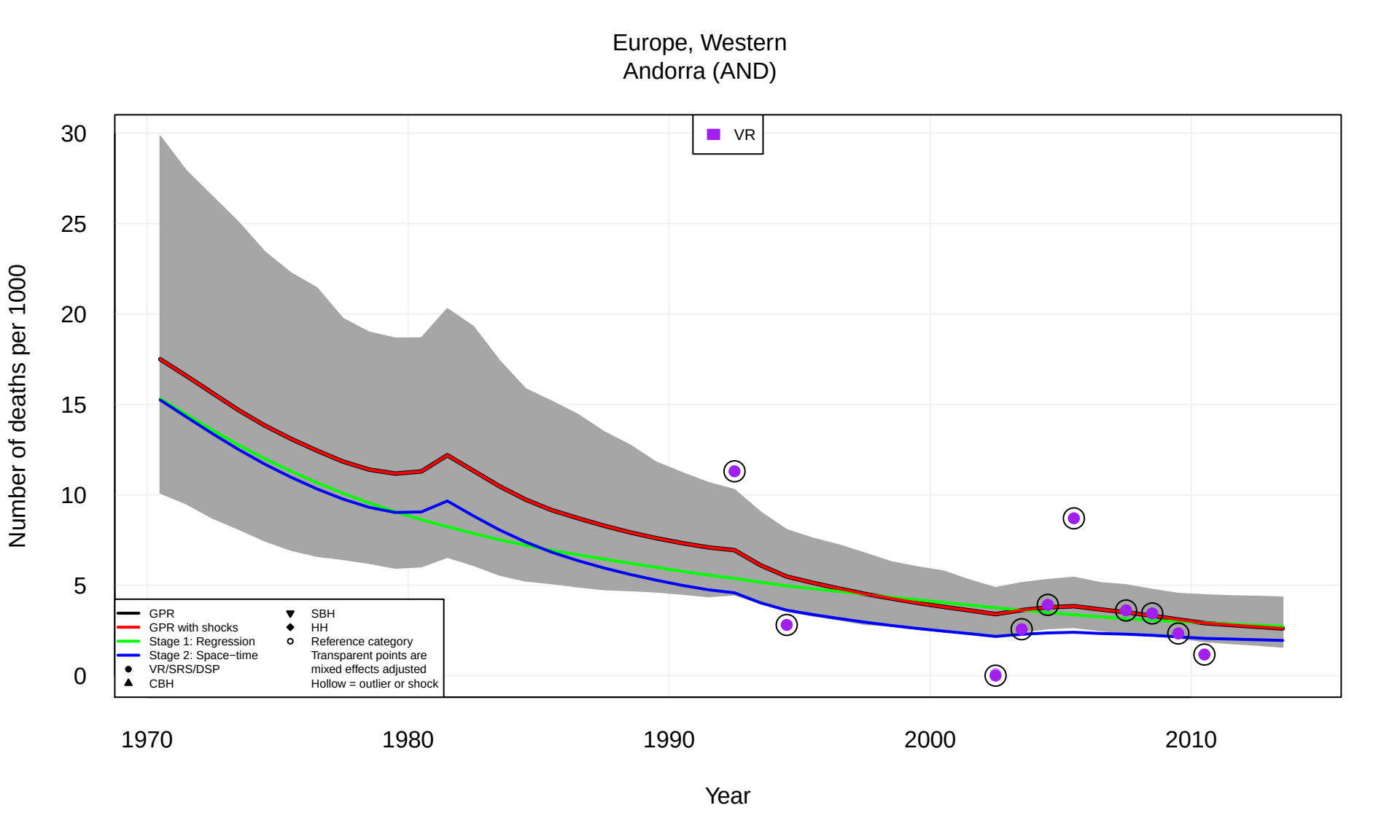

Europe, Eastern
Lithuania (LTU)
VR
25
20
15
10
5
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

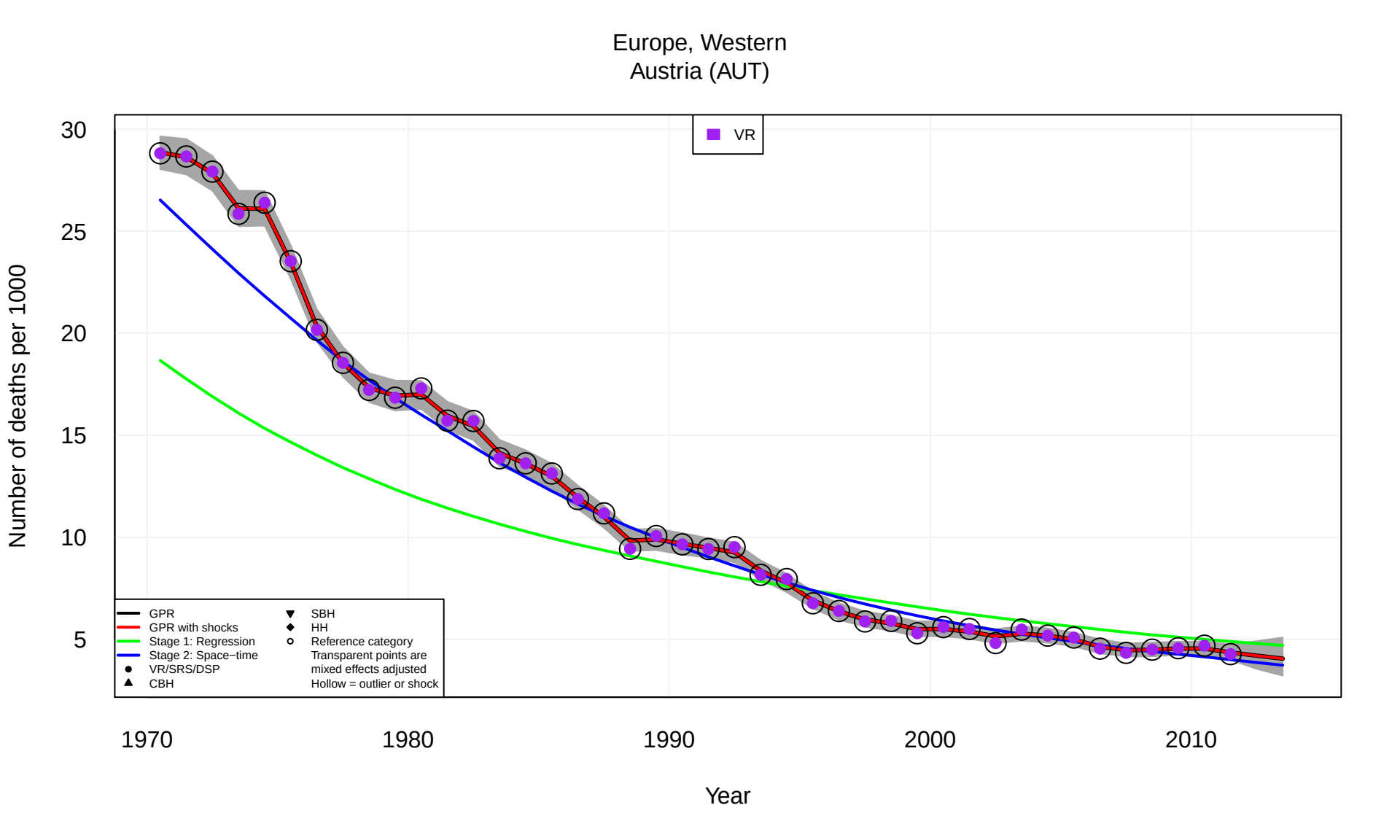

Europe, Eastern
Latvia (LVA)
VR
Census
40
30
20
10
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

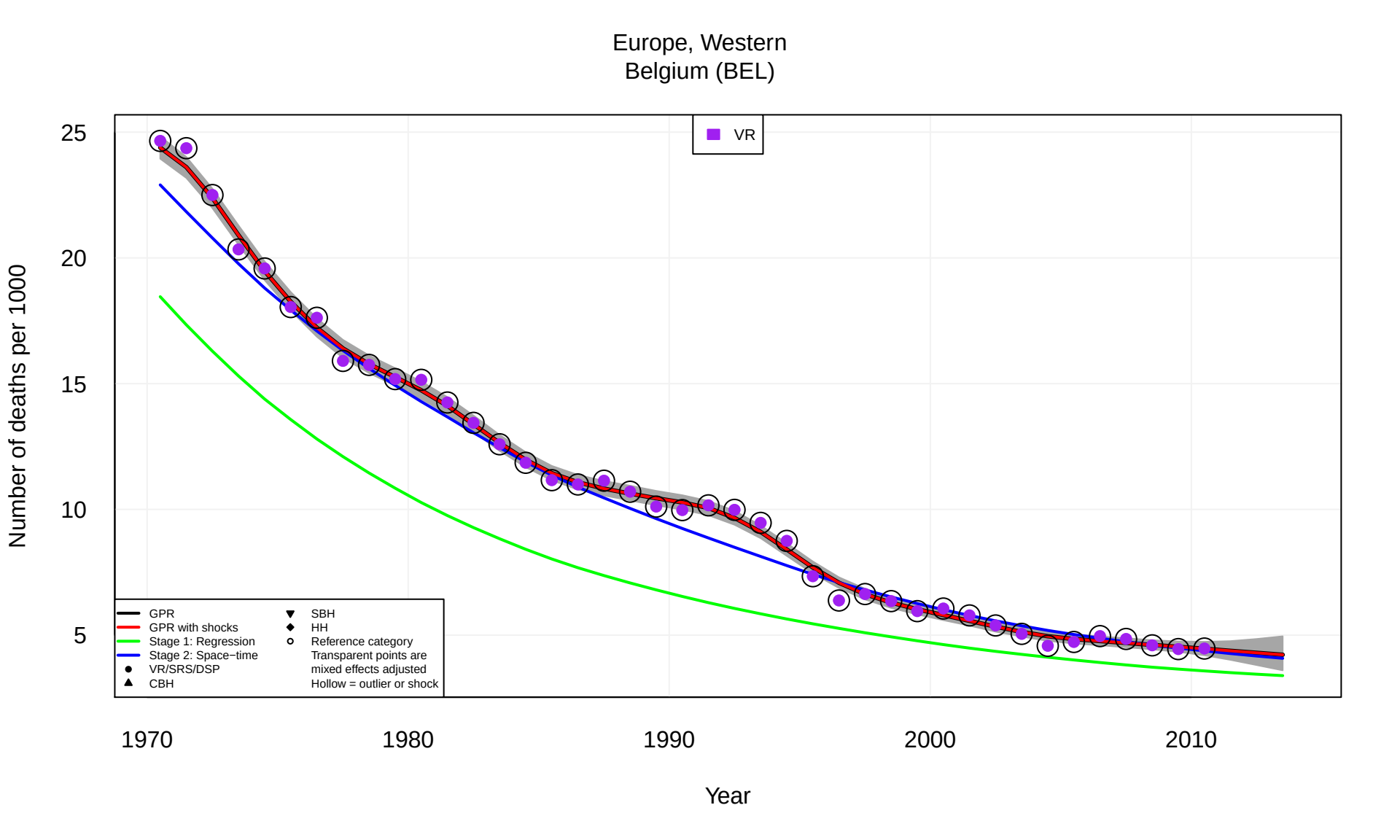

Europe, Eastern
Moldova (MDA)
VR
Standard DHS
RHS
Census
100
80
60
40
20
Number of deaths per 1000
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock
1970
1980
1990
2000
2010
Year

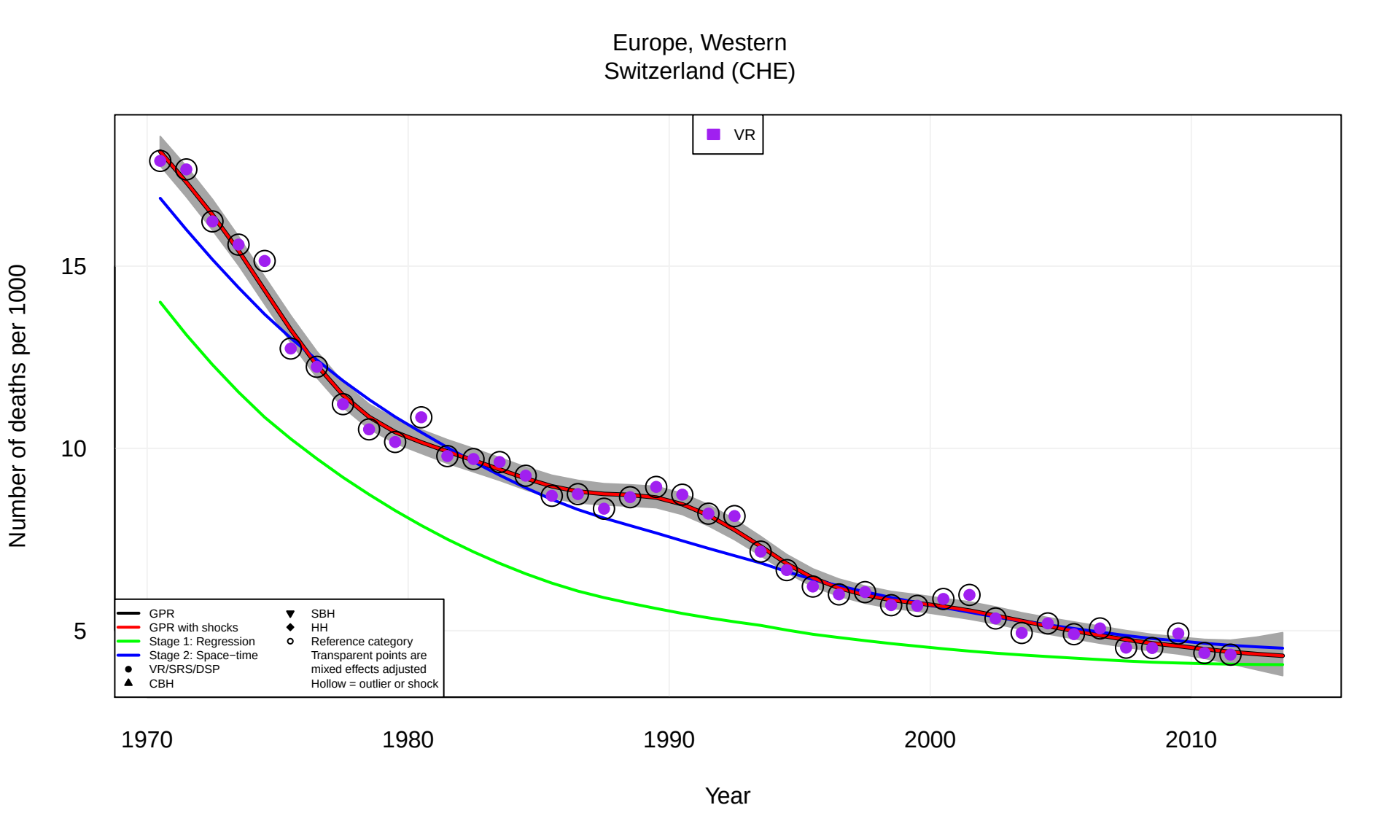

Europe, Eastern
Russia (RUS)
VR
Census
40
30
20
10
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

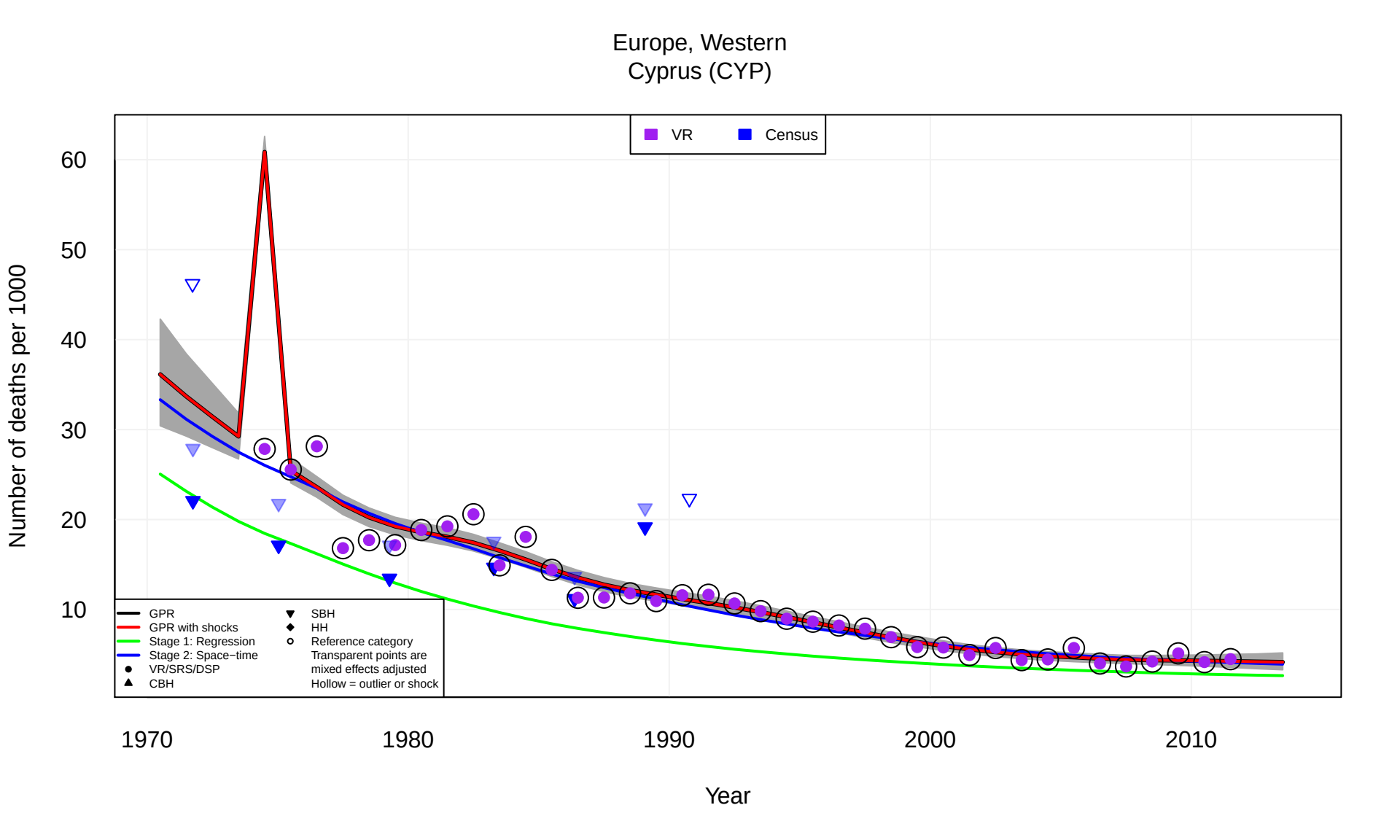

Europe, Eastern
Ukraine (UKR)
VR
Standard DHS
RHS
Census
MICS
Number of deaths per 1000
50
40
30
20
10
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

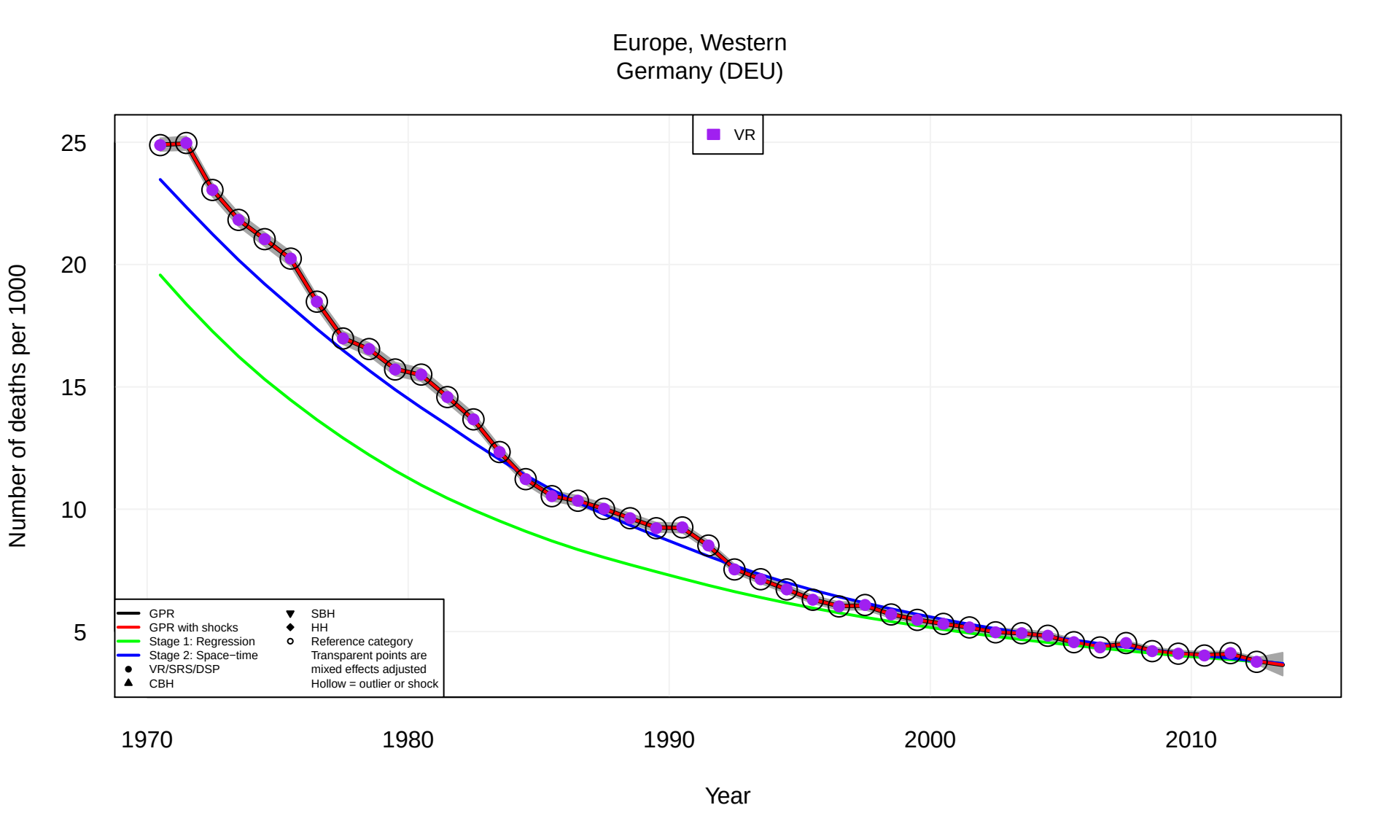

Europe, Western
Andorra (AND)
VR
30
25
20
15
10
5
0
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

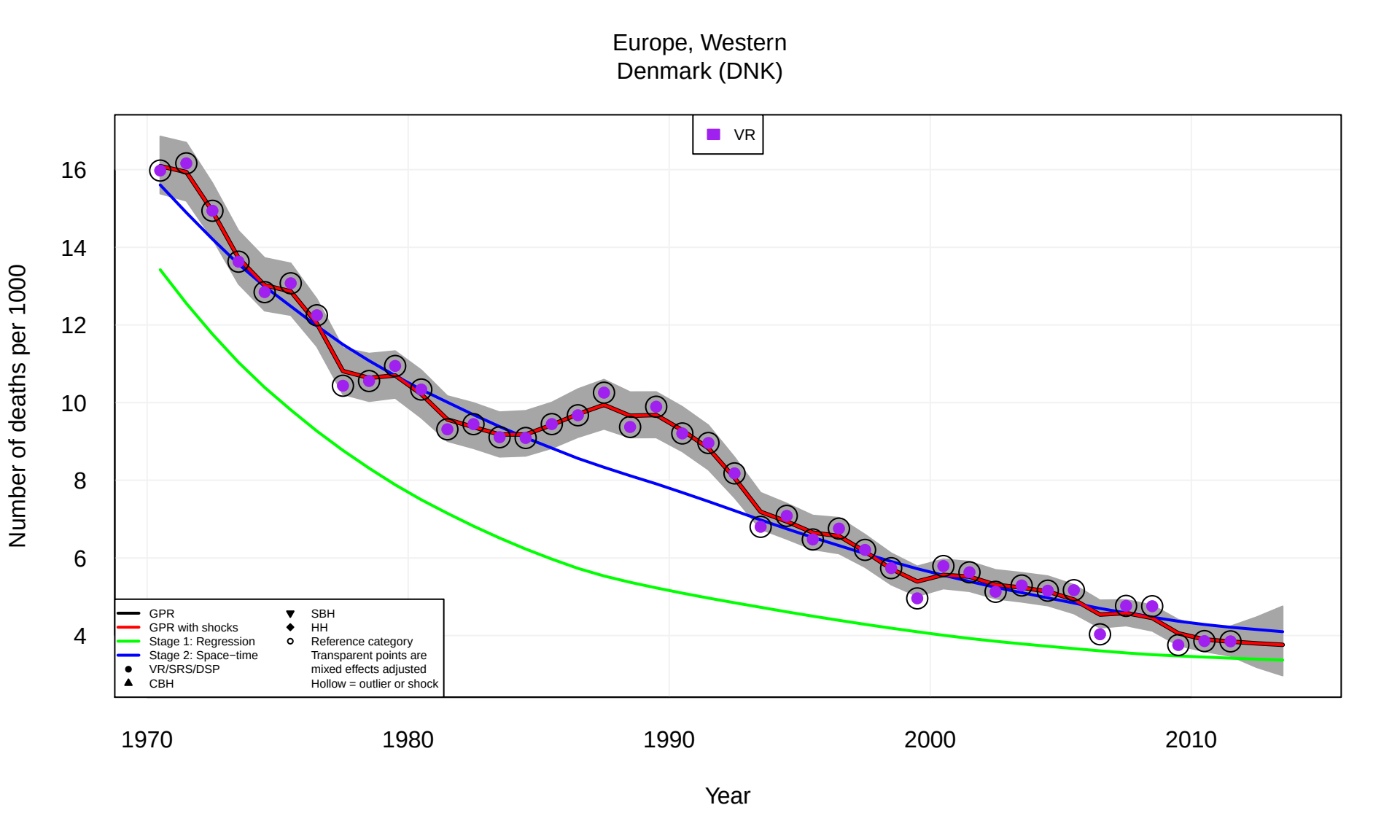

Europe, Western
Austria (AUT)
VR
Number of deaths per 1000
30
25
20
15
10
5
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

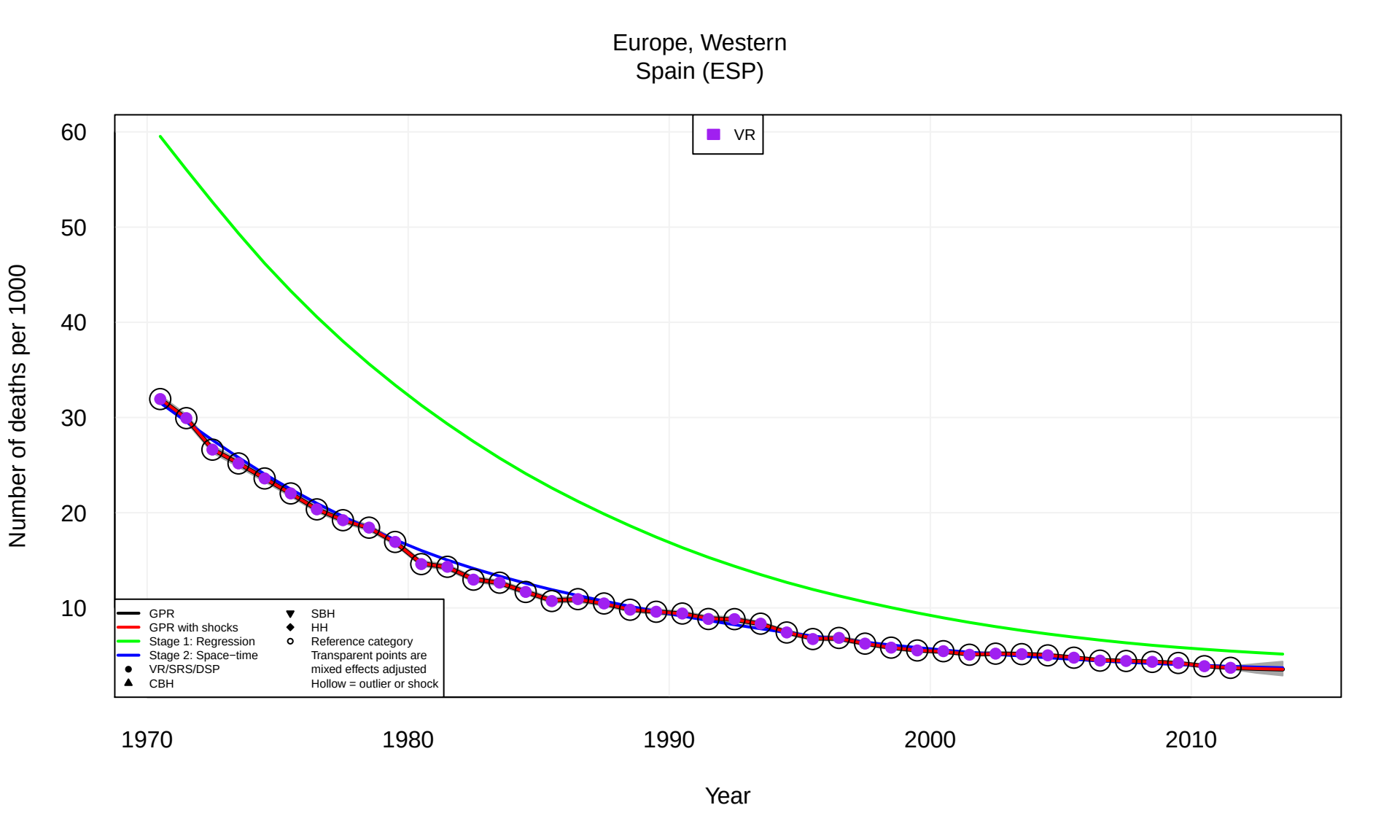

Europe, Western
Belgium (BEL)
VR
25
20
15
10
5
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

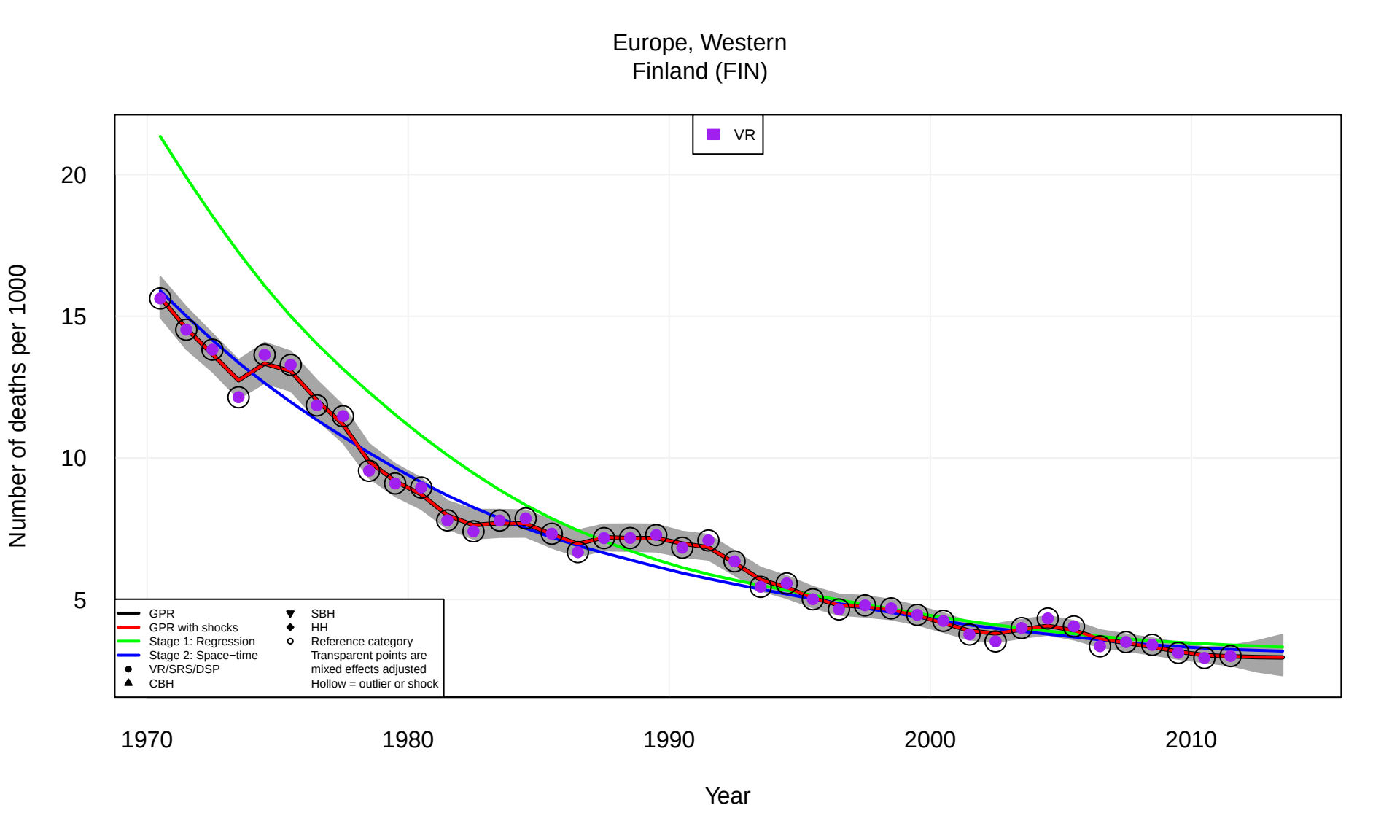

Europe, Western
Switzerland (CHE)
VR
Number of deaths per 1000
15
10
5
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

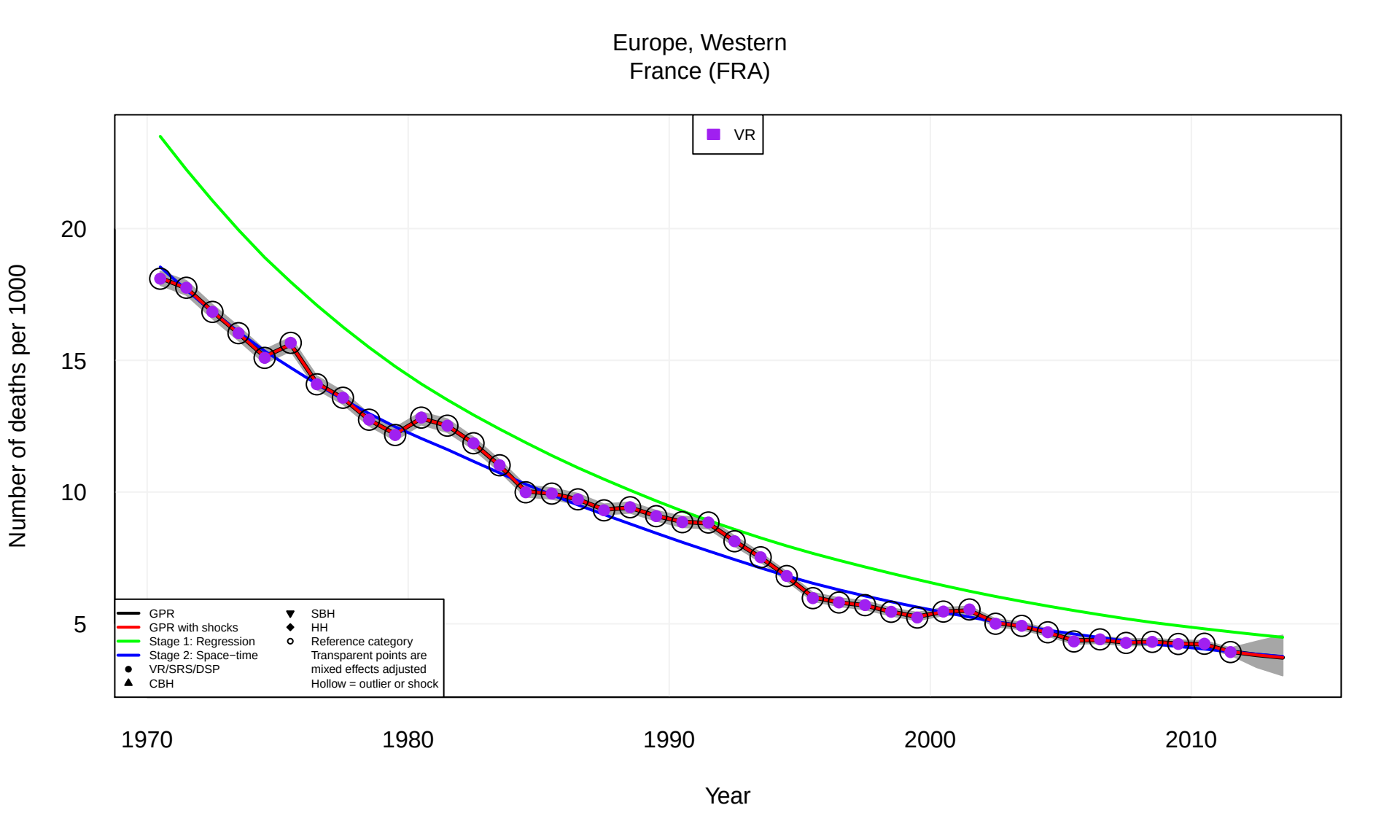

Europe, Western
Cyprus (CYP)
VR
Census
Number of deaths per 1000
60
50
40
30
20
10
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

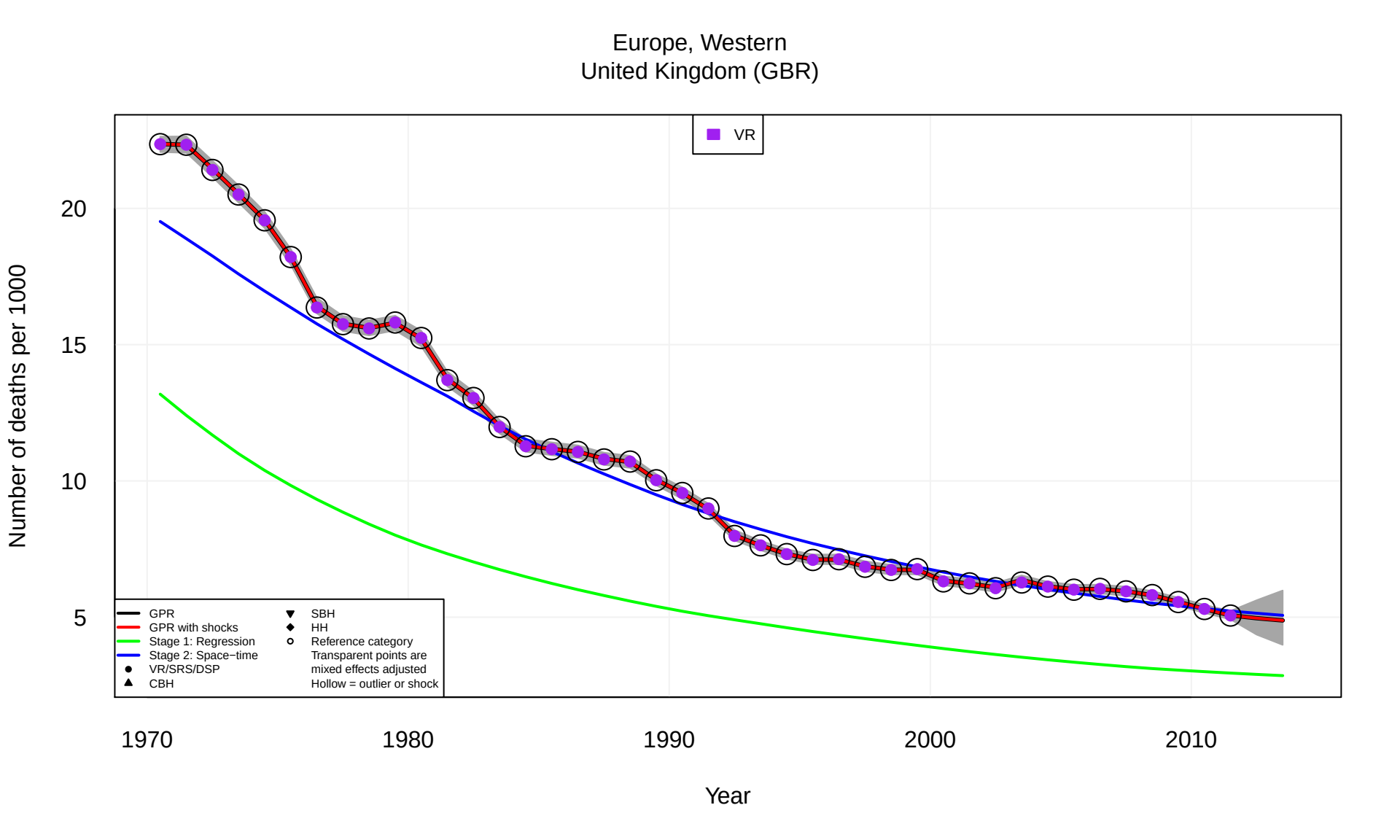

Europe, Western
Germany (DEU)
VR
25
20
15
10
5
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

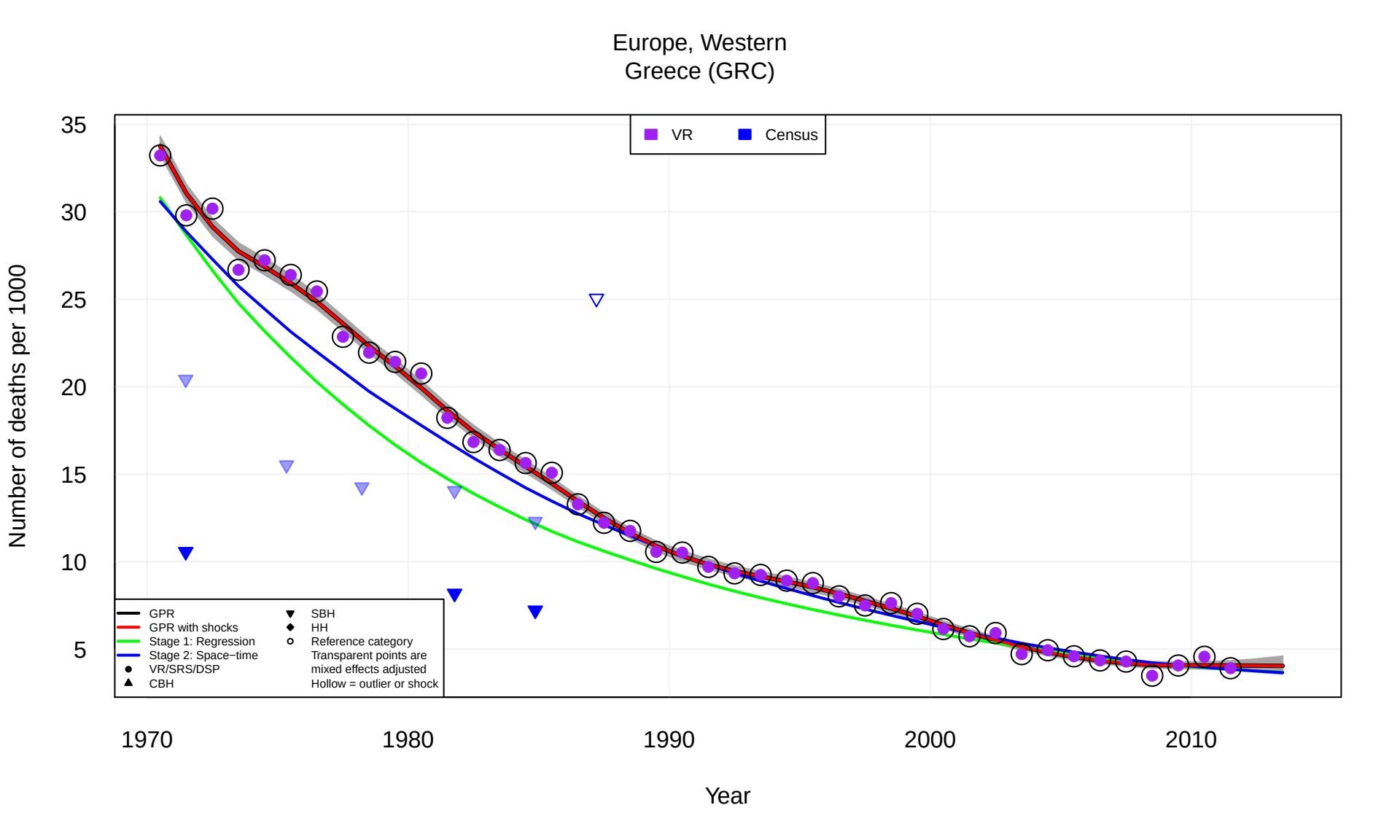

Europe, Western
Denmark (DNK)
VR
Number of deaths per 1000
16
14
12
10
8
6
4
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

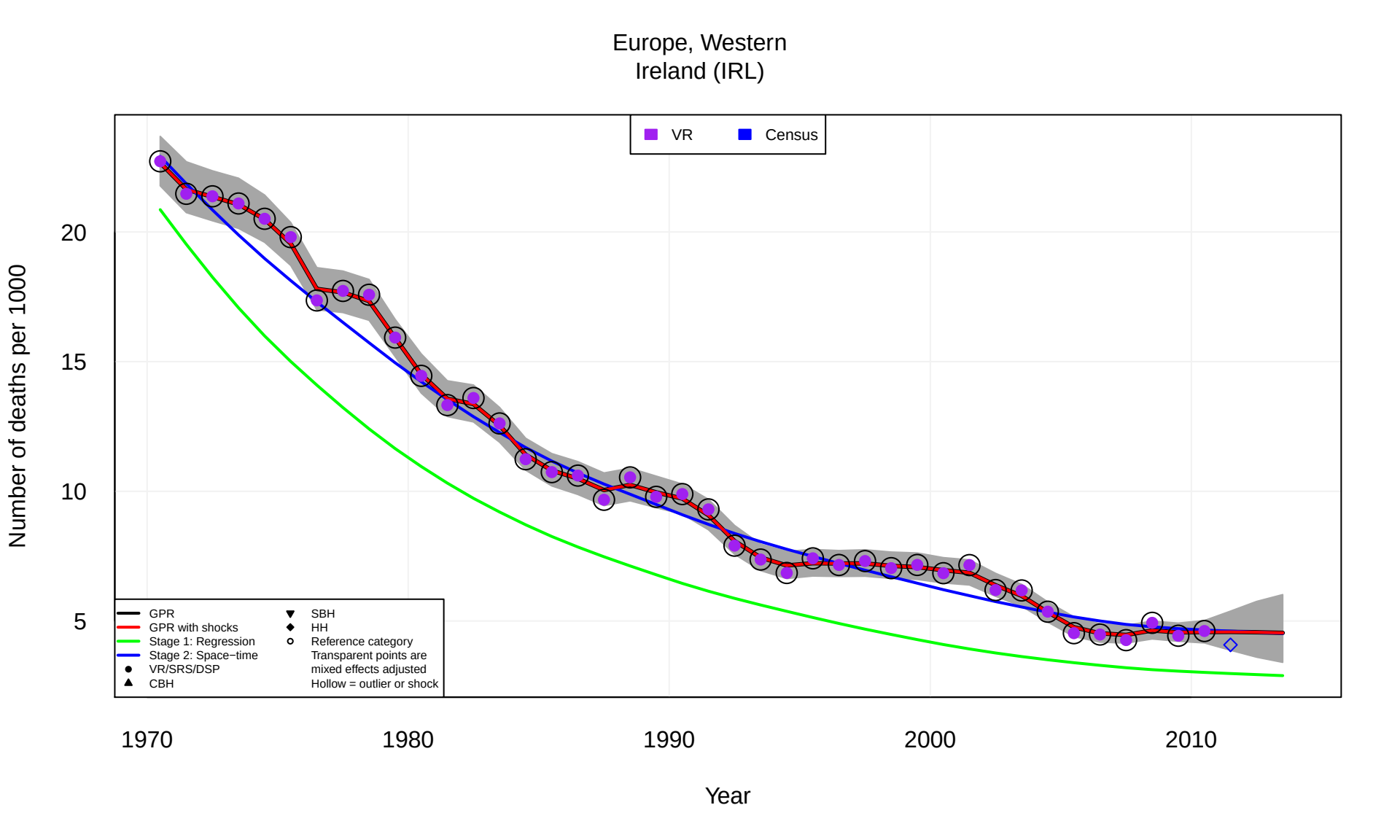

Europe, Western
Spain (ESP)
VR
60
50
40
30
20
10
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

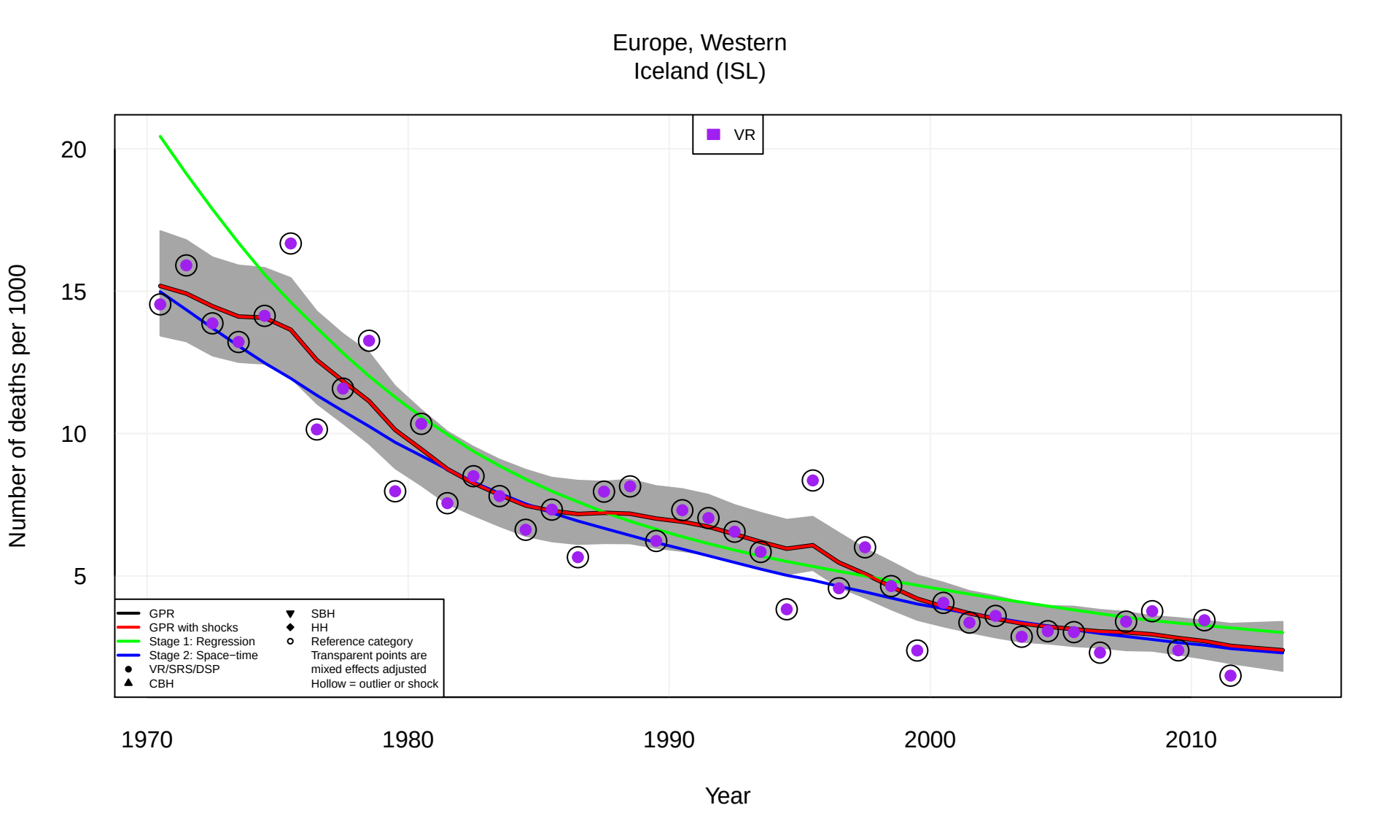

Europe, Western
Finland (FIN)
VR
20
15
10
5
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

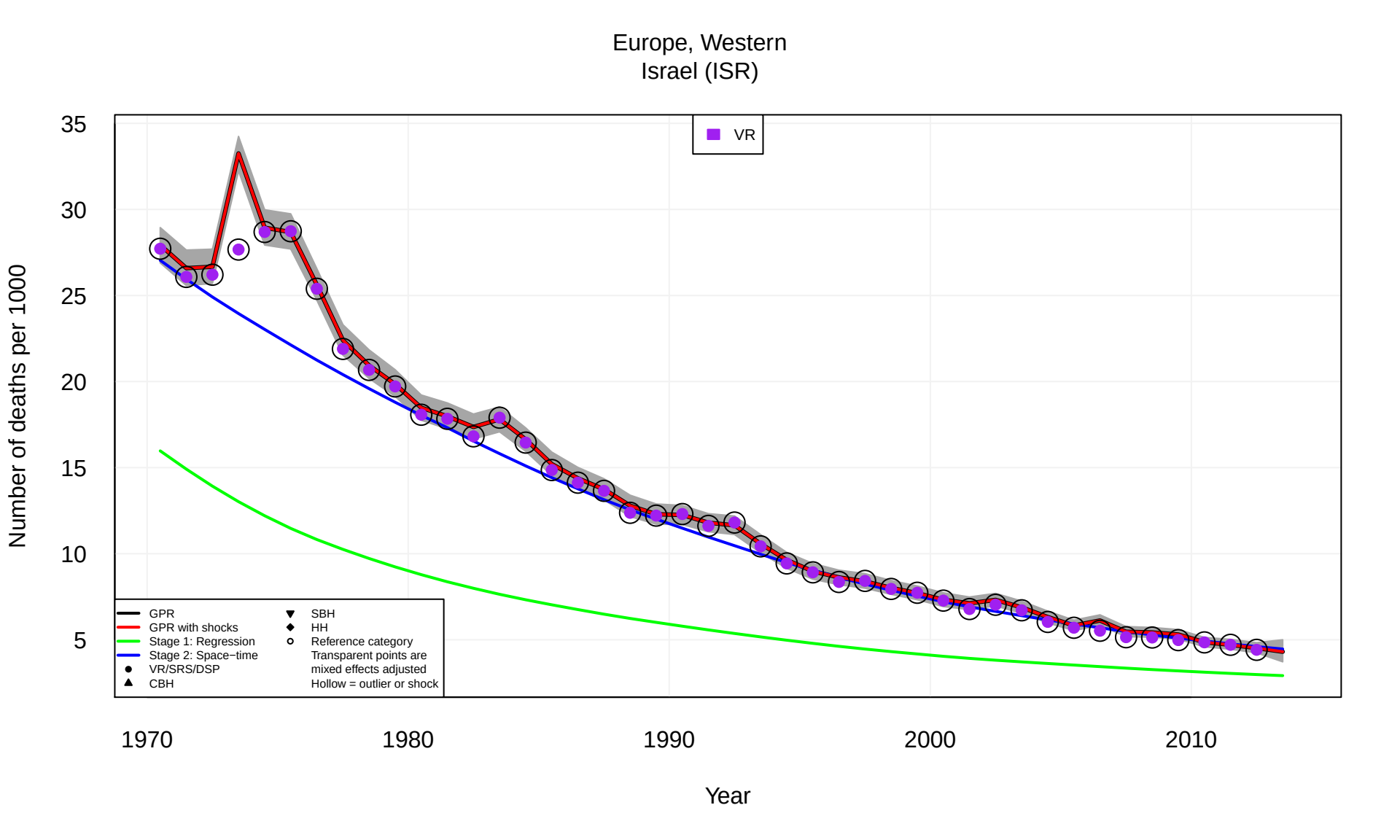

Europe, Western
France (FRA)
VR
Number of deaths per 1000
20
15
10
5
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

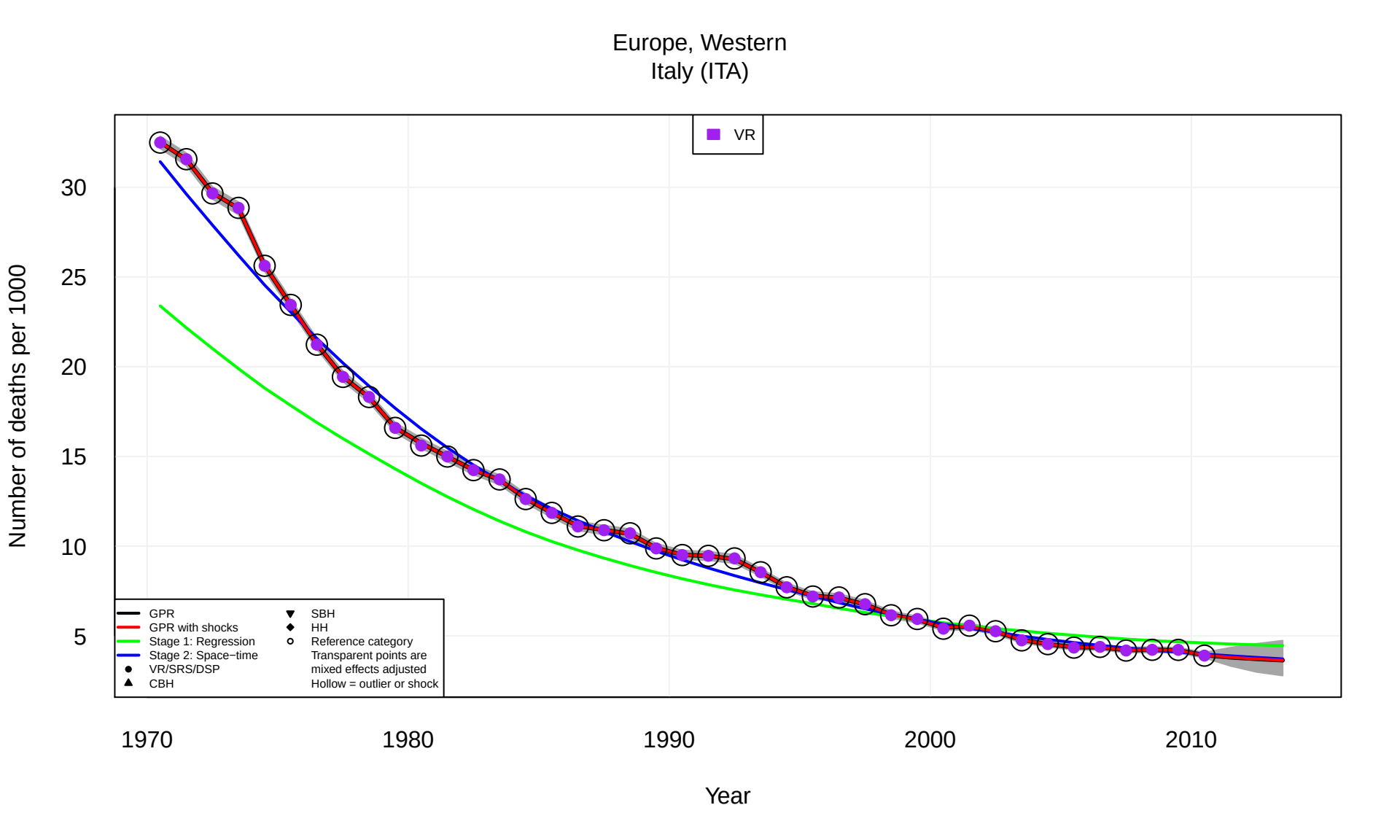

Europe, Western
United Kingdom (GBR)
VR
Number of deaths per 1000
20
15
10
5
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

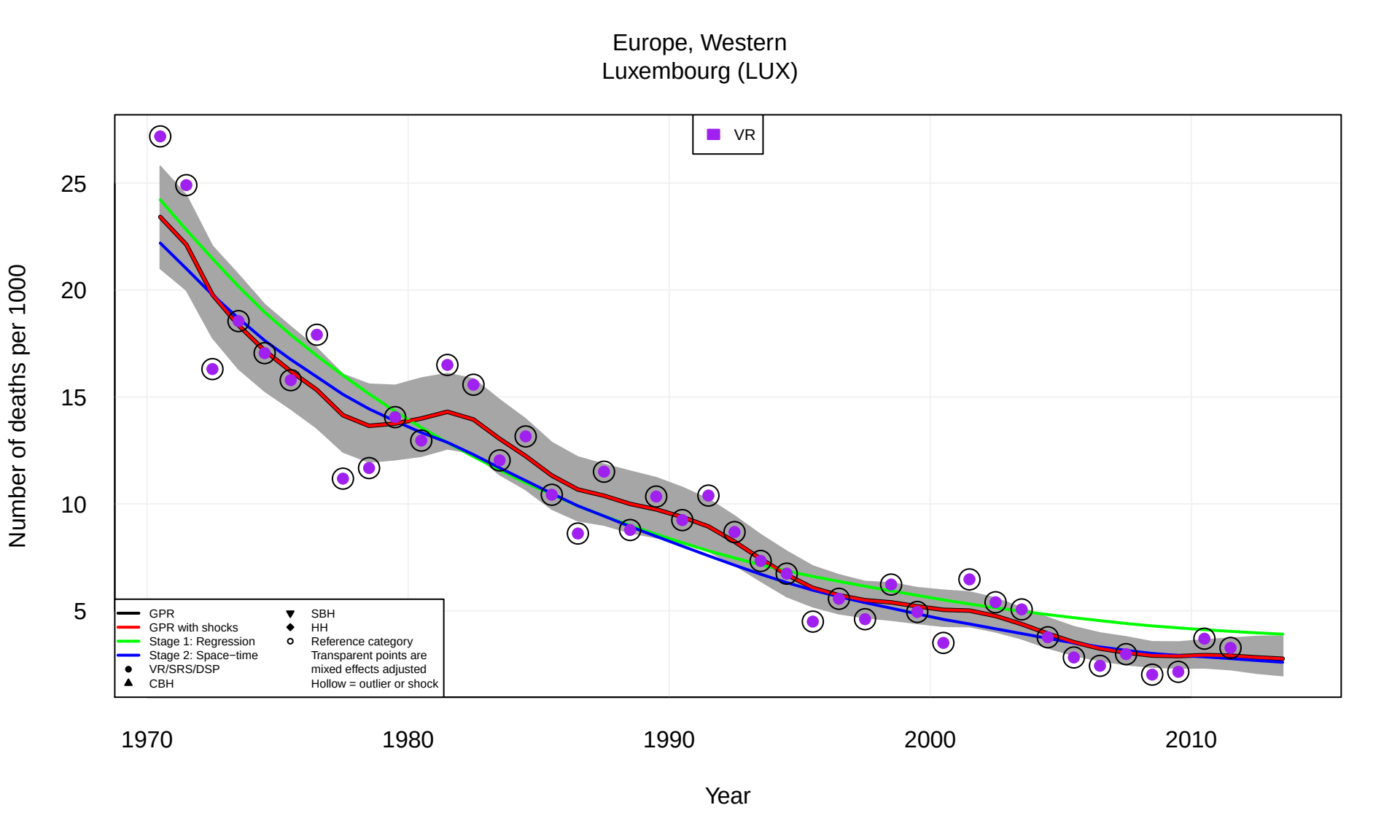

Europe, Western
Greece (GRC)
VR
Census
Number of deaths per 1000
35
30
25
20
15
10
5
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

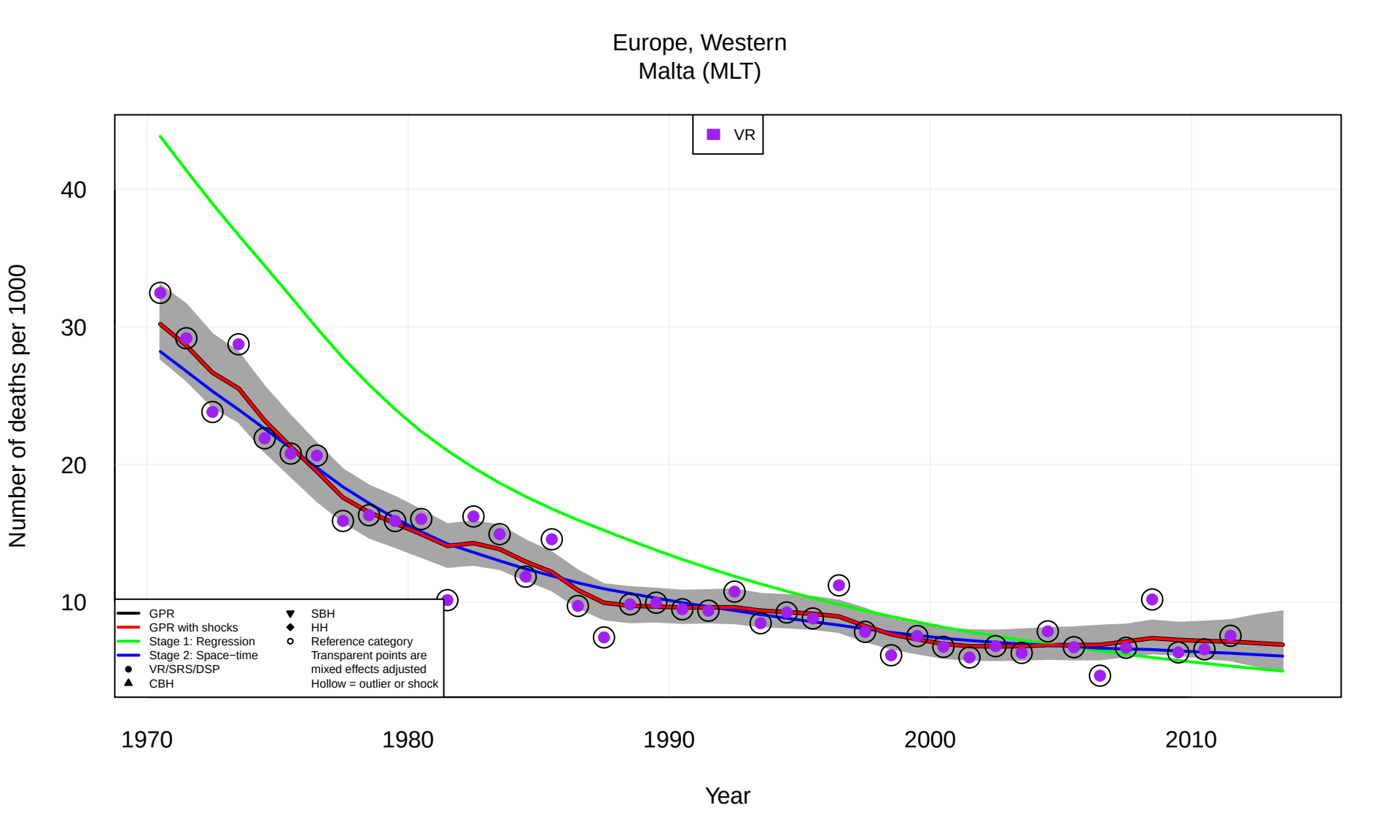

Europe, Western
Ireland (IRL)
VR
Census
Number of deaths per 1000
20
15
10
5
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

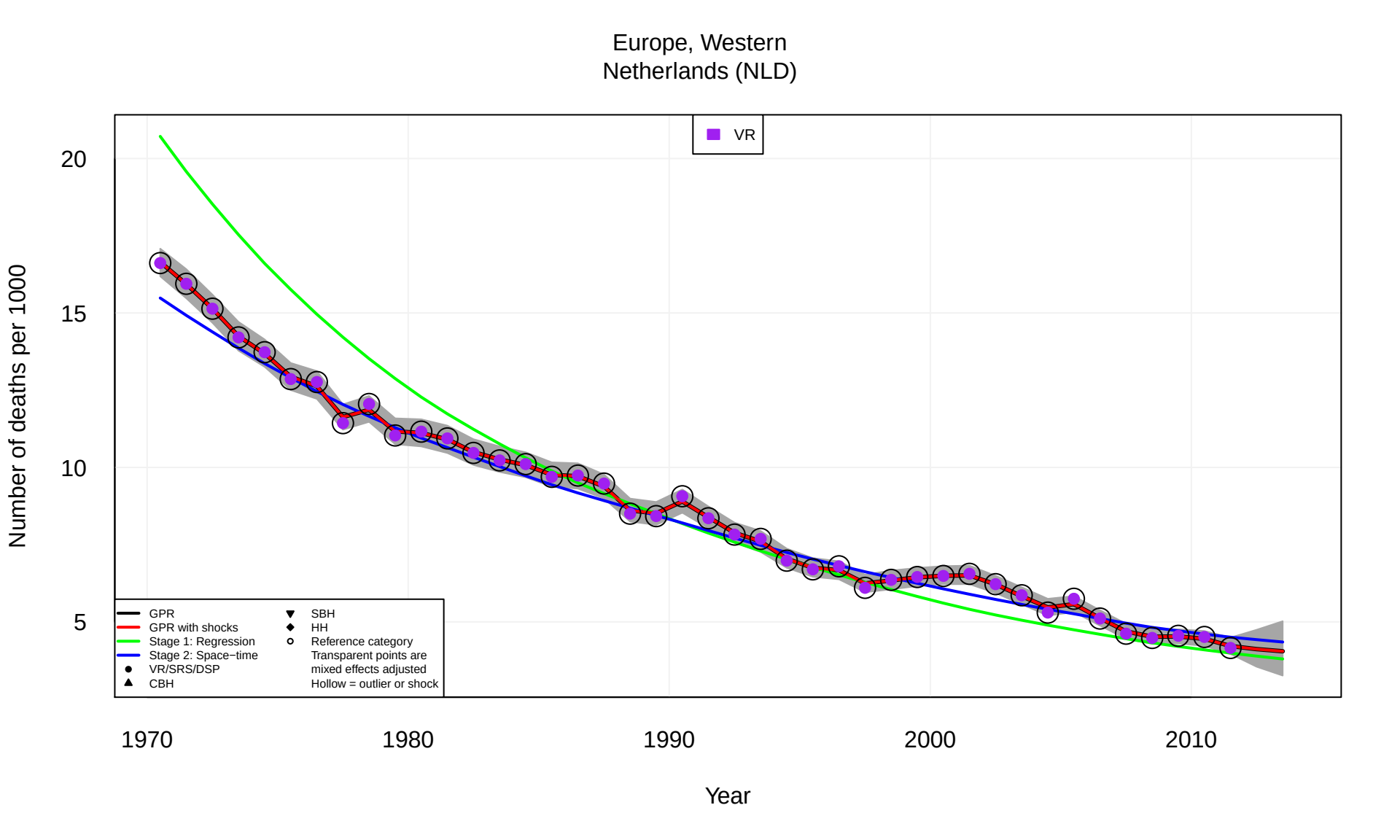

Europe, Western
Iceland (ISL)
VR
20
15
10
5
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

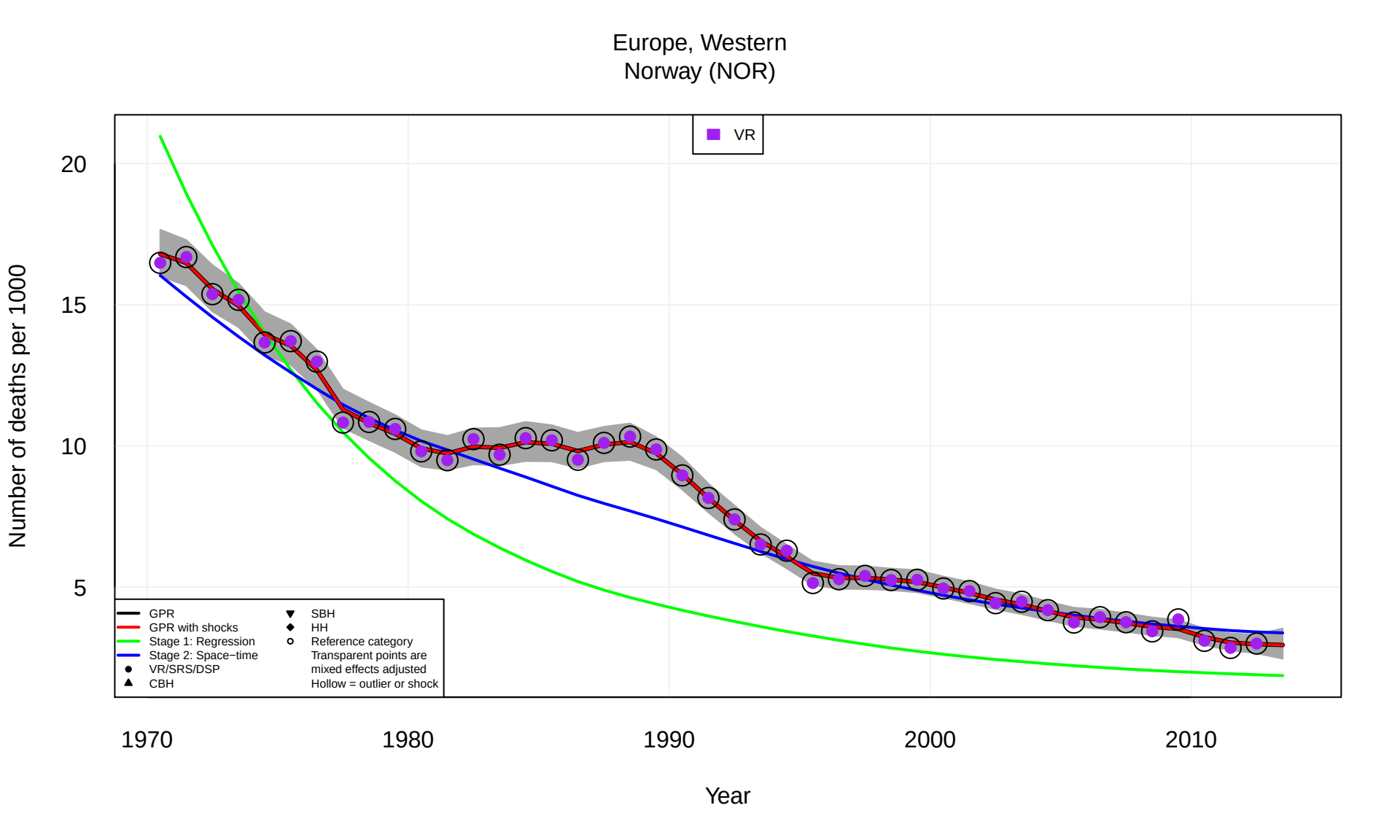

Europe, Western
Israel (ISR)
VR
35
30
25
20
15
10
5
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

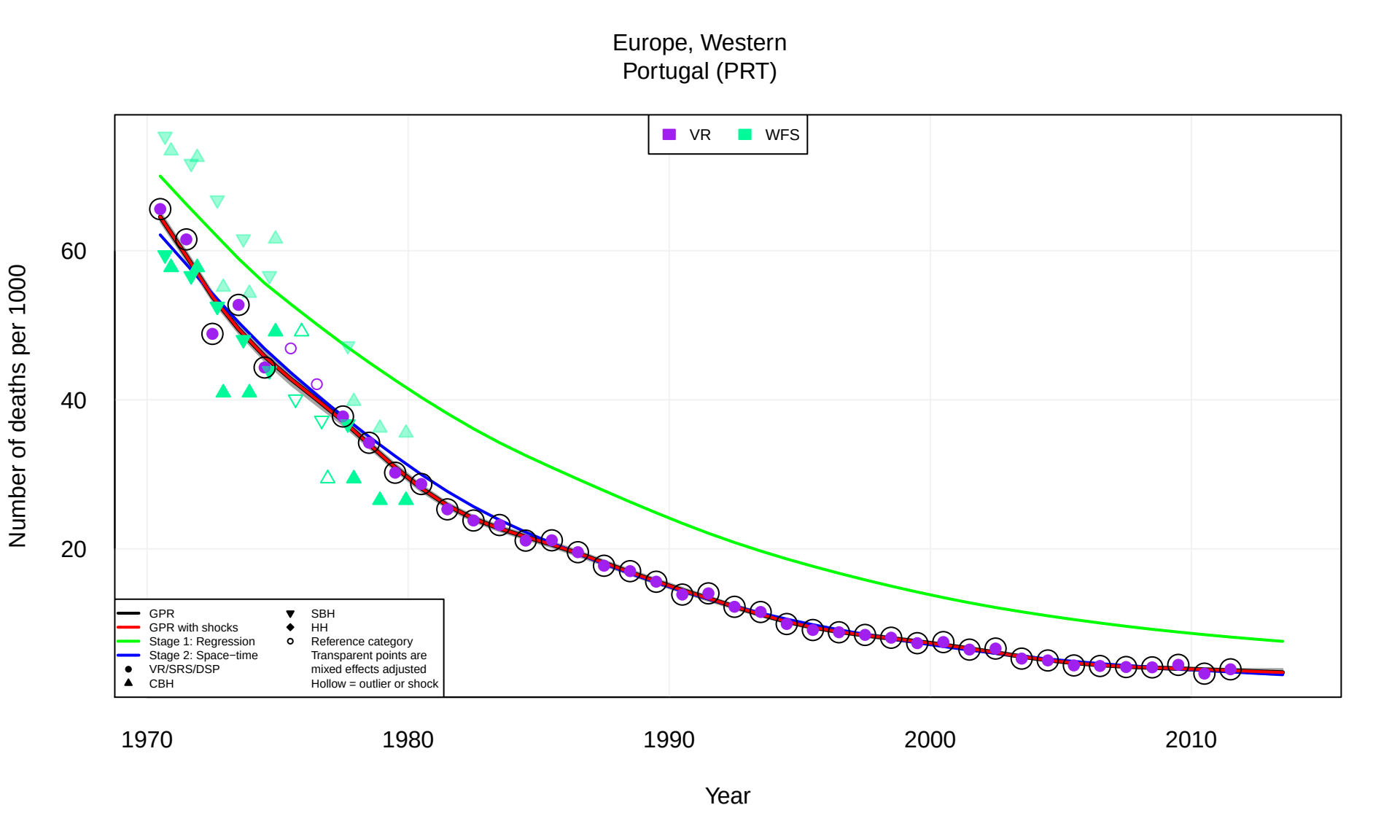

Europe, Western
Italy (ITA)
VR
30
25
20
15
10
5
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

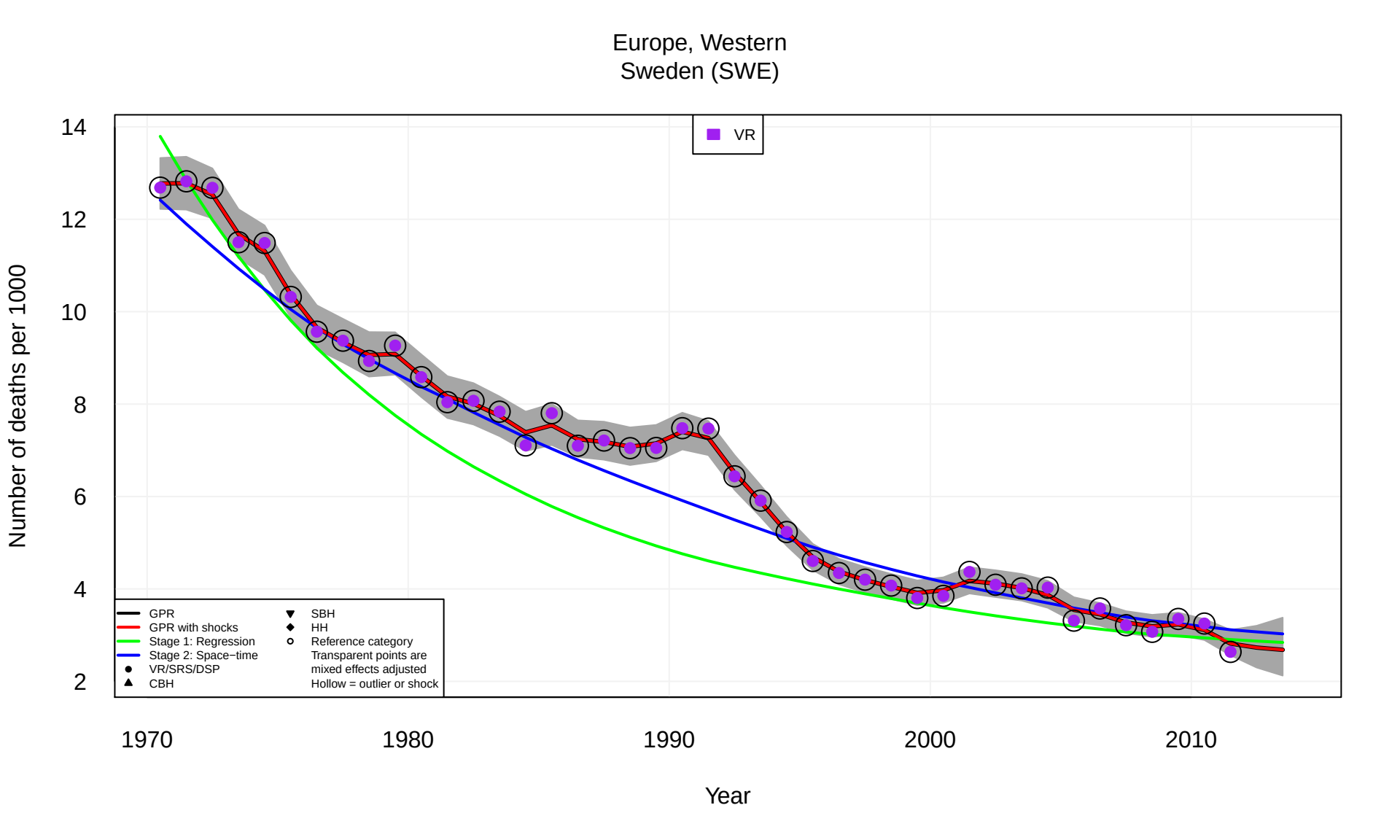

Europe, Western
Luxembourg (LUX)
VR
Number of deaths per 1000
25
20
15
10
5
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

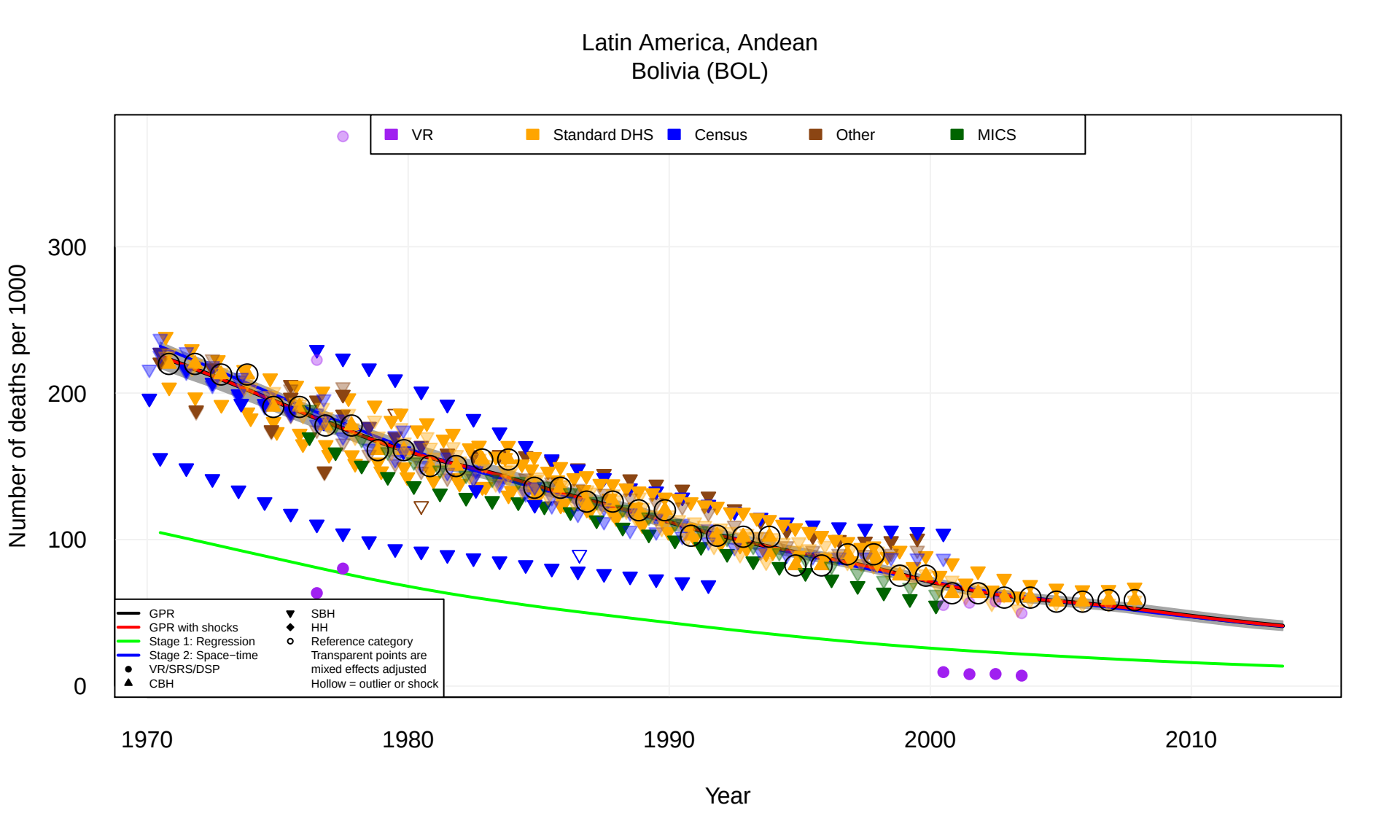

Europe, Western
Malta (MLT)
VR
40
30
20
10
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

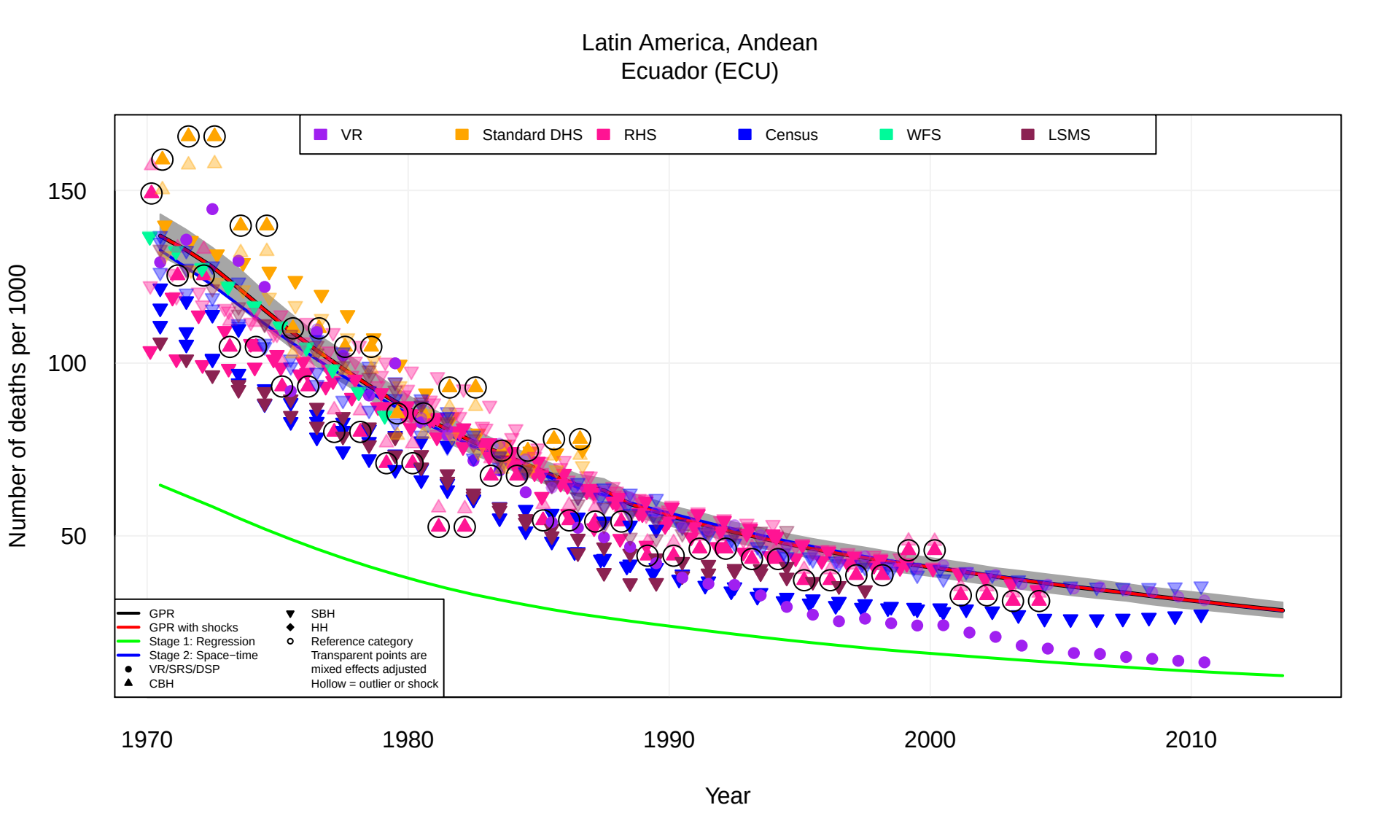

Europe, Western
Netherlands (NLD)
VR
20
15
10
5
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

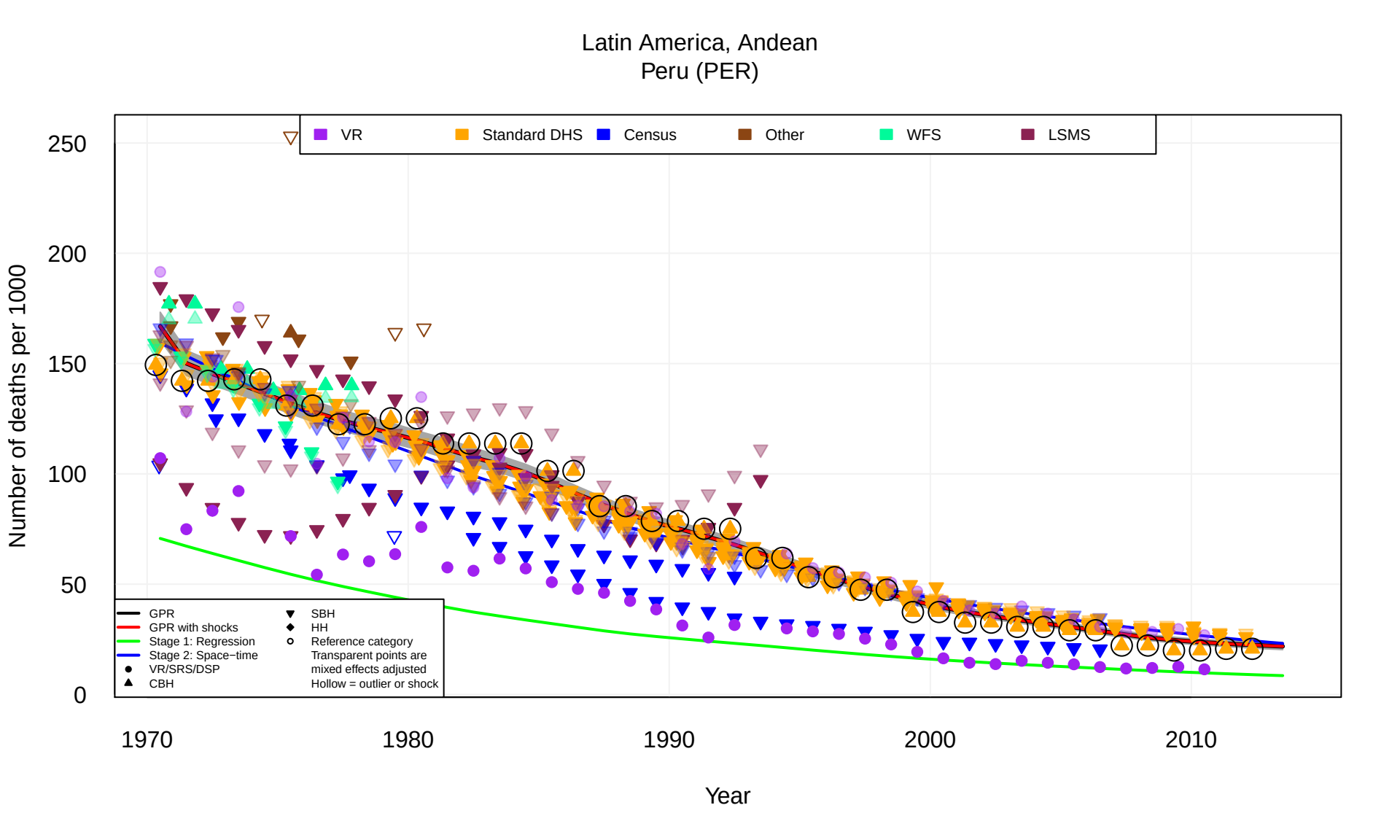

Europe, Western
Norway (NOR)
VR
Number of deaths per 1000
20
15
10
5
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

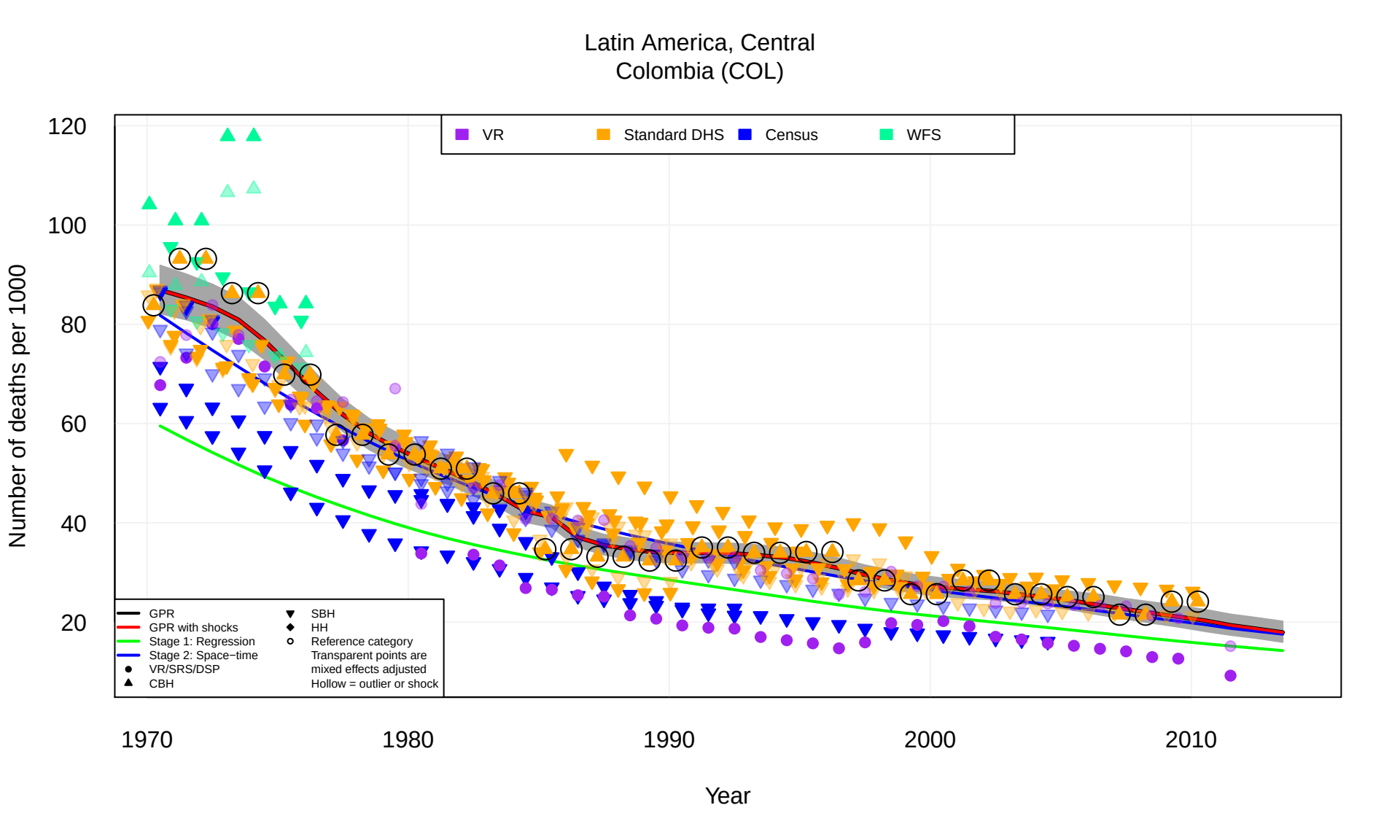

Europe, Western
Portugal (PRT)
VR
WFS
Number of deaths per 1000
60
40
20
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

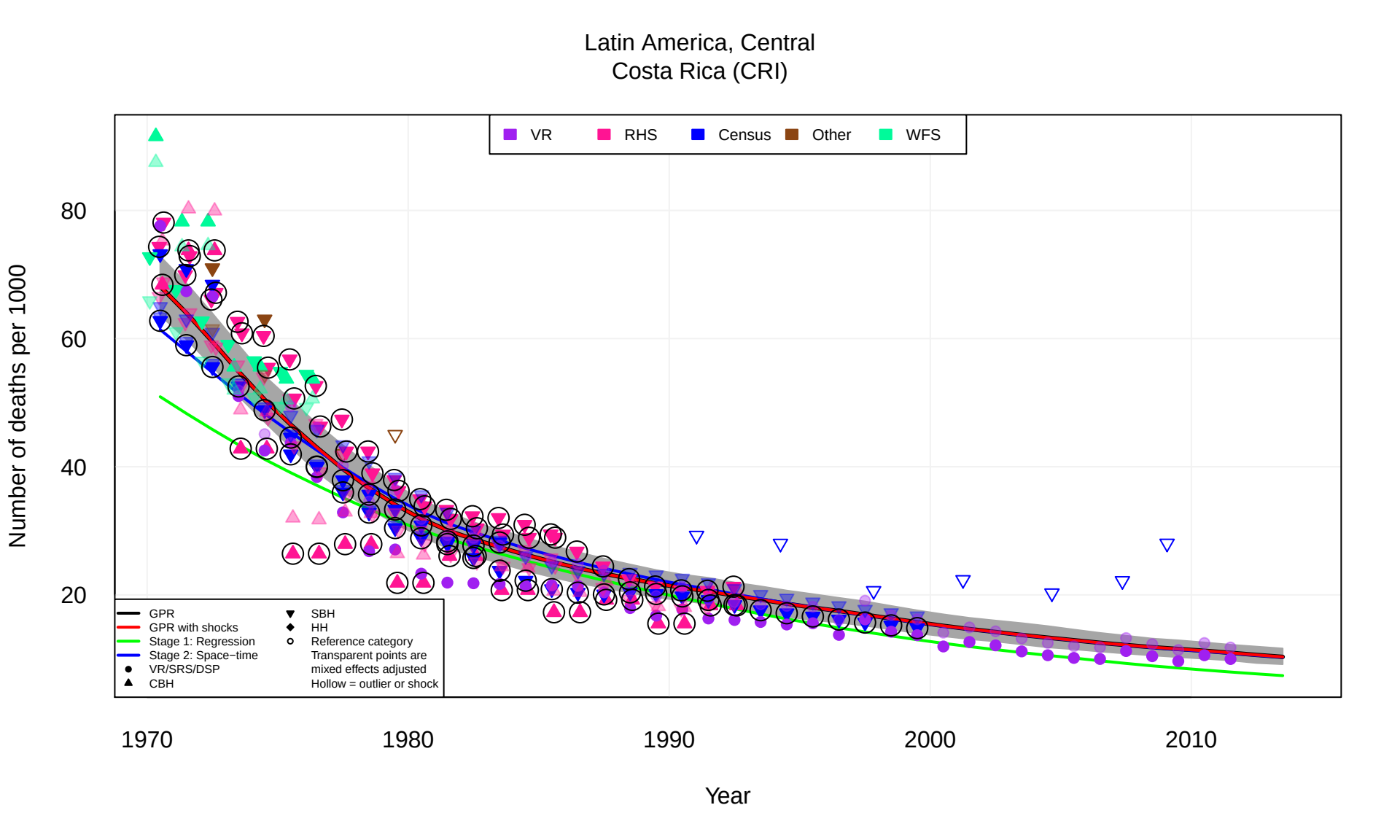

Europe, Western
Sweden (SWE)
VR
Number of deaths per 1000
14
12
10
8
6
4
2
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

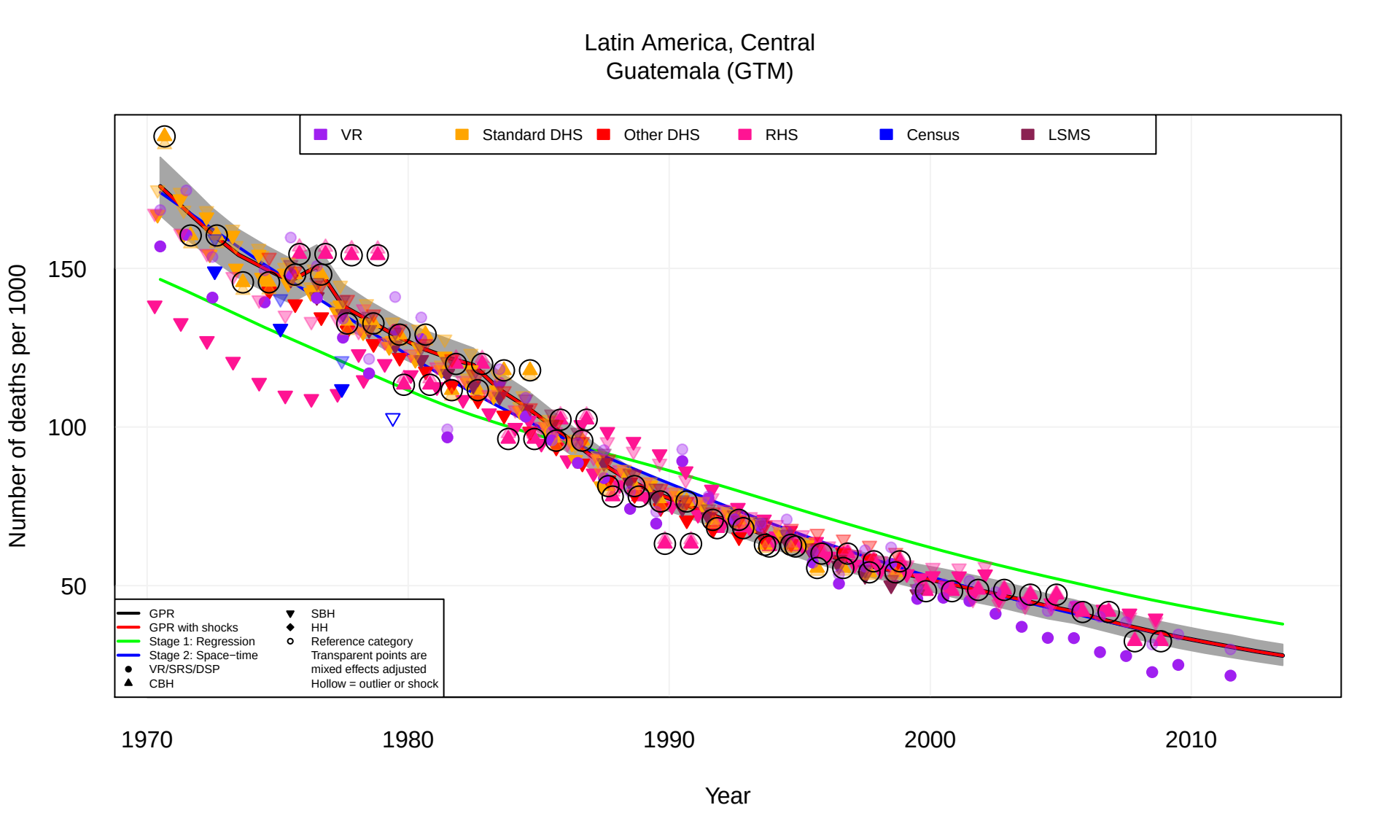

Latin America, Andean
Bolivia (BOL)
VR
Standard DHS
Census
Other
MICS
Number of deaths per 1000
300
200
100
0
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

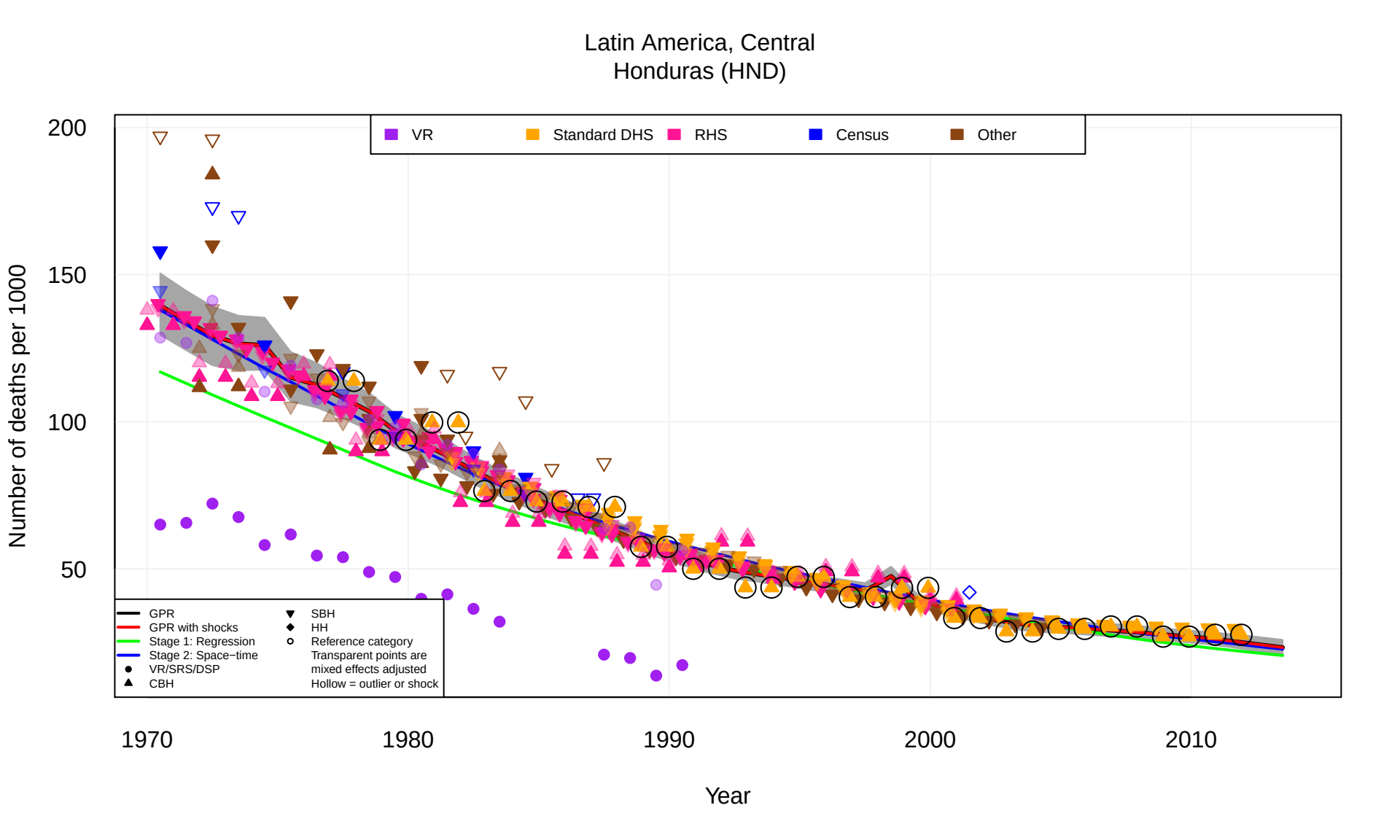

Latin America, Andean
Ecuador (ECU)
VR
Standard DHS
RHS
Census
WFS
LSMS
150
100
50
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

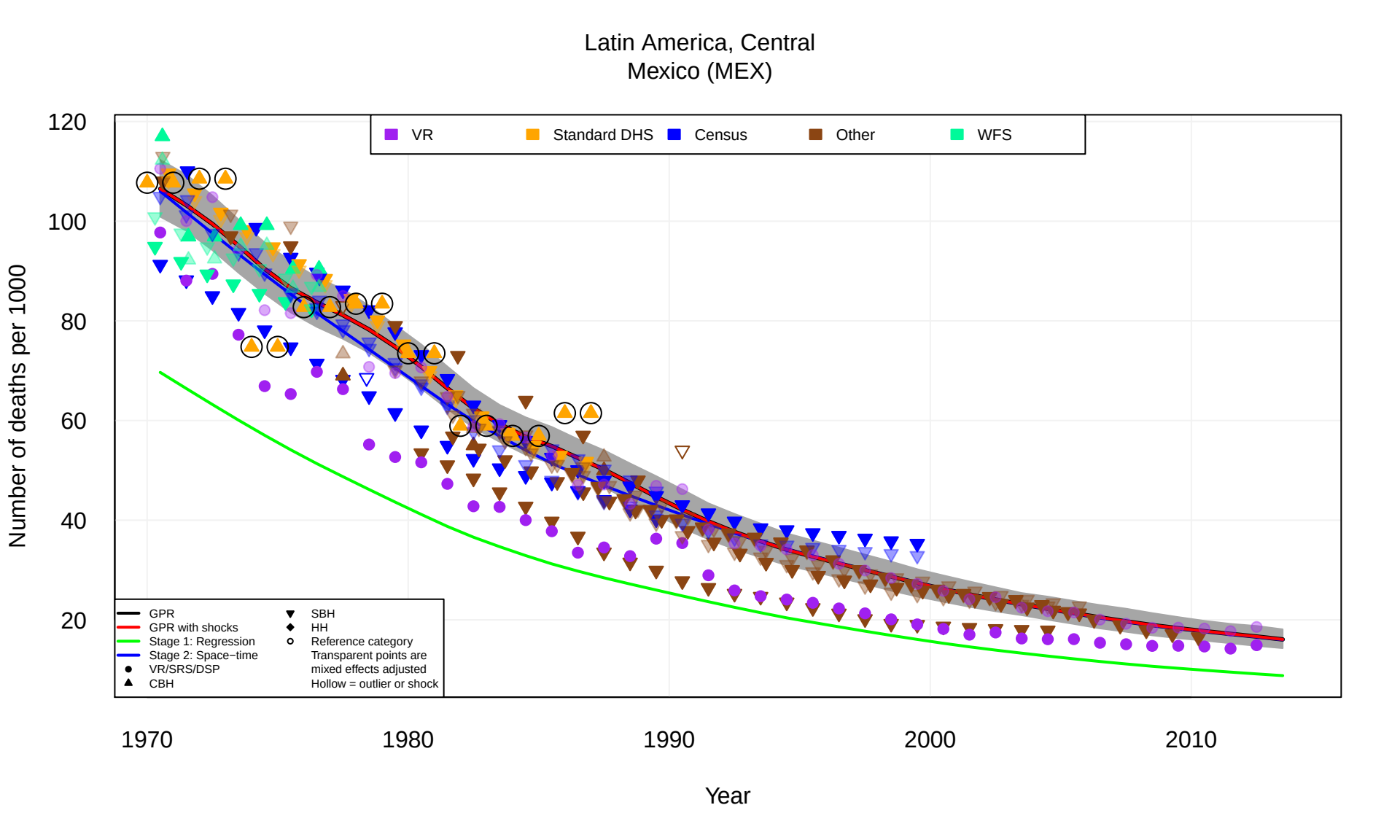

Latin America, Andean
Peru (PER)
VR
Standard DHS
Census
Other
WFS
LSMS
250
200
150
100
50
0
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

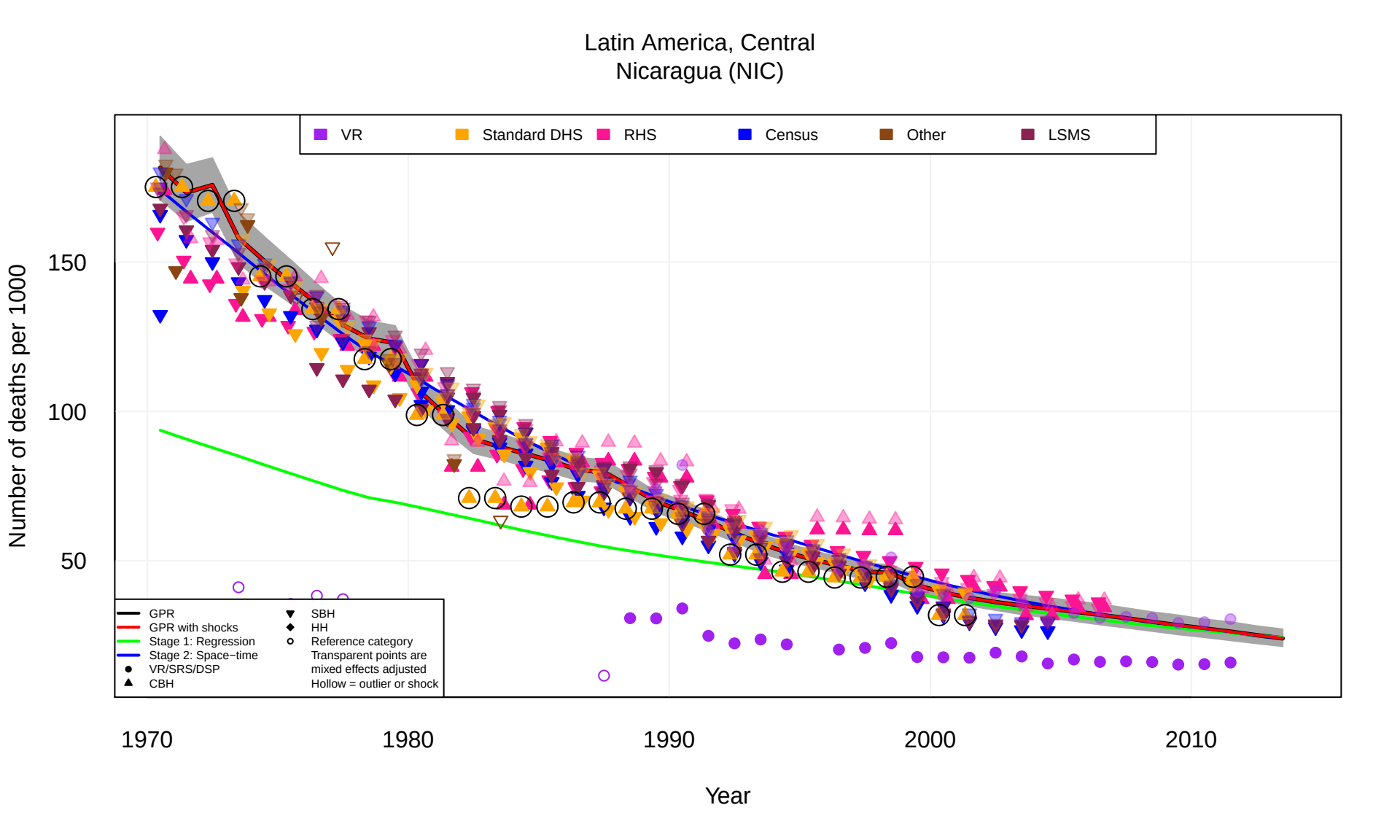

Latin America, Central
Colombia (COL)
VR
Standard DHS
Census
WFS
120
100
80
60
40
20
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

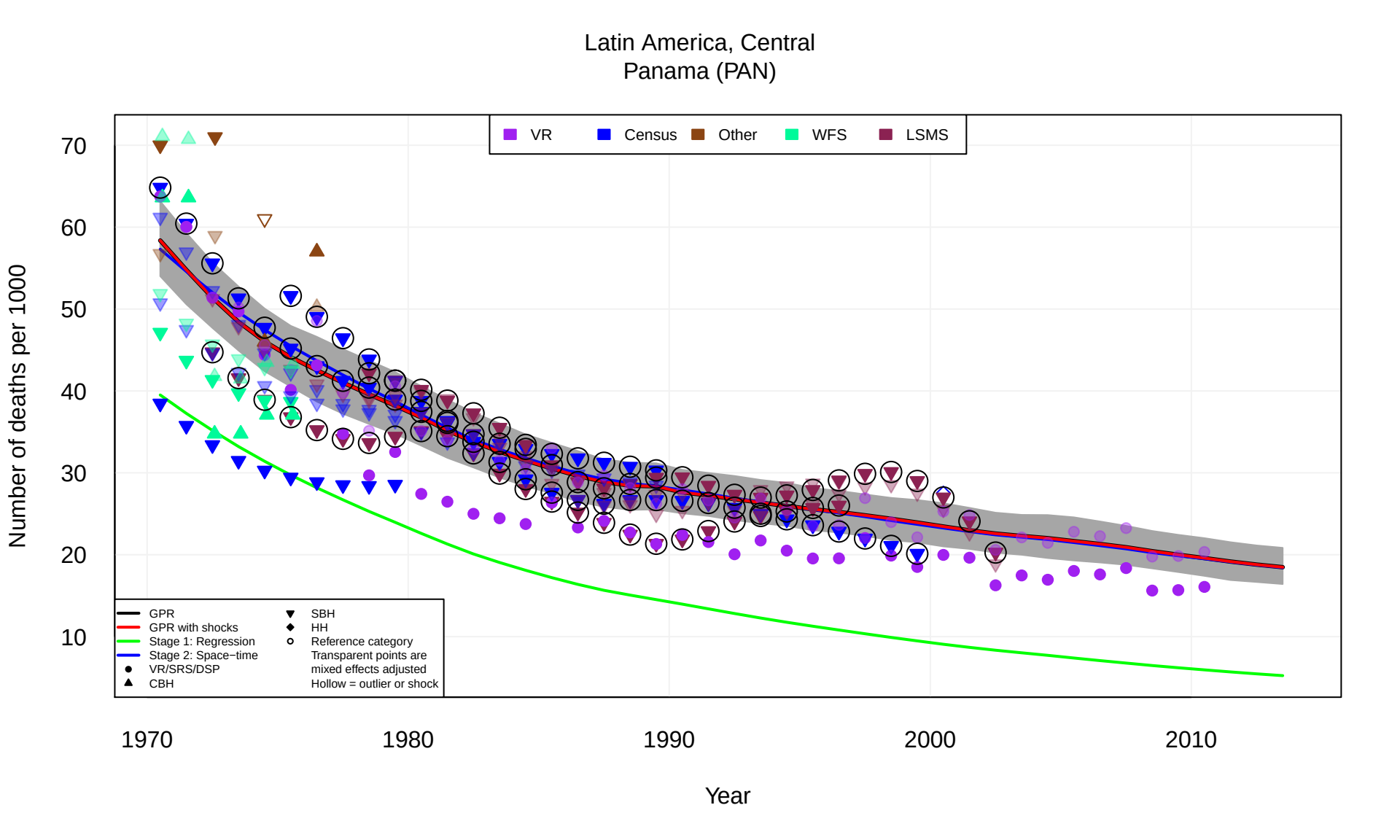

Latin America, Central
Costa Rica (CRI)
VR
RHS
Census
Other
WFS
Number of deaths per 1000
80
60
40
20
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

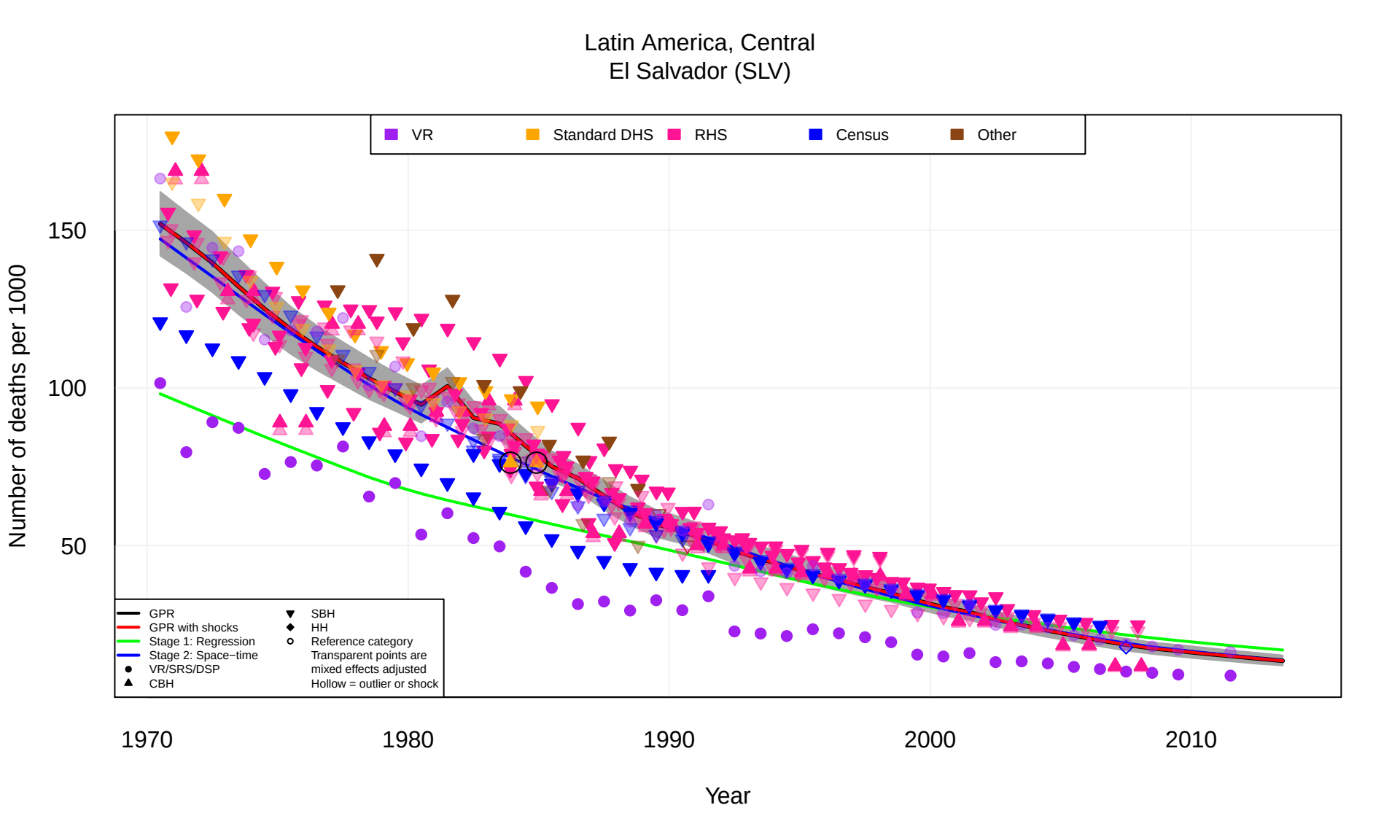

Latin America, Central
Guatemala (GTM)
VR
Standard DHS
Other DHS
RHS
Census
LSMS
Number of deaths per 1000
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

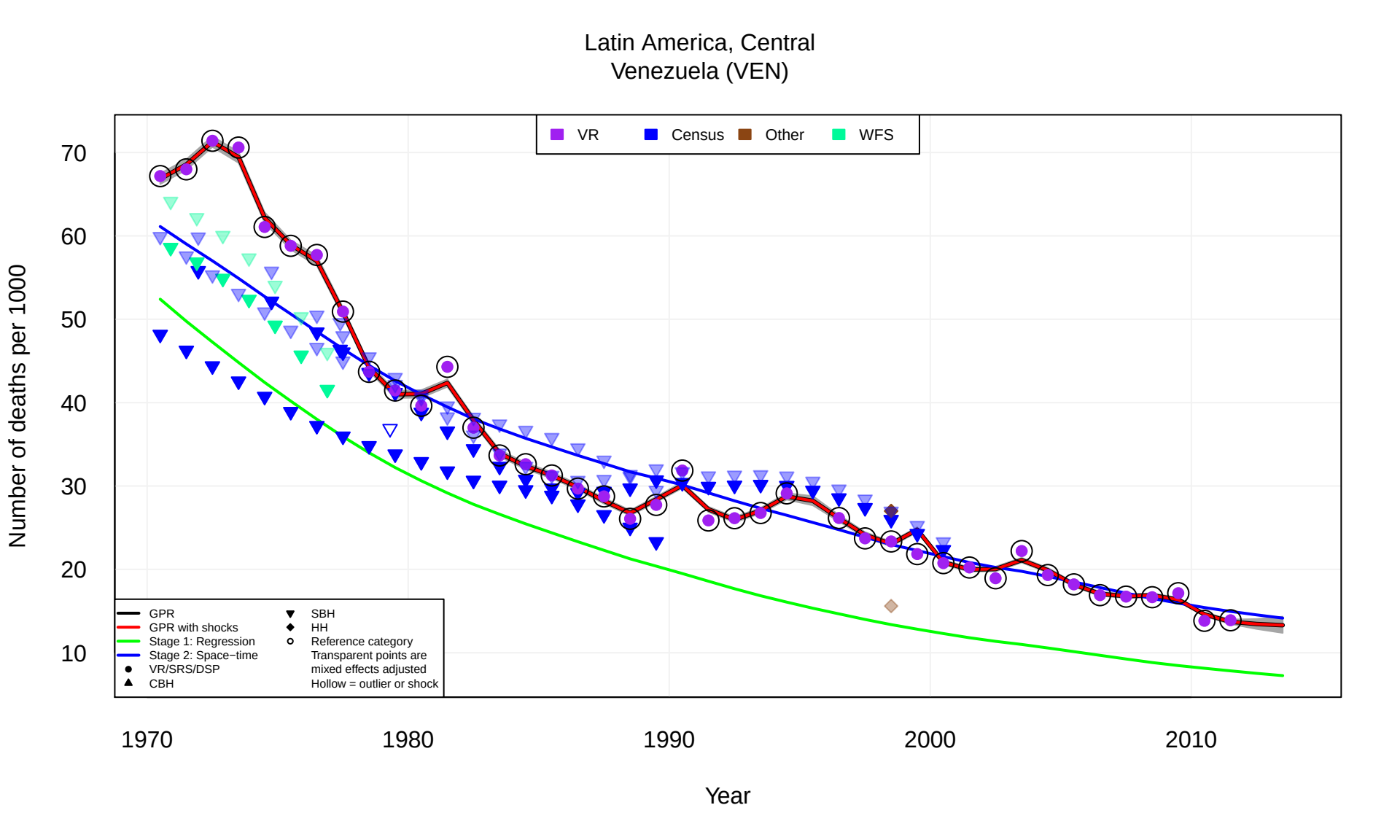

Latin America, Central
Honduras (HND)
VR
Standard DHS
RHS
Census
Other
200
150
100
50
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

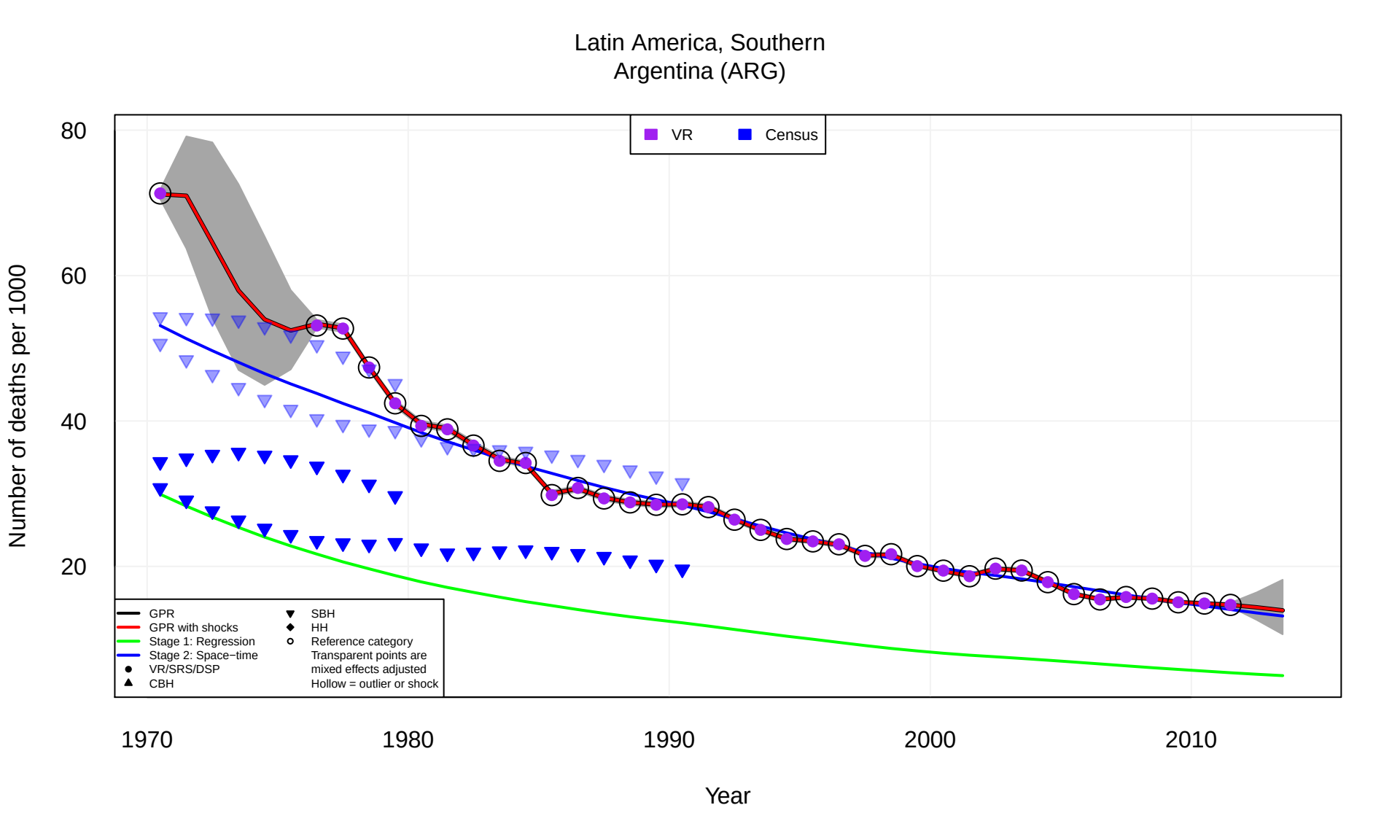

Latin America, Central
Mexico (MEX)
VR
Standard DHS
Census
Other
WFS
120
100
80
60
40
20
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

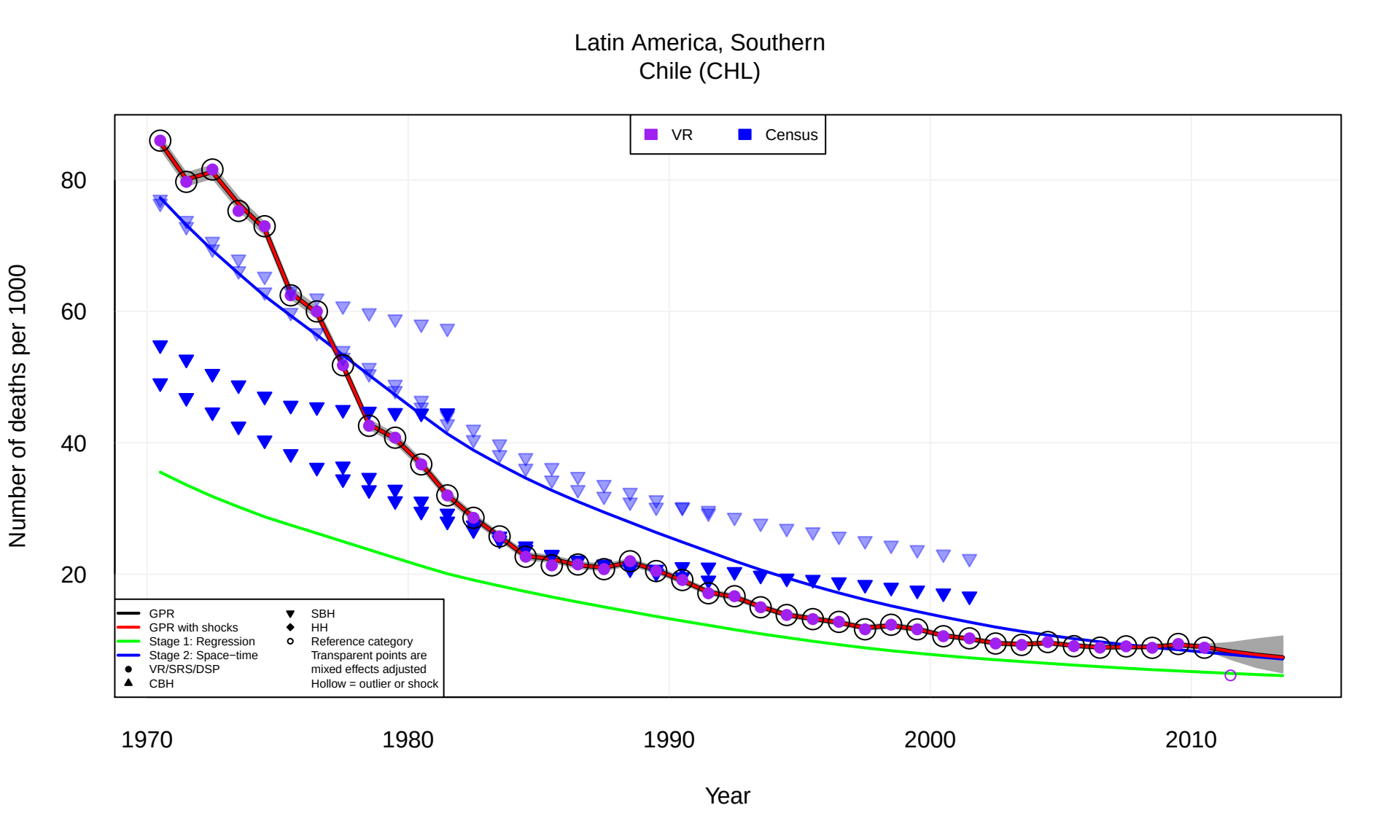

Latin America, Central
Nicaragua (NIC)
VR
Standard DHS
RHS
Census
Other
LSMS
Number of deaths per 1000
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

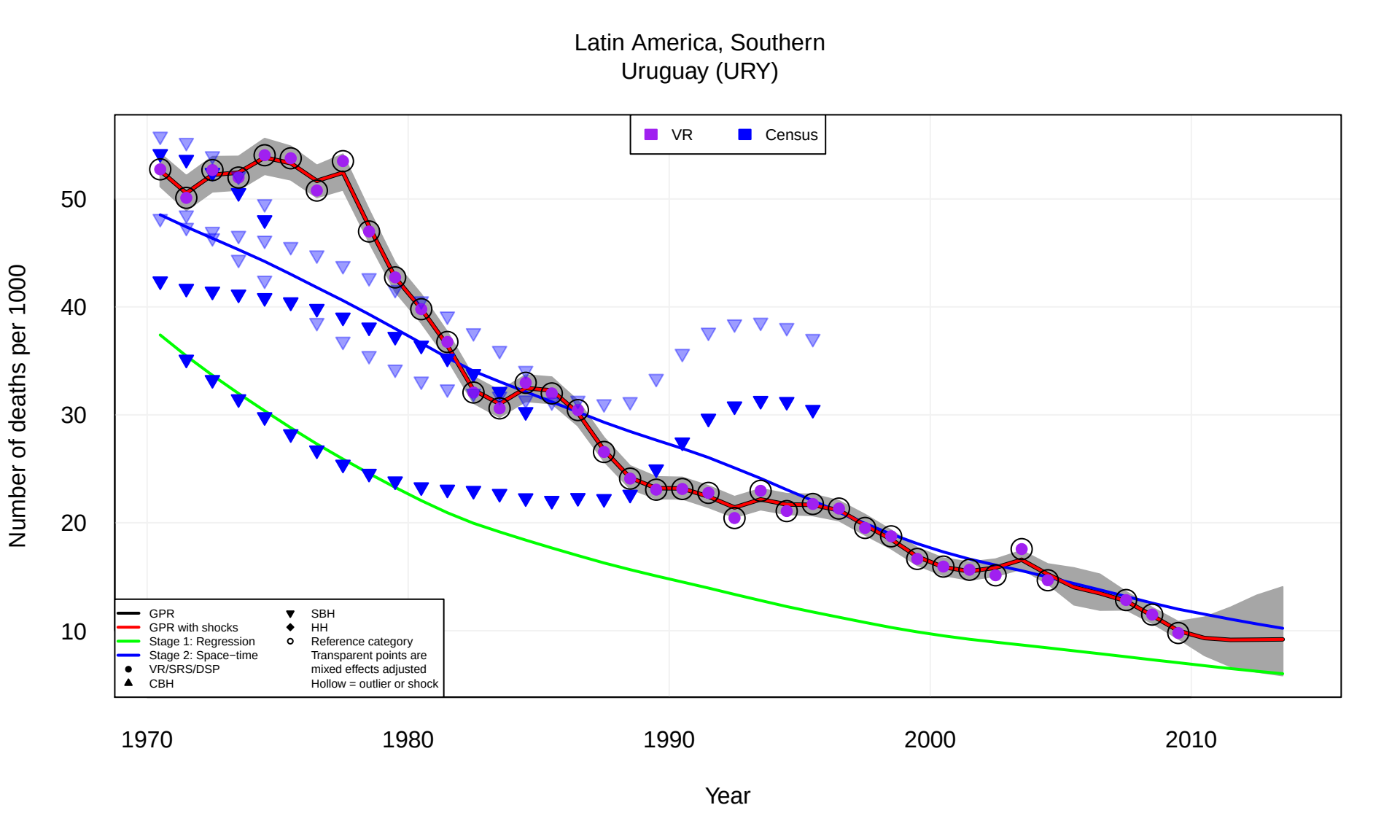

Latin America, Central
Panama (PAN)
VR
Census
Other
WFS
LSMS
Number of deaths per 1000
70
60
50
40
30
20
10
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

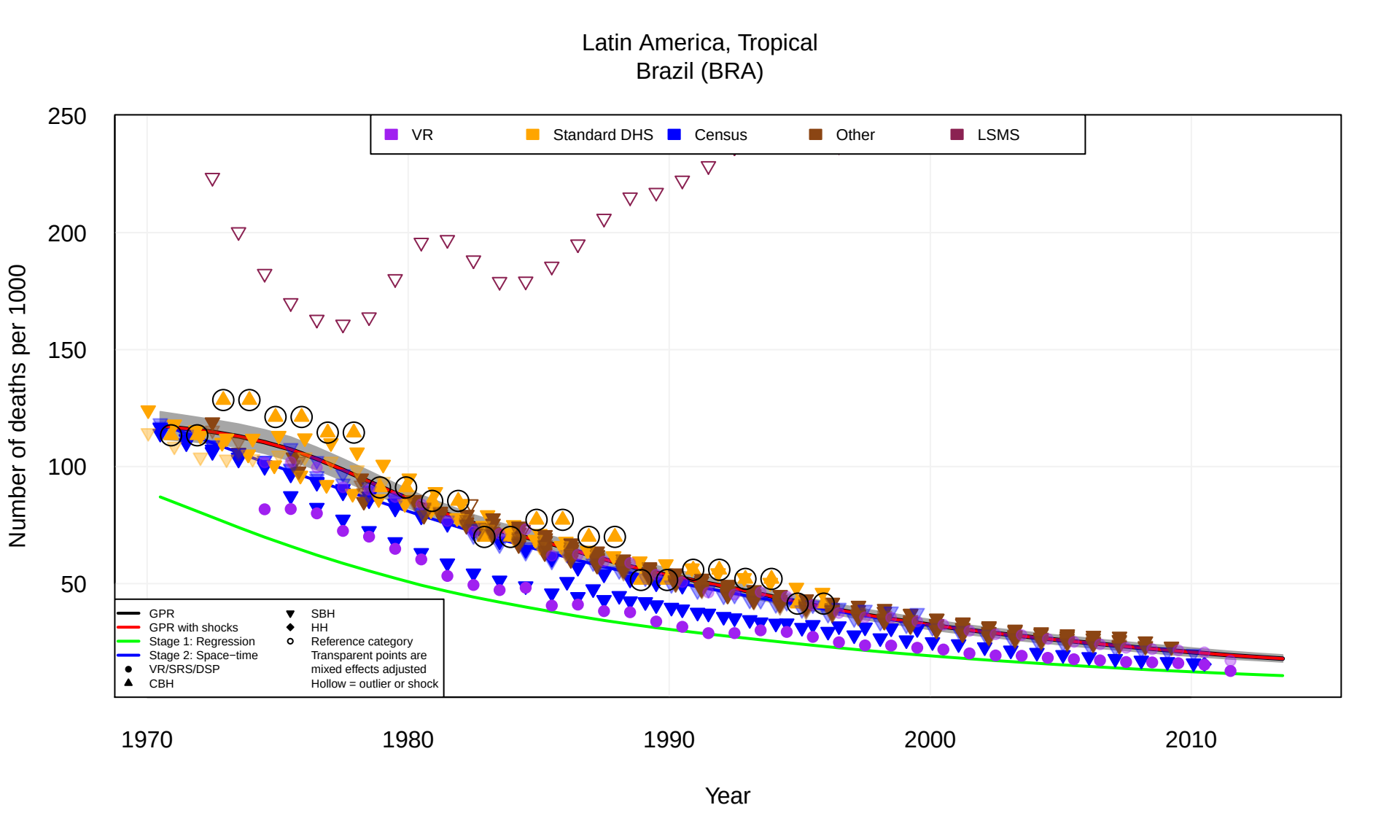

Latin America, Central
El Salvador (SLV)
VR
Standard DHS
RHS
Census
Other
150
100
50
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

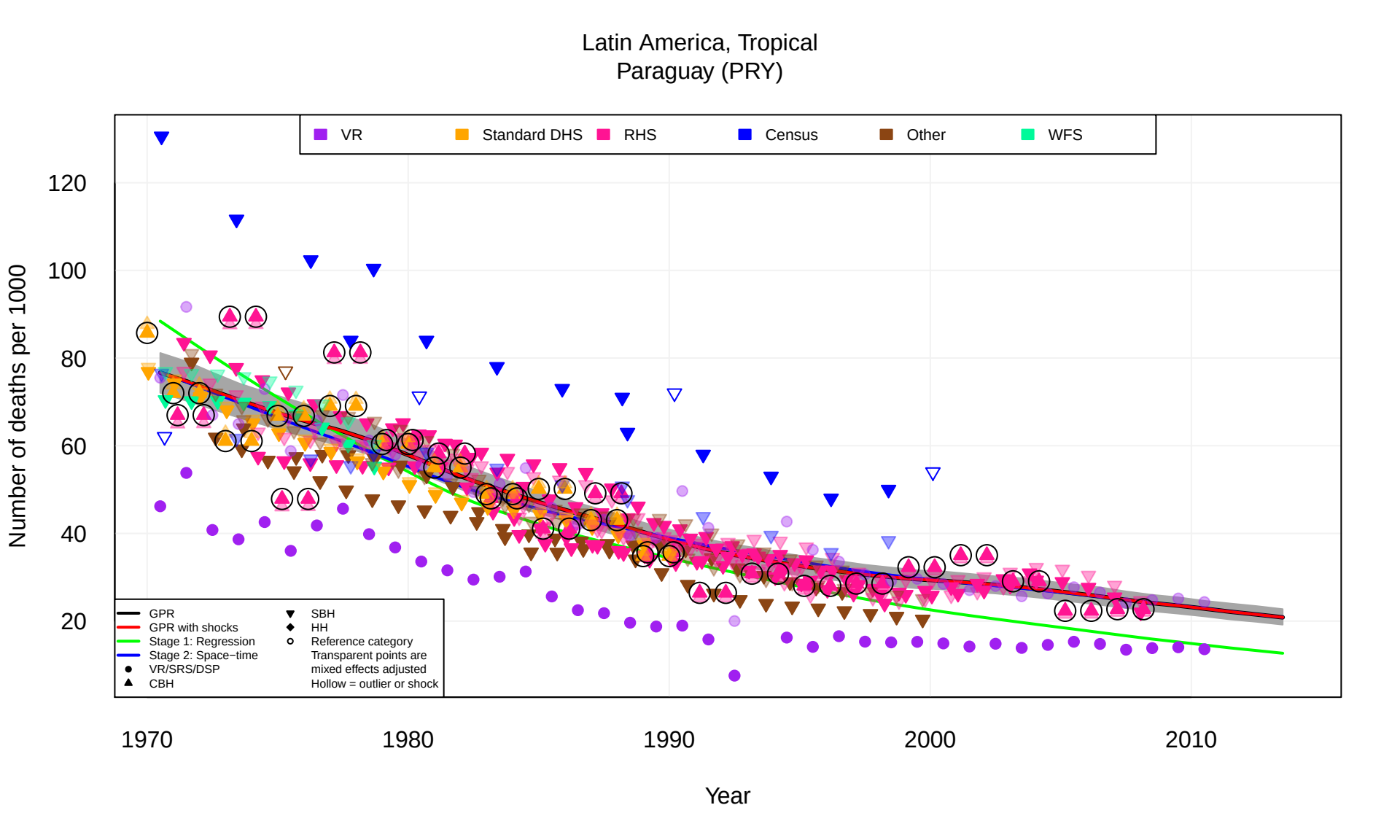

Latin America, Central
Venezuela (VEN)
VR
Census
Other
WFS
Number of deaths per 1000
70
60
50
40
30
20
10
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

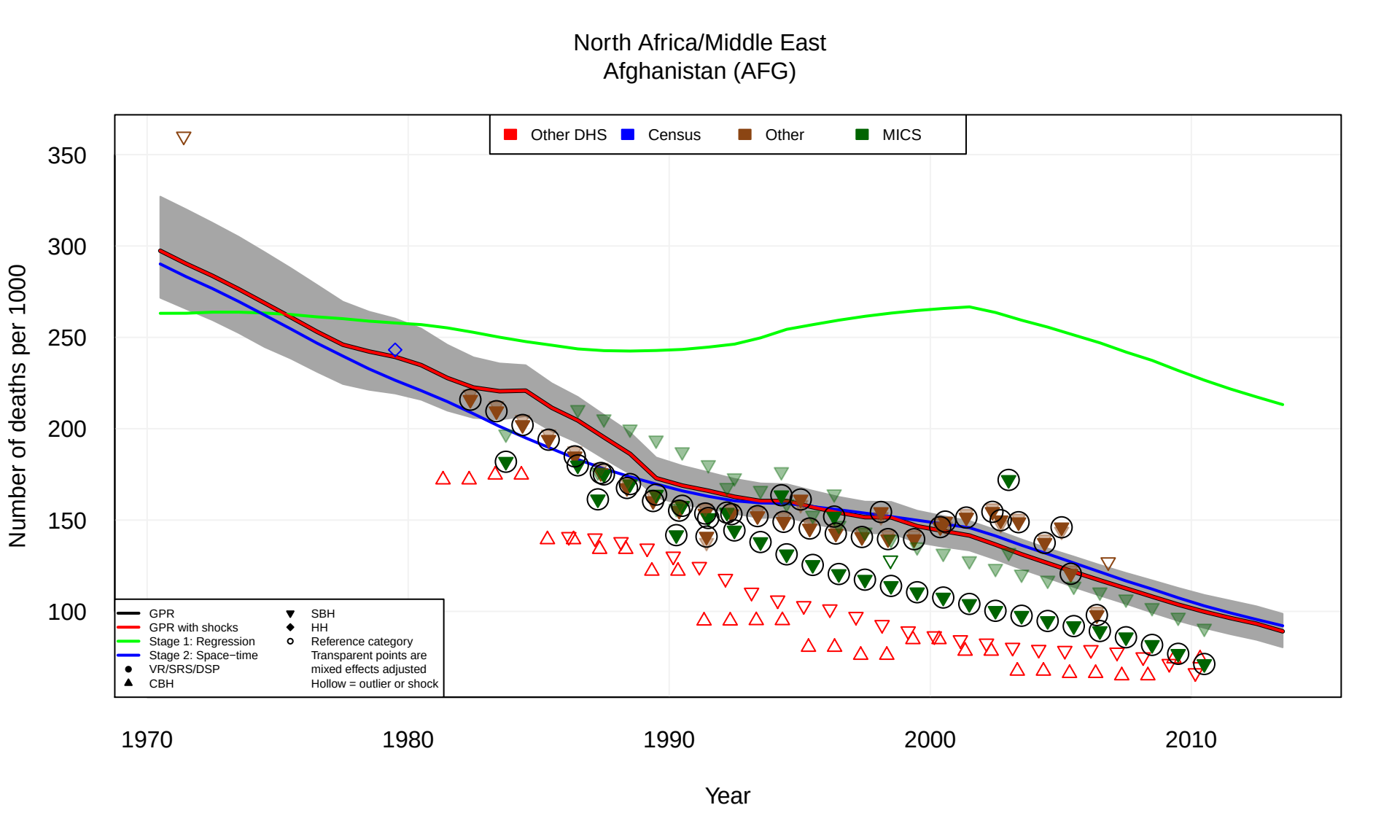

Latin America, Southern
Argentina (ARG)
VR
Census
80
60
40
20
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

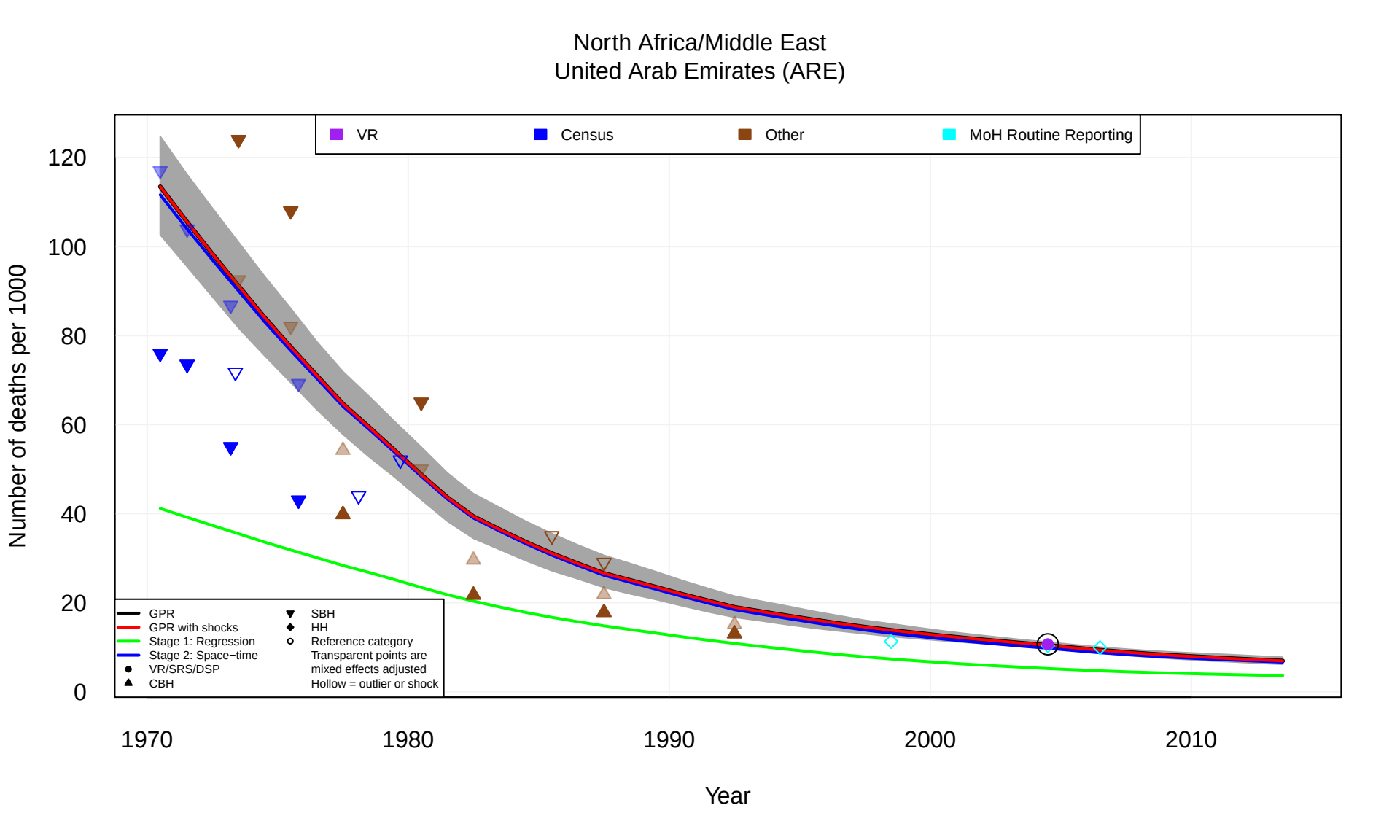

Latin America, Southern
Chile (CHL)
VR
Census
80
60
40
20
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

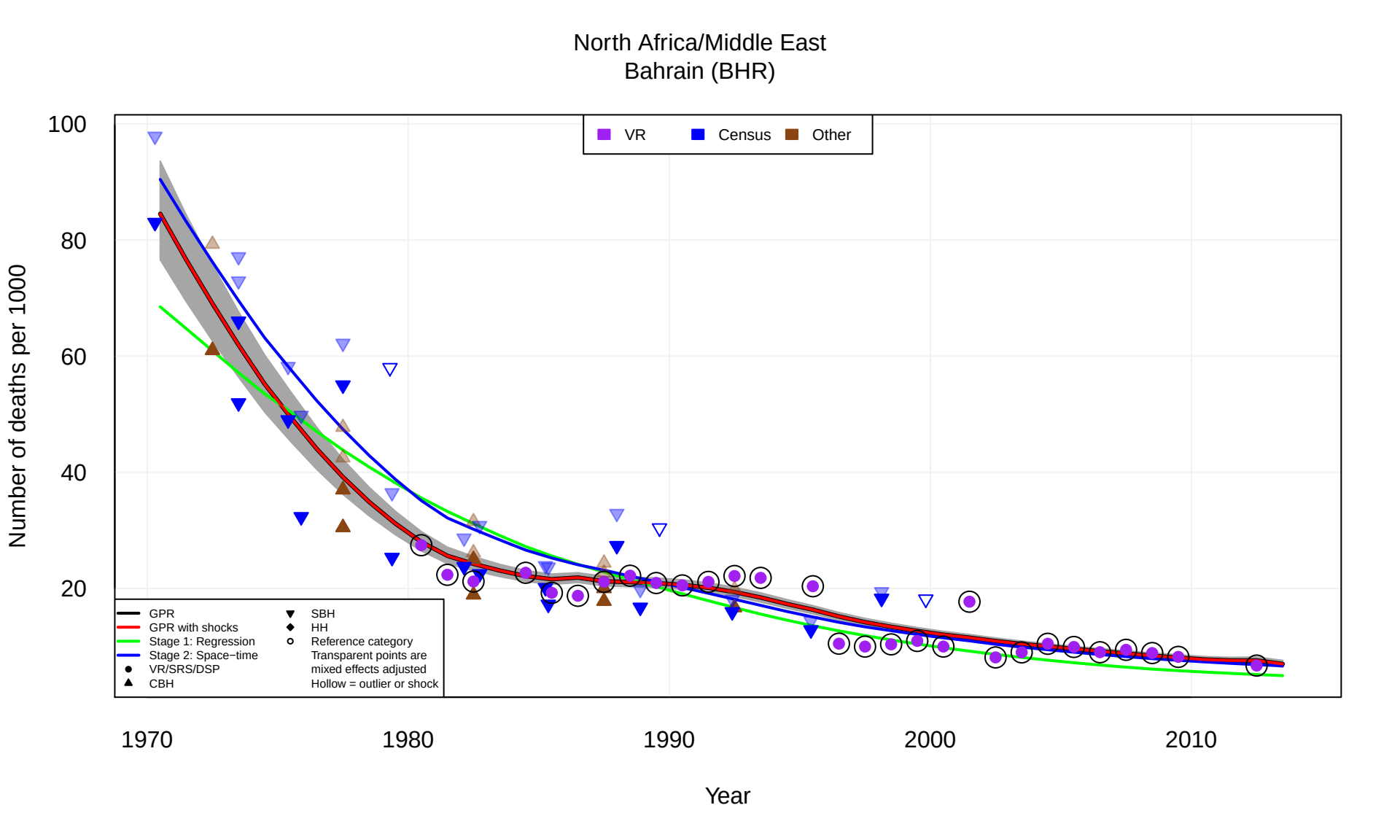

Latin America, Southern
Uruguay (URY)
VR
Census
Number of deaths per 1000
50
40
30
20
10
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

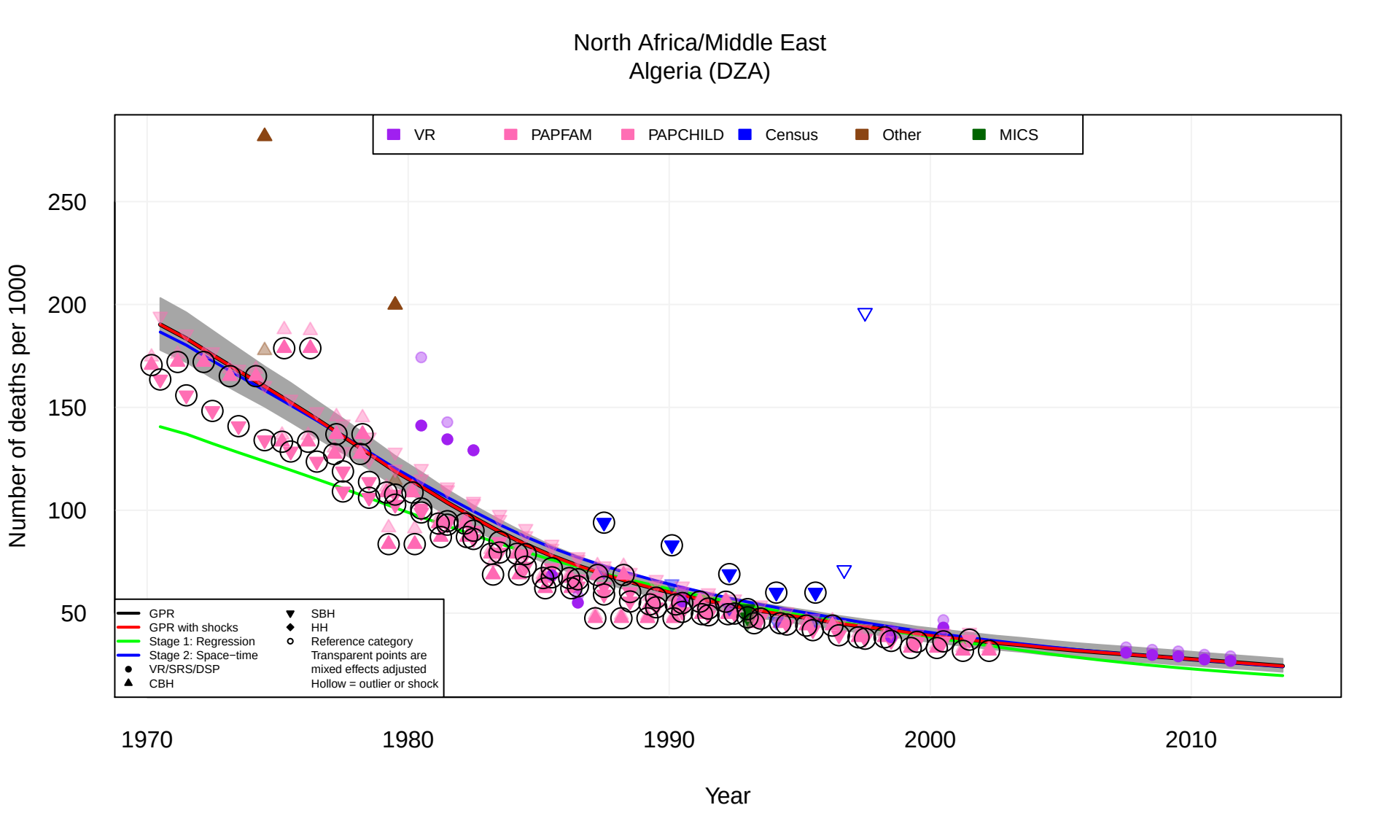

Latin America, Tropical
Brazil (BRA)
VR
Standard DHS
Census
Other
LSMS
250
200
150
100
50
Number of deaths per 1000
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock
1970
1980
1990
2000
2010
Year

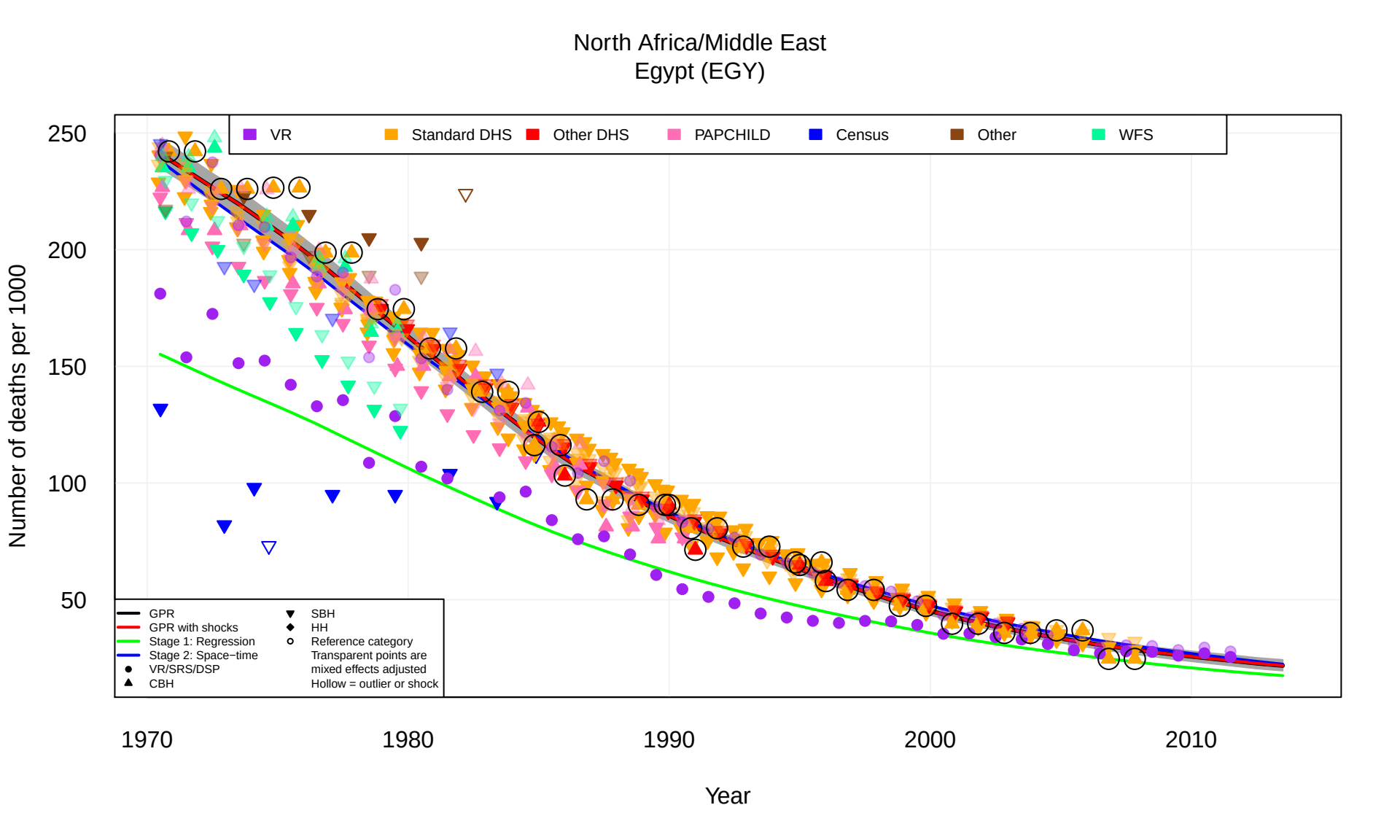

Latin America, Tropical
Paraguay (PRY)
VR
Standard DHS
RHS
Census
Other
WFS
120
100
80
60
40
20
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

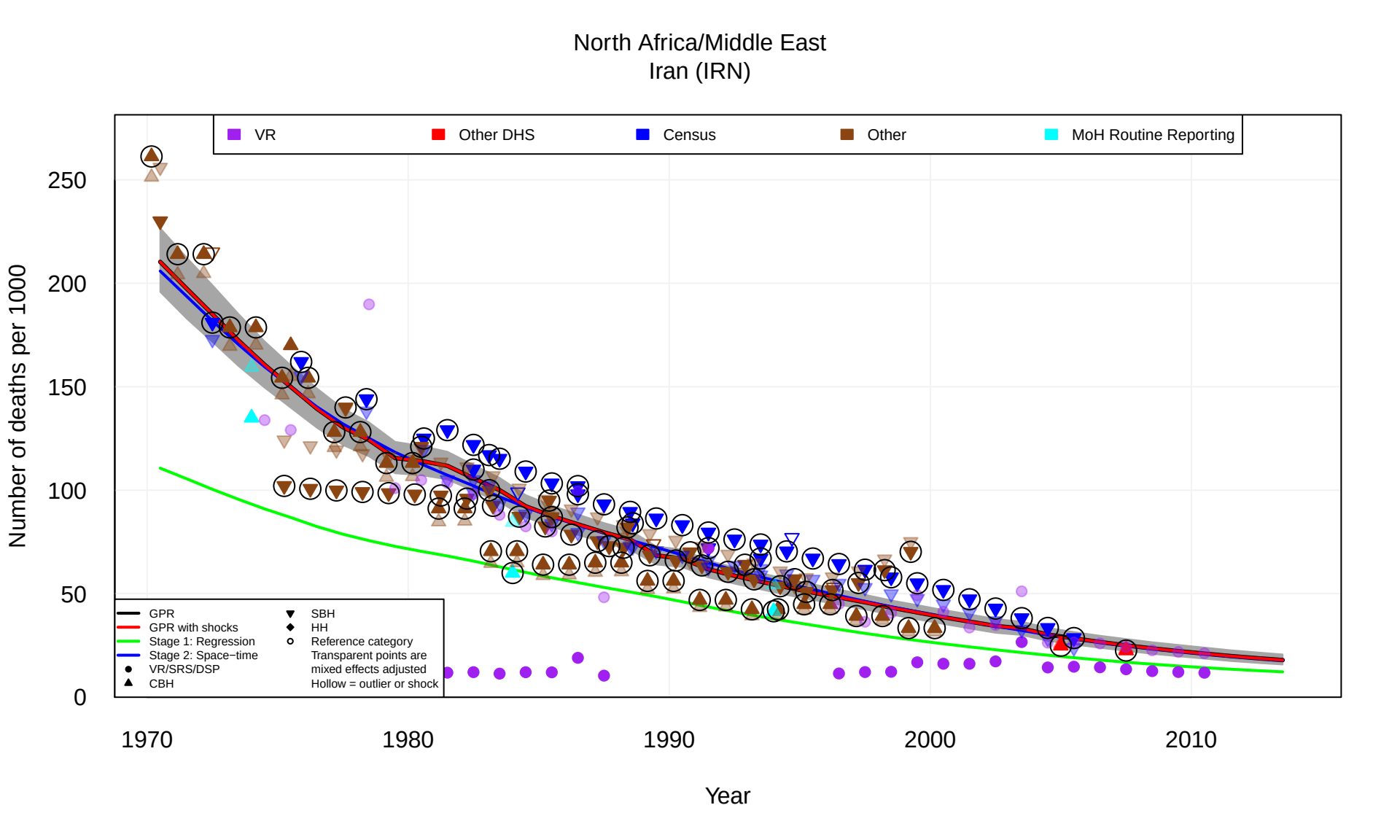

North Africa/Middle East
Afghanistan (AFG)
Other DHS
Census
Other
MICS
Number of deaths per 1000
350
300
250
200
150
100
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

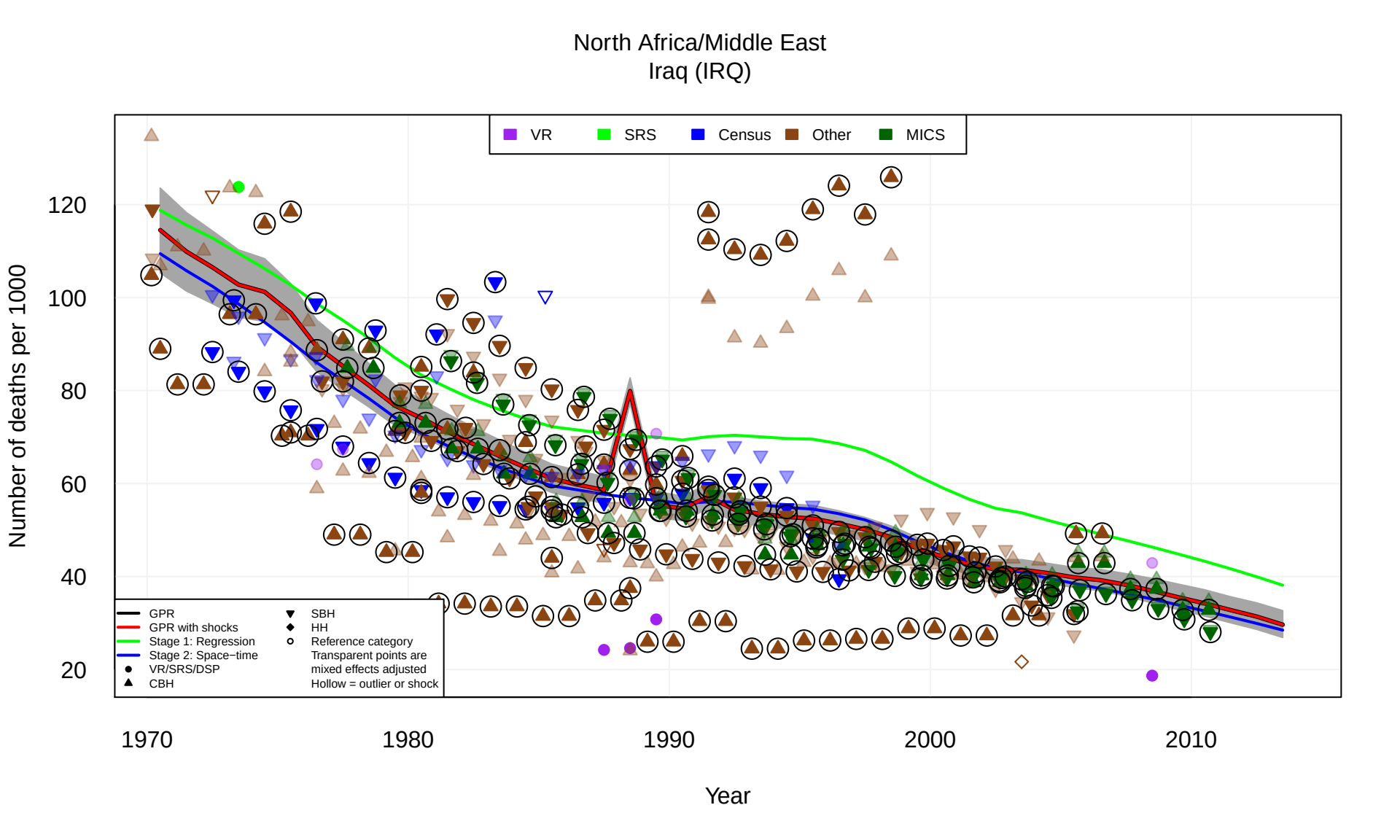

North Africa/Middle East
United Arab Emirates (ARE)
VR
Census
Other
MoH Routine Reporting
Number of deaths per 1000
120
100
80
60
40
20
0
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

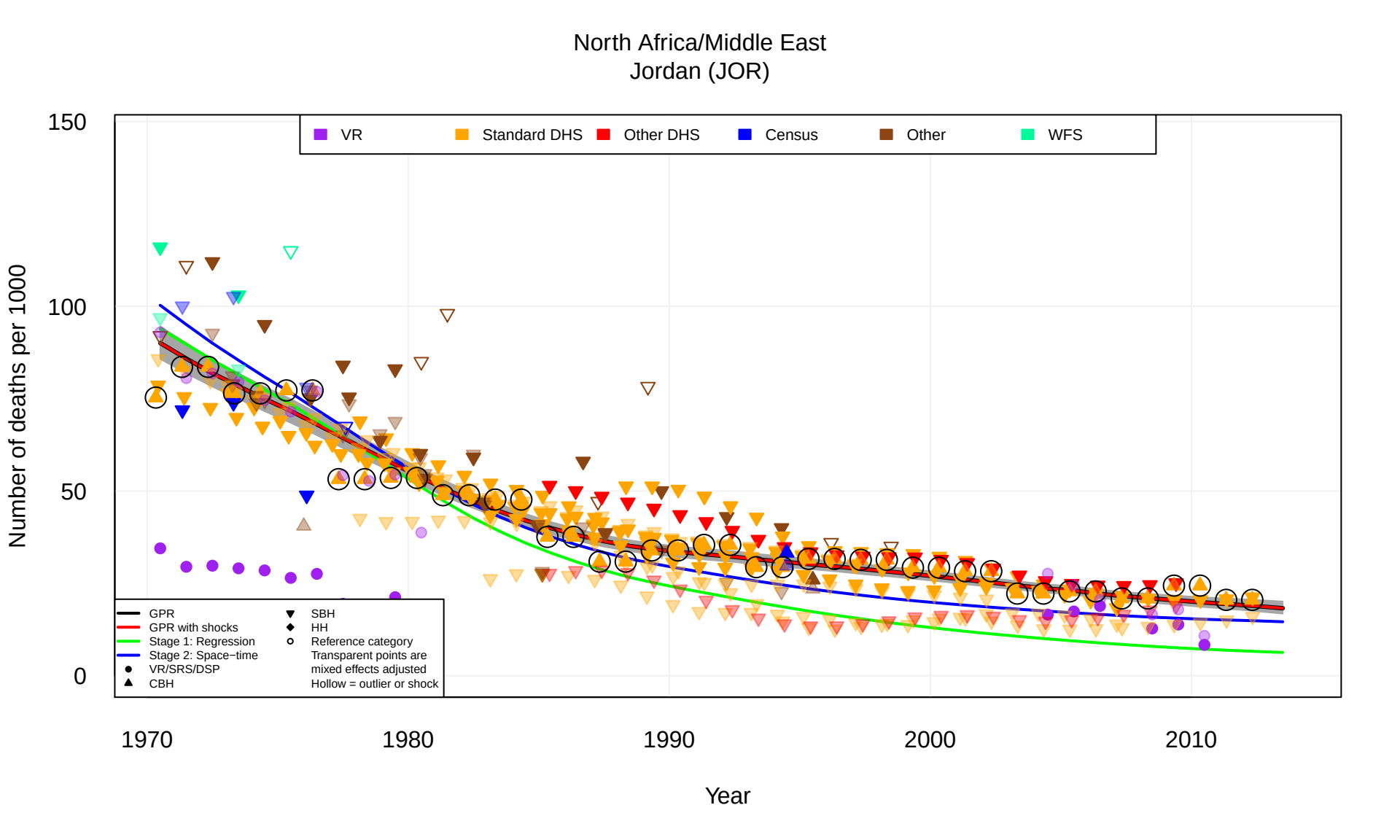

North Africa/Middle East
Bahrain (BHR)
VR
Census
Other
Number of deaths per 1000
100
80
60
40
20
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

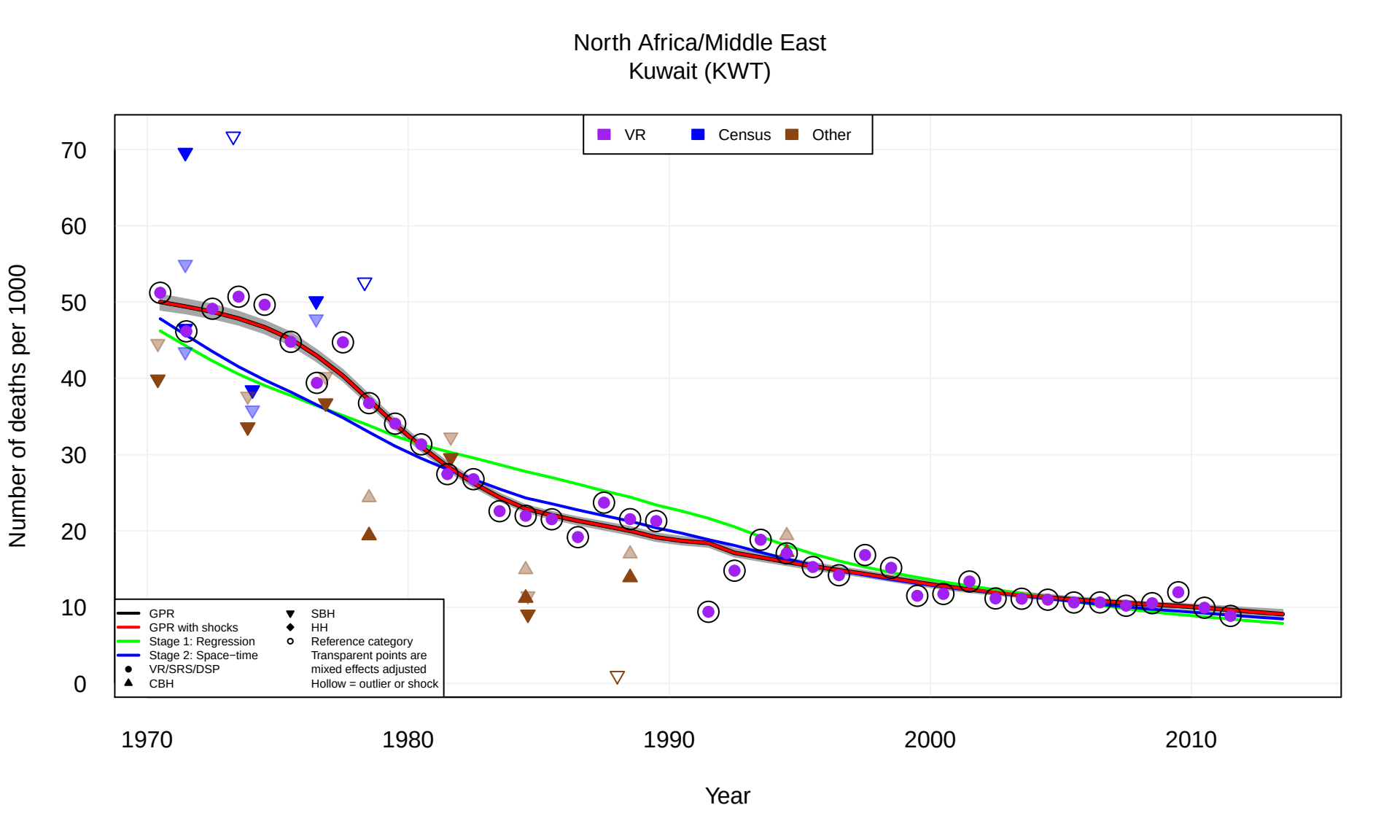

North Africa/Middle East
Algeria (DZA)
VR
PAPFAM
PAPCHILD
Census
Other
MICS
250
200
150
100
50
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

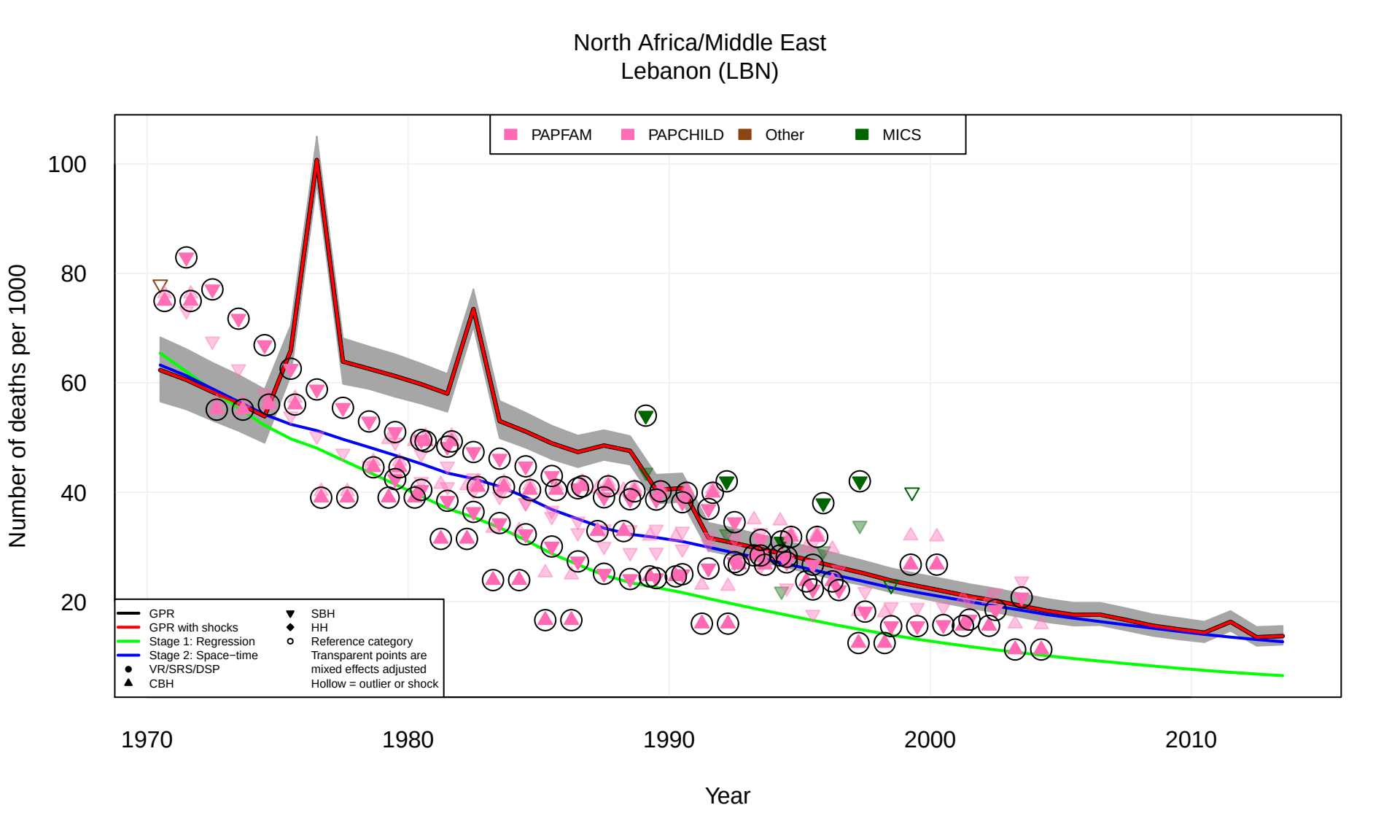

North Africa/Middle East
Egypt (EGY)
VR
Standard DHS
Other DHS
PAPCHILD
Census
Other
WFS
Number of deaths per 1000
250
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

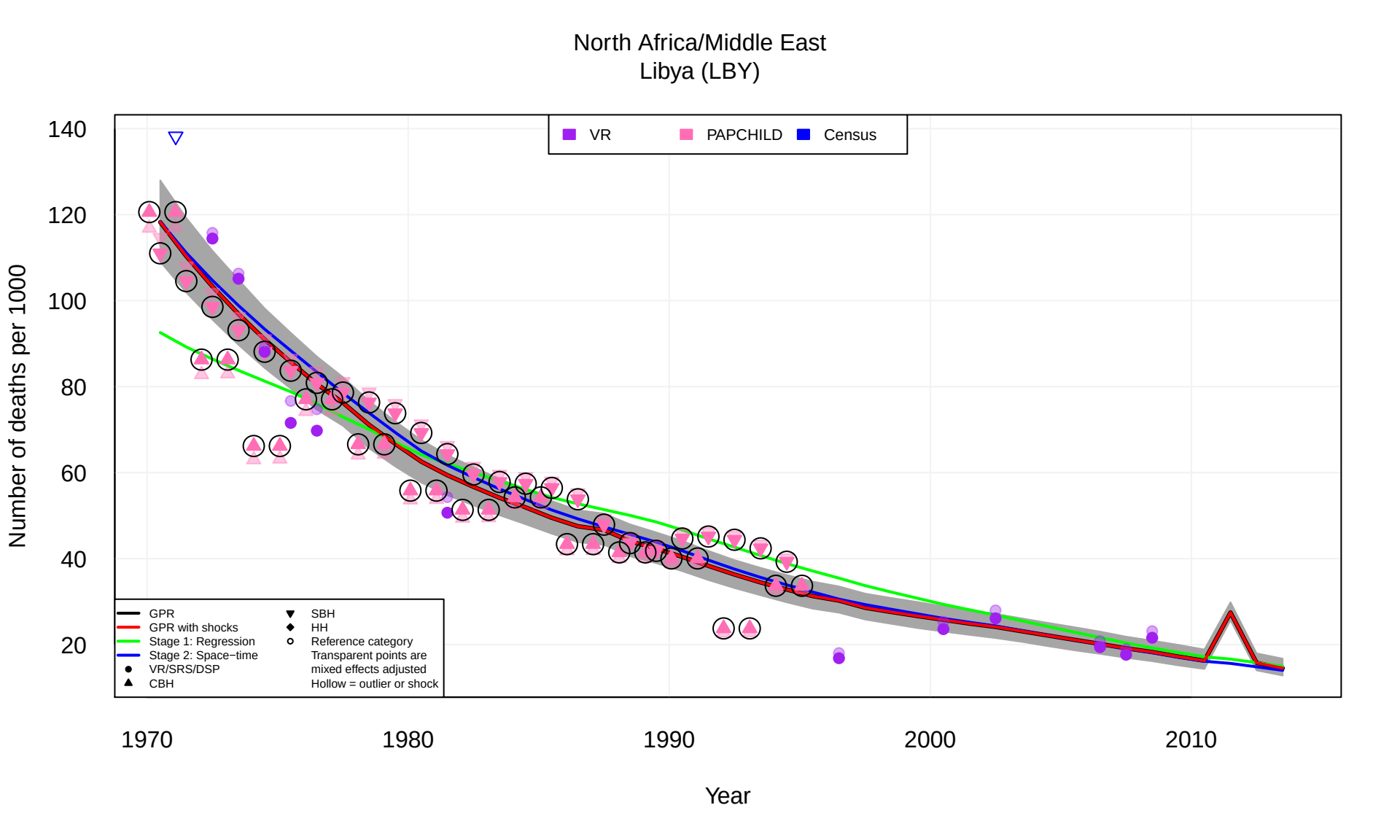

North Africa/Middle East
Iran (IRN)
VR
Other DHS
Census
Other
MoH Routine Reporting
Number of deaths per 1000
250
200
150
100
50
0
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

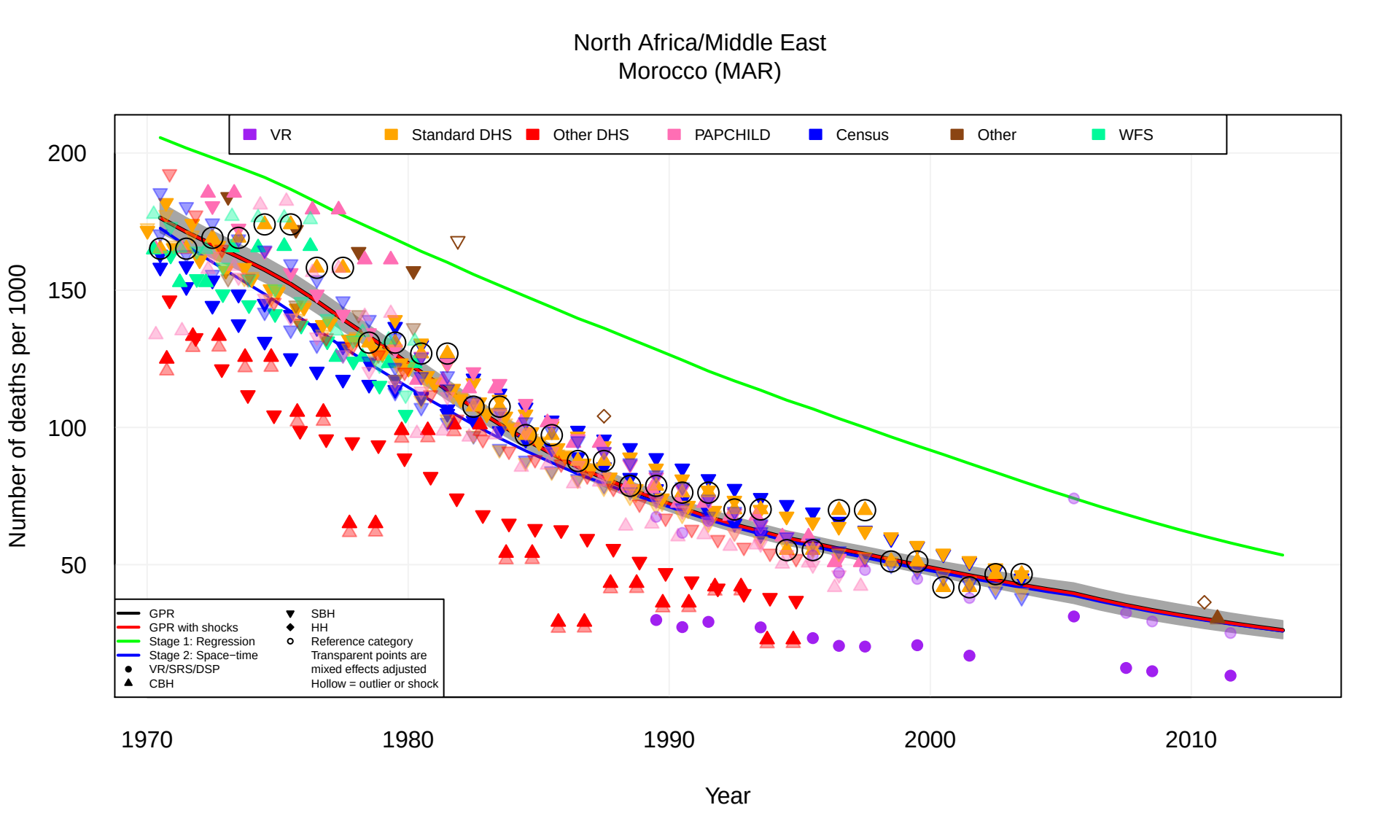

North Africa/Middle East
Iraq (IRQ)
VR
SRS
Census
Other
MICS
Number of deaths per 1000
120
100
80
60
40
20
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

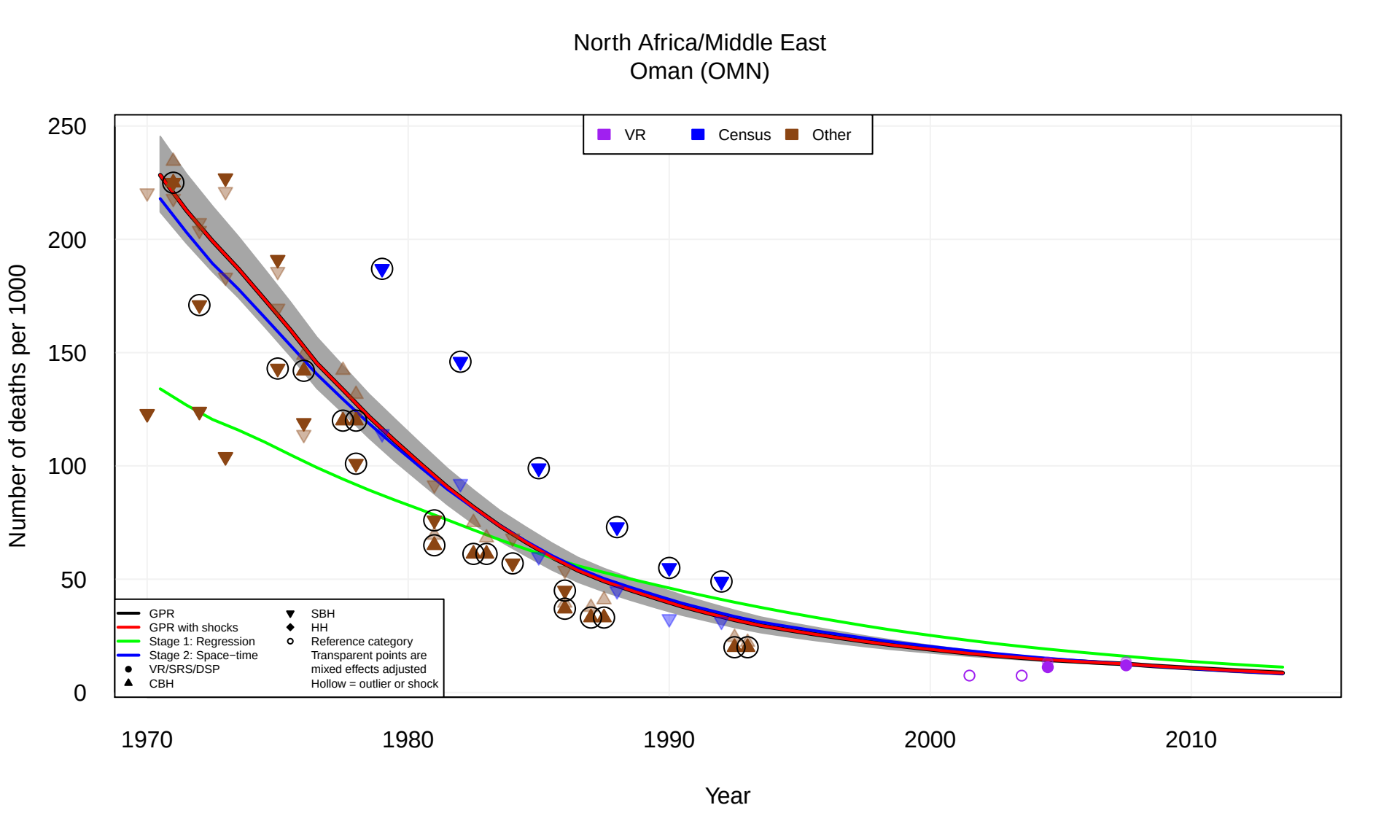

North Africa/Middle East
Jordan (JOR)
VR
Standard DHS
Other DHS
Census
Other
WFS
150
100
50
0
Number of deaths per 1000
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock
1970
1980
1990
2000
2010
Year

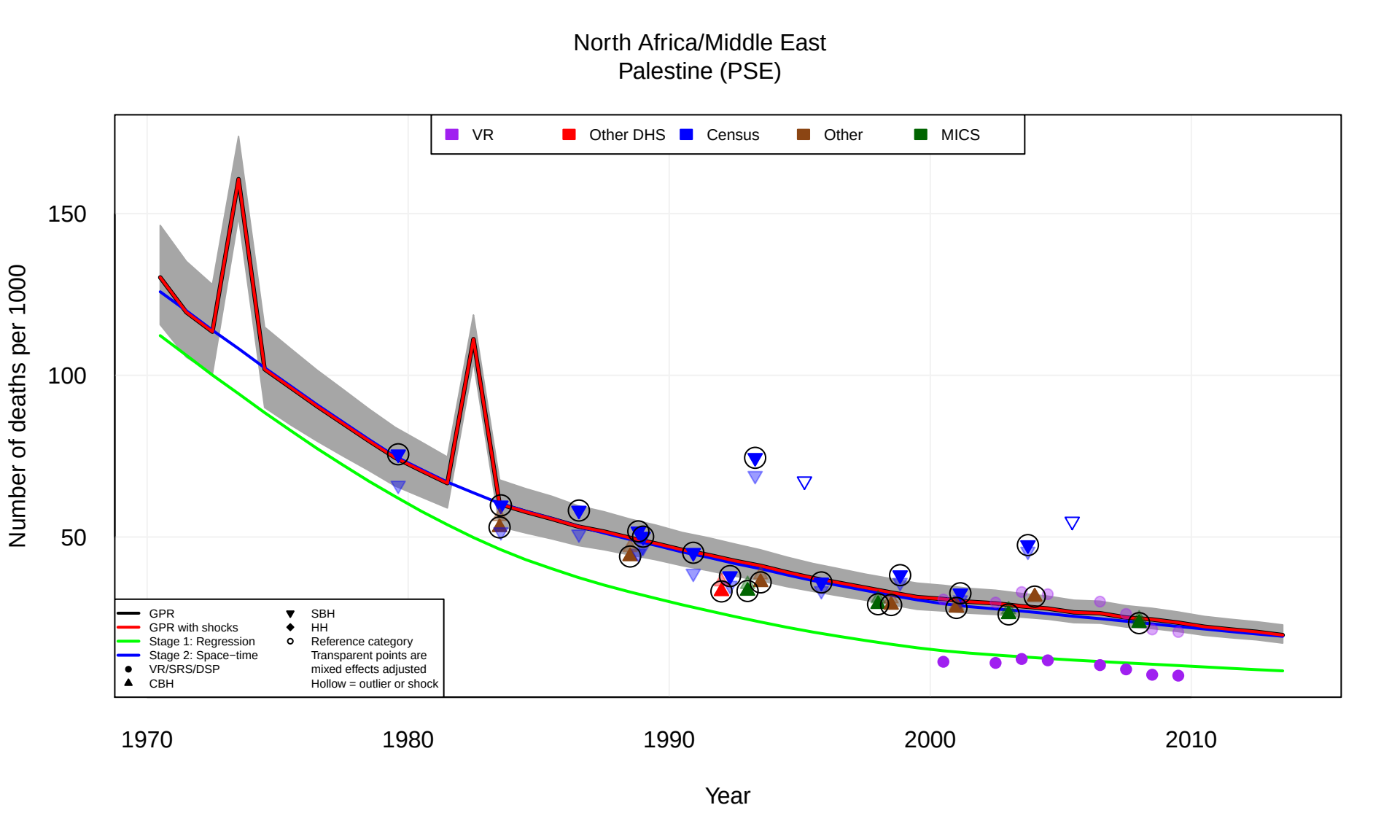

North Africa/Middle East
Kuwait (KWT)
VR
Census
Other
Number of deaths per 1000
70
60
50
40
30
20
10
0
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

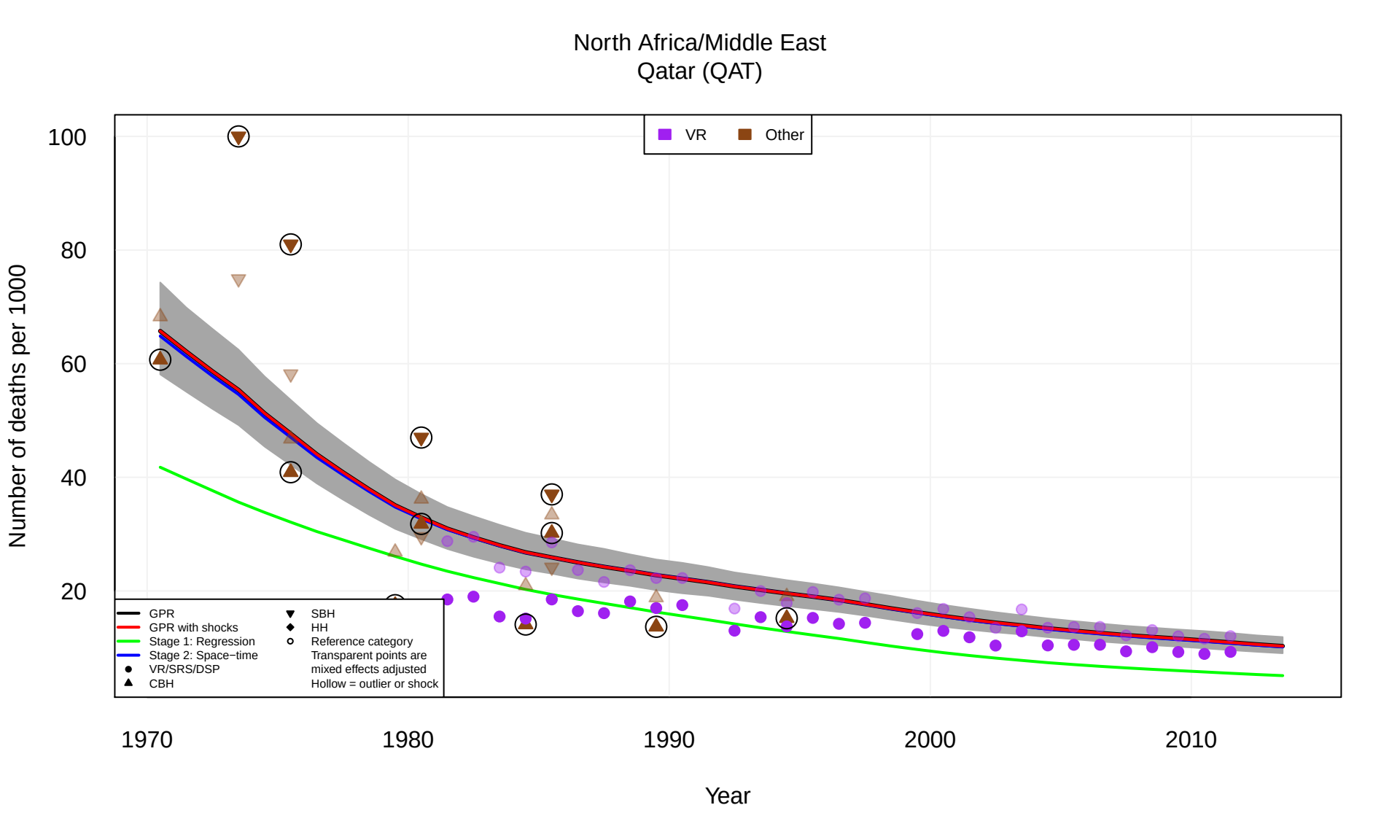

North Africa/Middle East
Lebanon (LBN)
PAPFAM
PAPCHILD
Other
MICS
Number of deaths per 1000
100
80
60
40
20
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

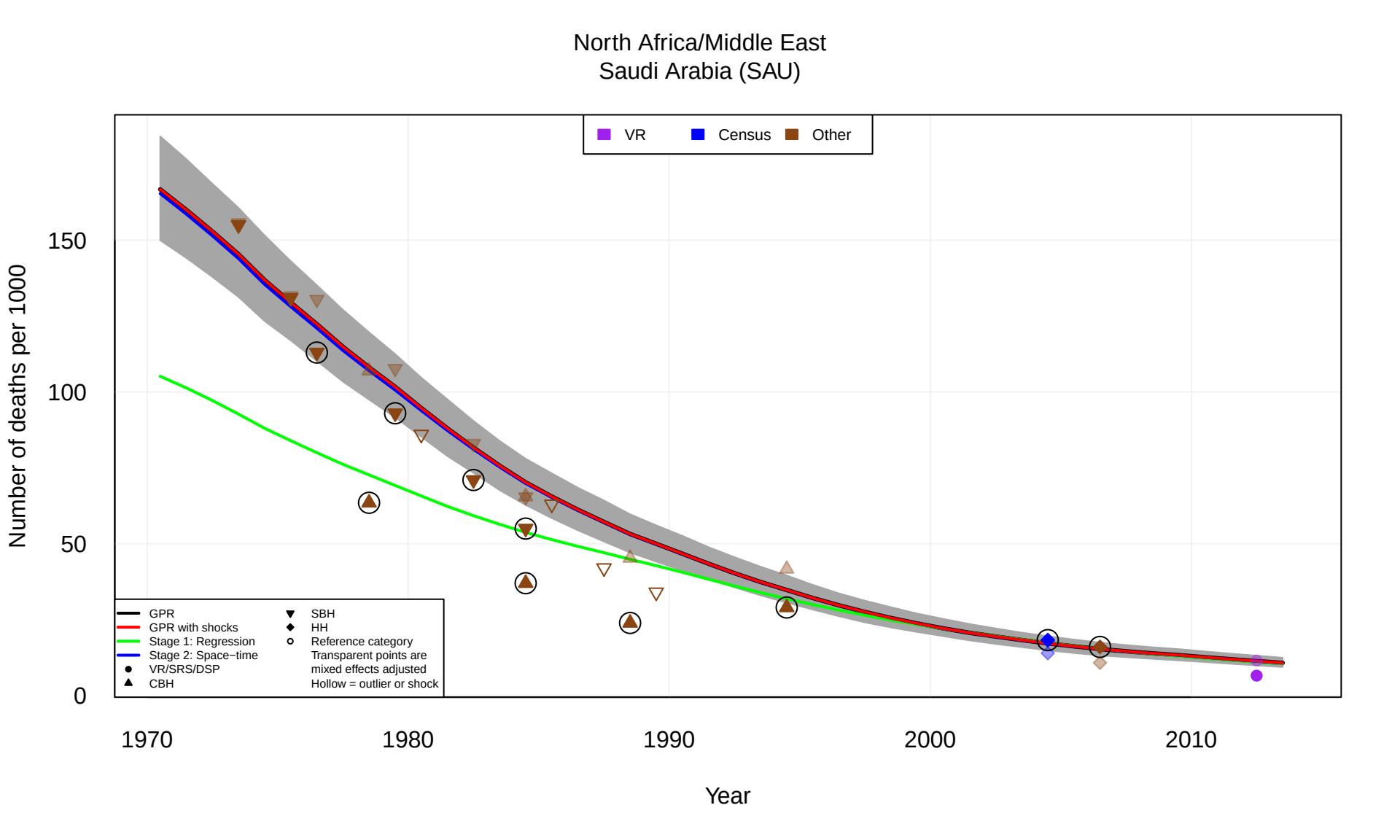

North Africa/Middle East
Libya (LBY)
VR
PAPCHILD
Census
Number of deaths per 1000
140
120
100
80
60
40
20
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

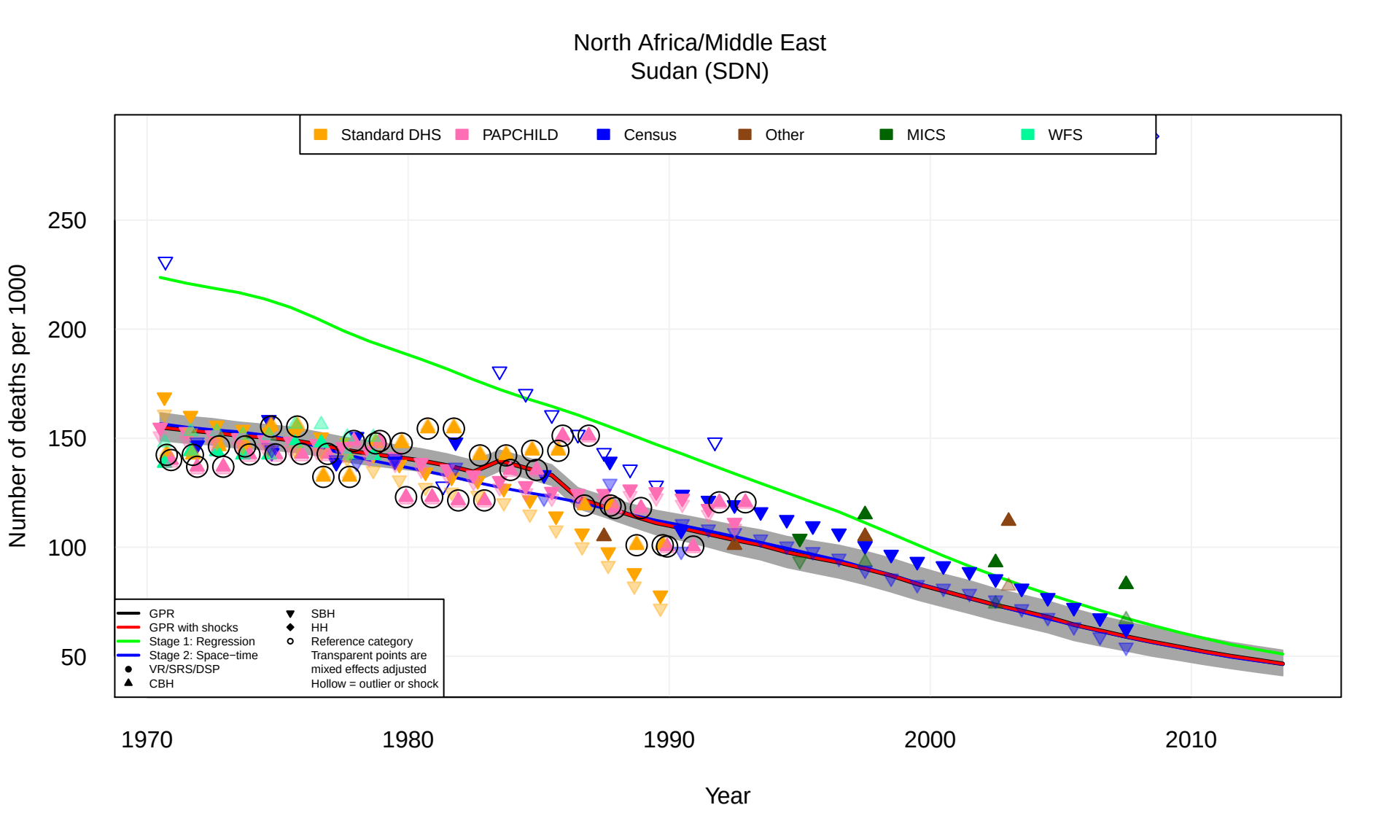

North Africa/Middle East
Morocco (MAR)
VR
Standard DHS
Other DHS
PAPCHILD
Census
Other
WFS
200
150
100
50
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

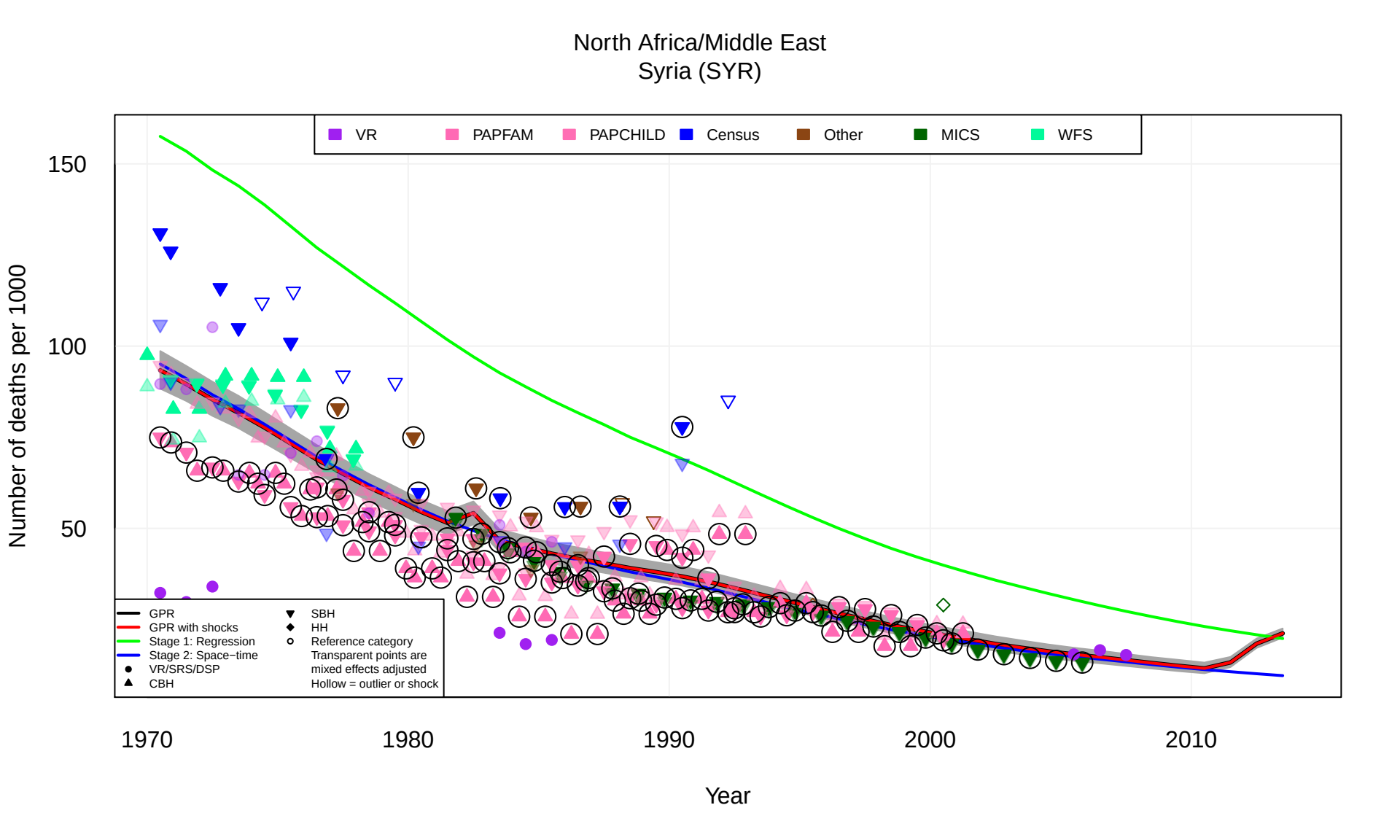

North Africa/Middle East
Oman (OMN)
VR
Census
Other
Number of deaths per 1000
250
200
150
100
50
0
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

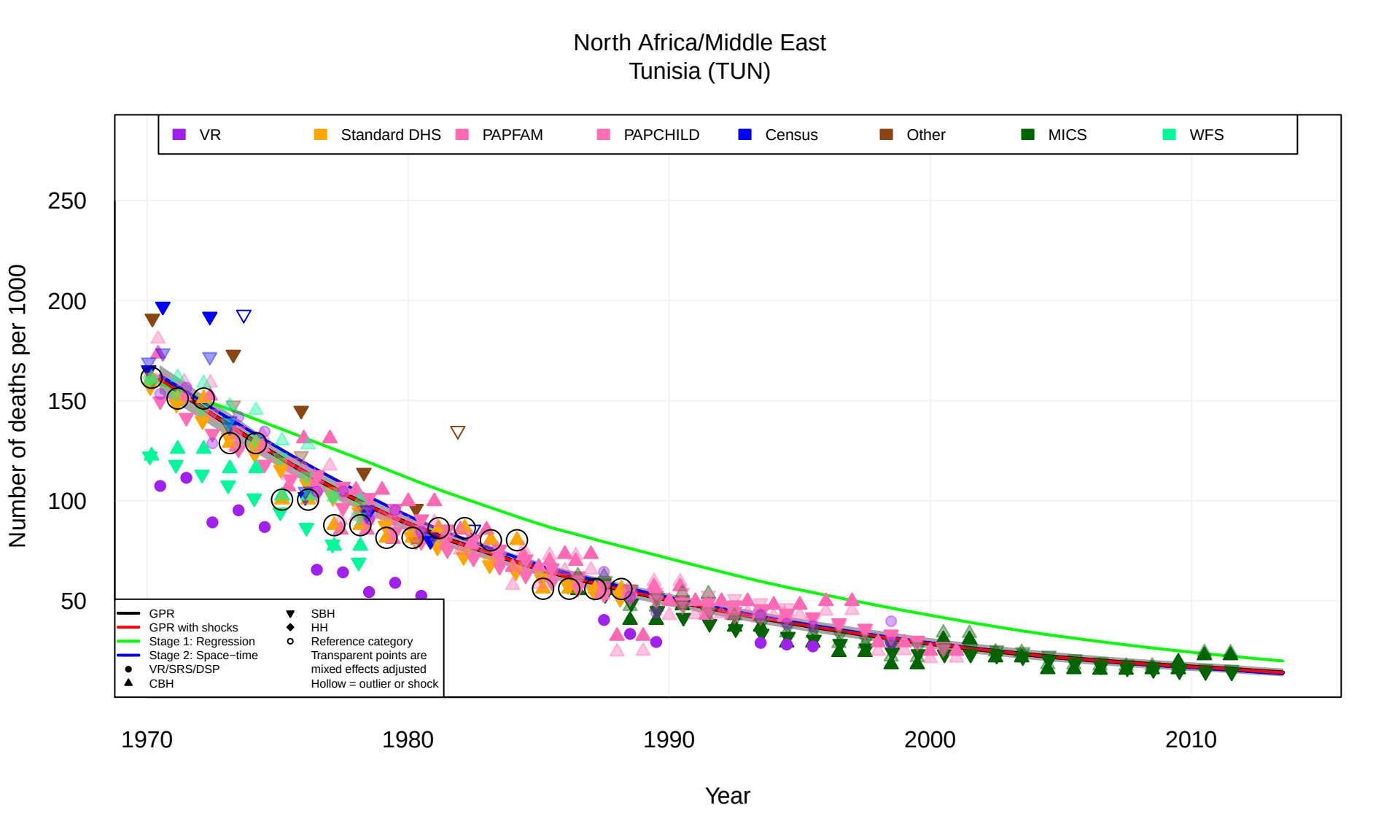

North Africa/Middle East
Palestine (PSE)
VR
Other DHS
Census
Other
MICS
150
100
50
Number of deaths per 1000
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock
1970
1980
1990
2000
2010
Year

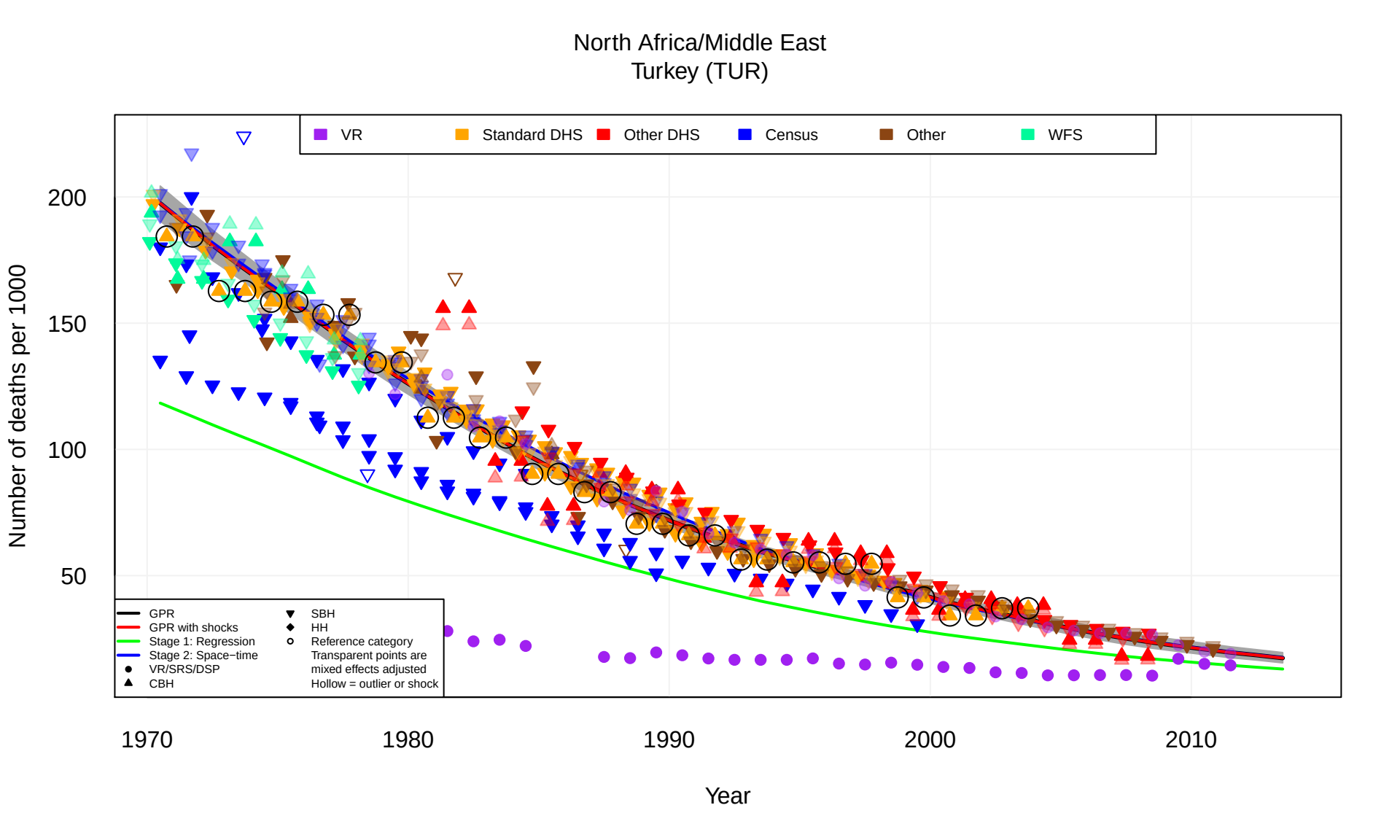

North Africa/Middle East
Qatar (QAT)
VR
Other
Number of deaths per 1000
100
80
60
40
20
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

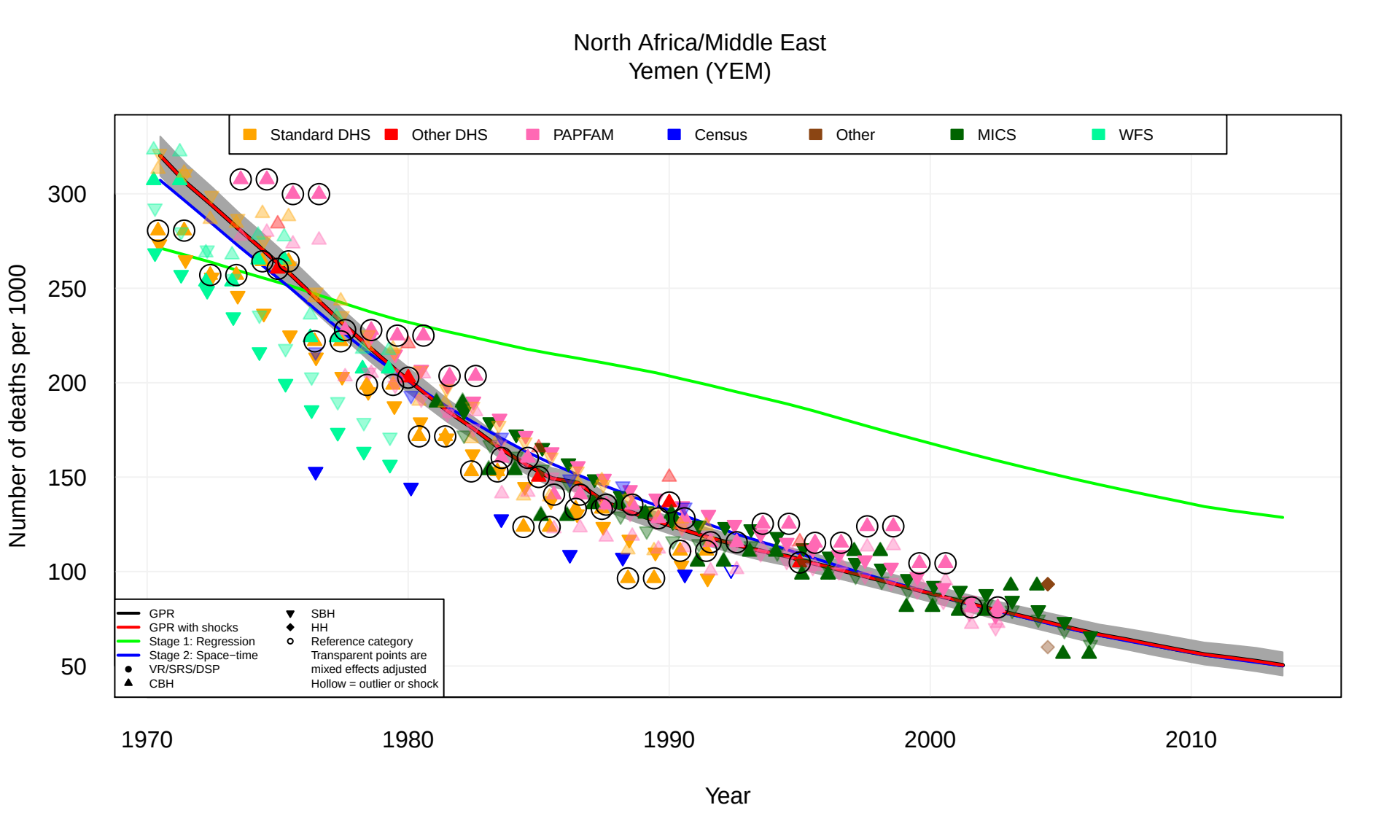

North Africa/Middle East
Saudi Arabia (SAU)
VR
Census
Other
Number of deaths per 1000
150
100
50
0
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

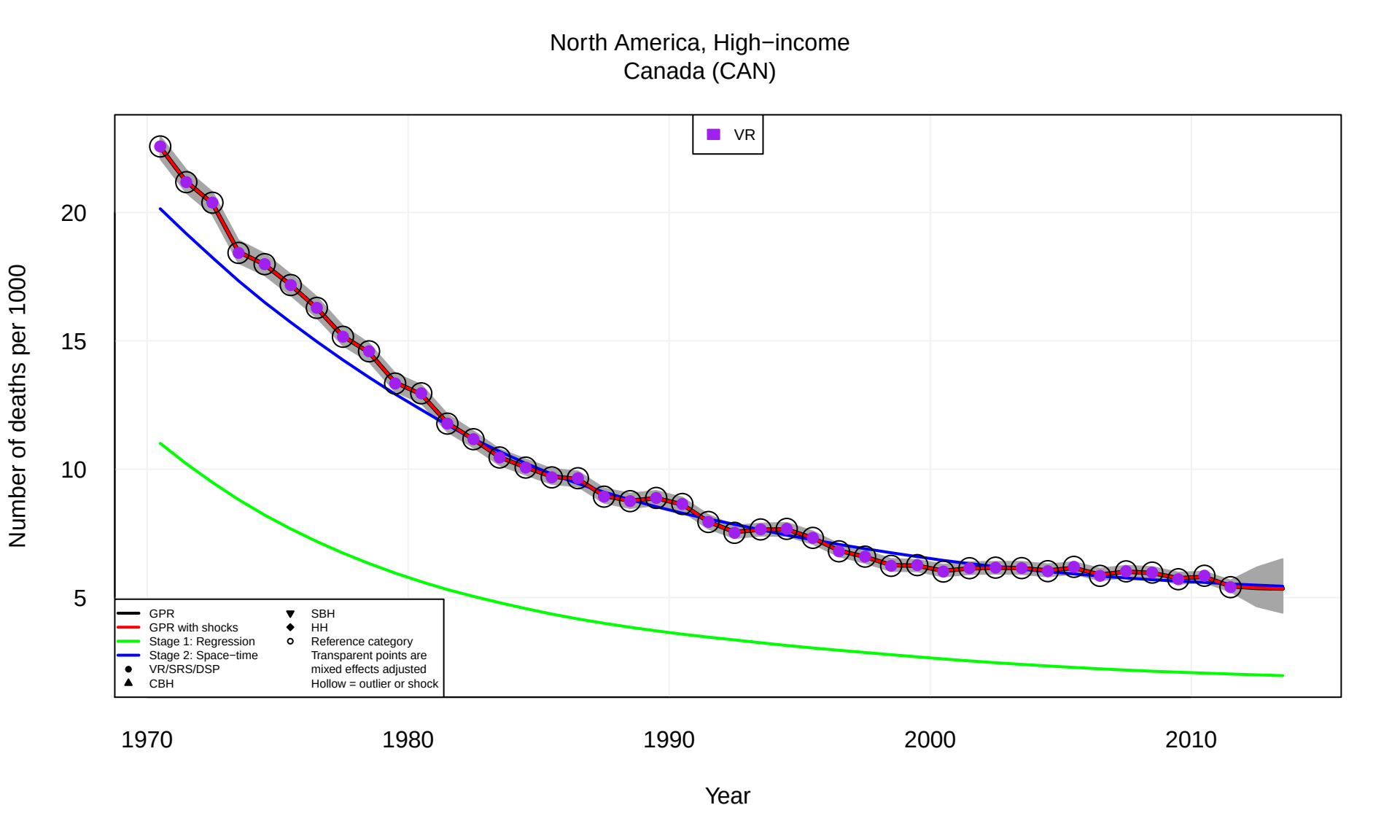

North Africa/Middle East
Sudan (SDN)
Standard DHS
PAPCHILD
Census
Other
MICS
WFS
Number of deaths per 1000
250
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

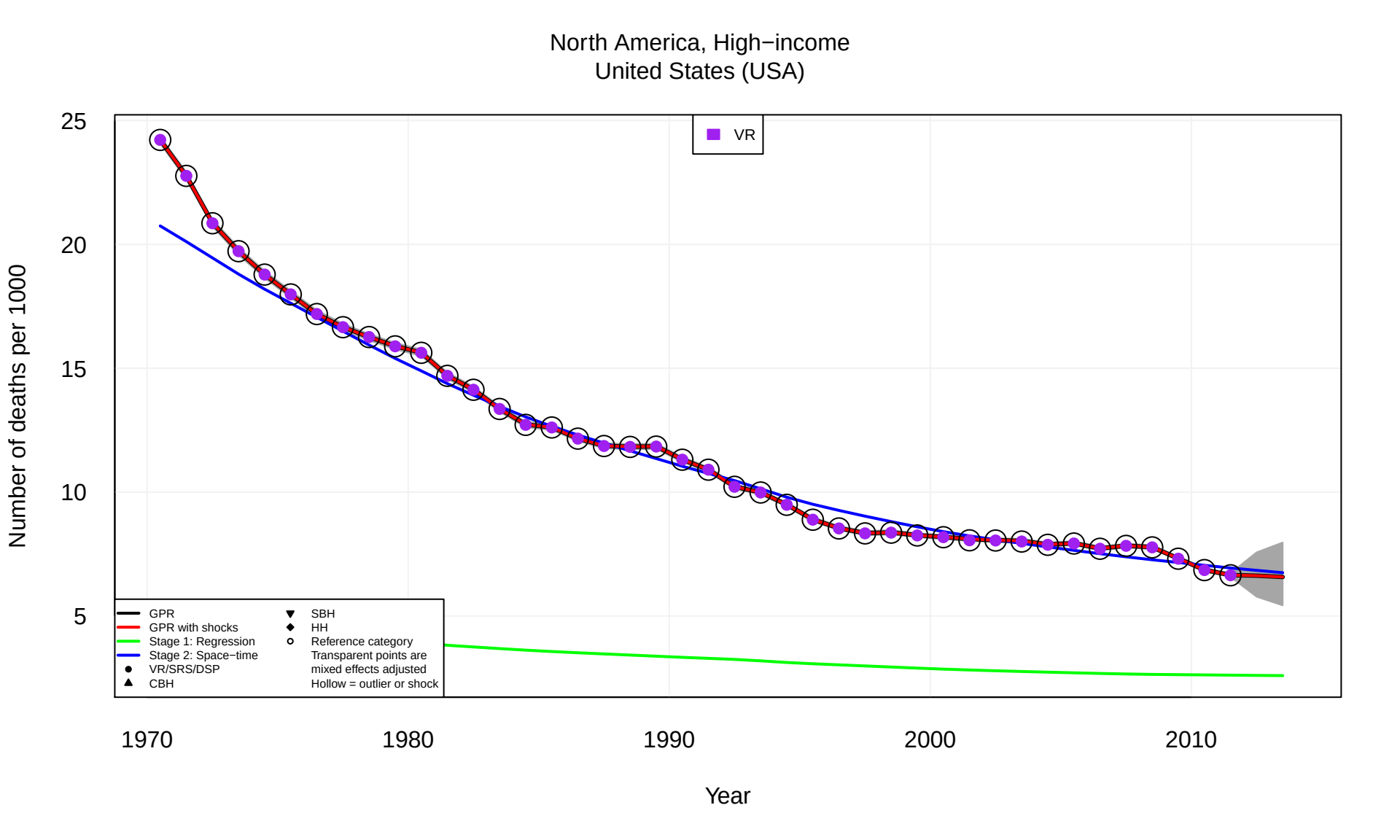

North Africa/Middle East
Syria (SYR)
VR
PAPFAM
PAPCHILD
Census
Other
MICS
WFS
150
100
50
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

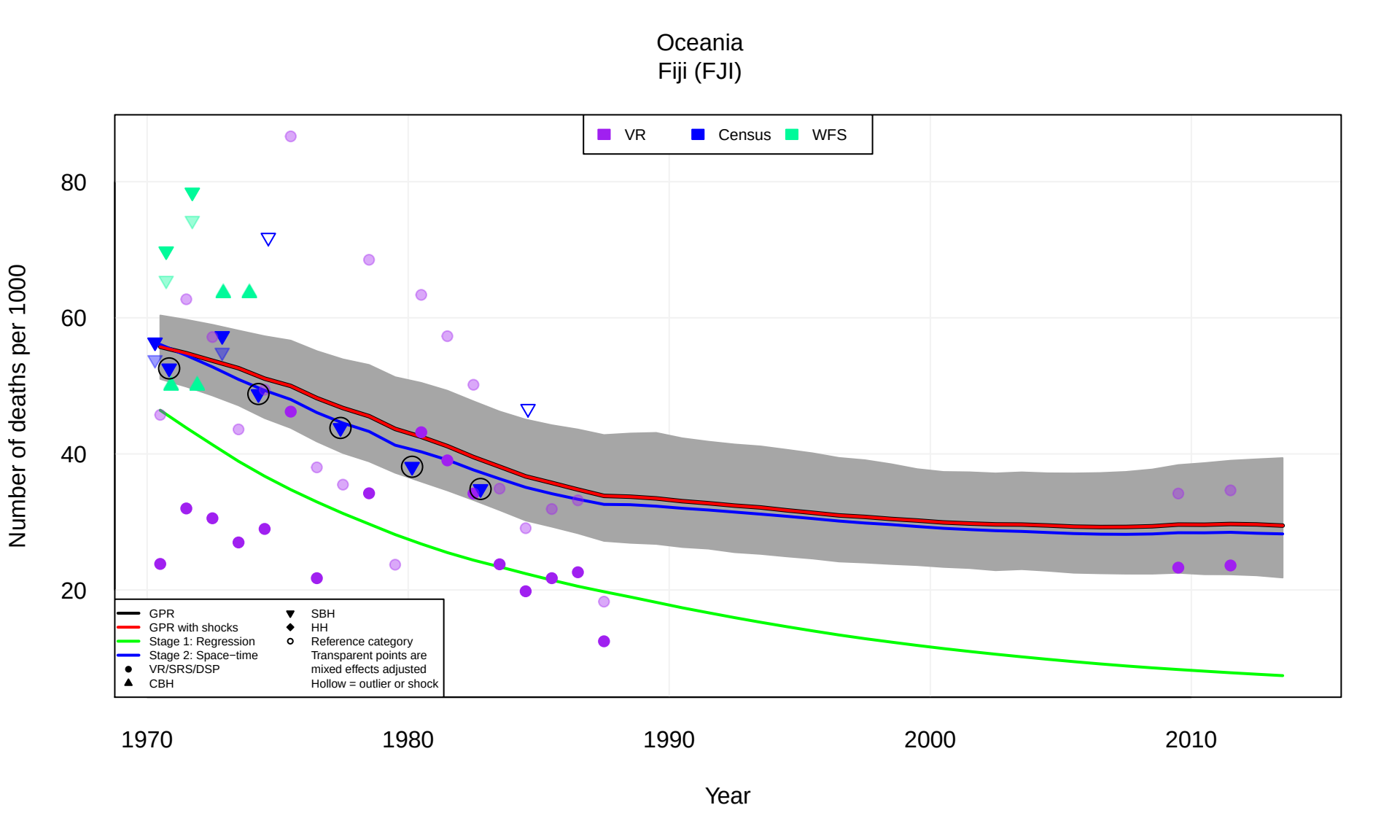

North Africa/Middle East
Tunisia (TUN)
VR
Standard DHS
PAPFAM
PAPCHILD
Census
Other
MICS
WFS
250
200
150
100
50
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

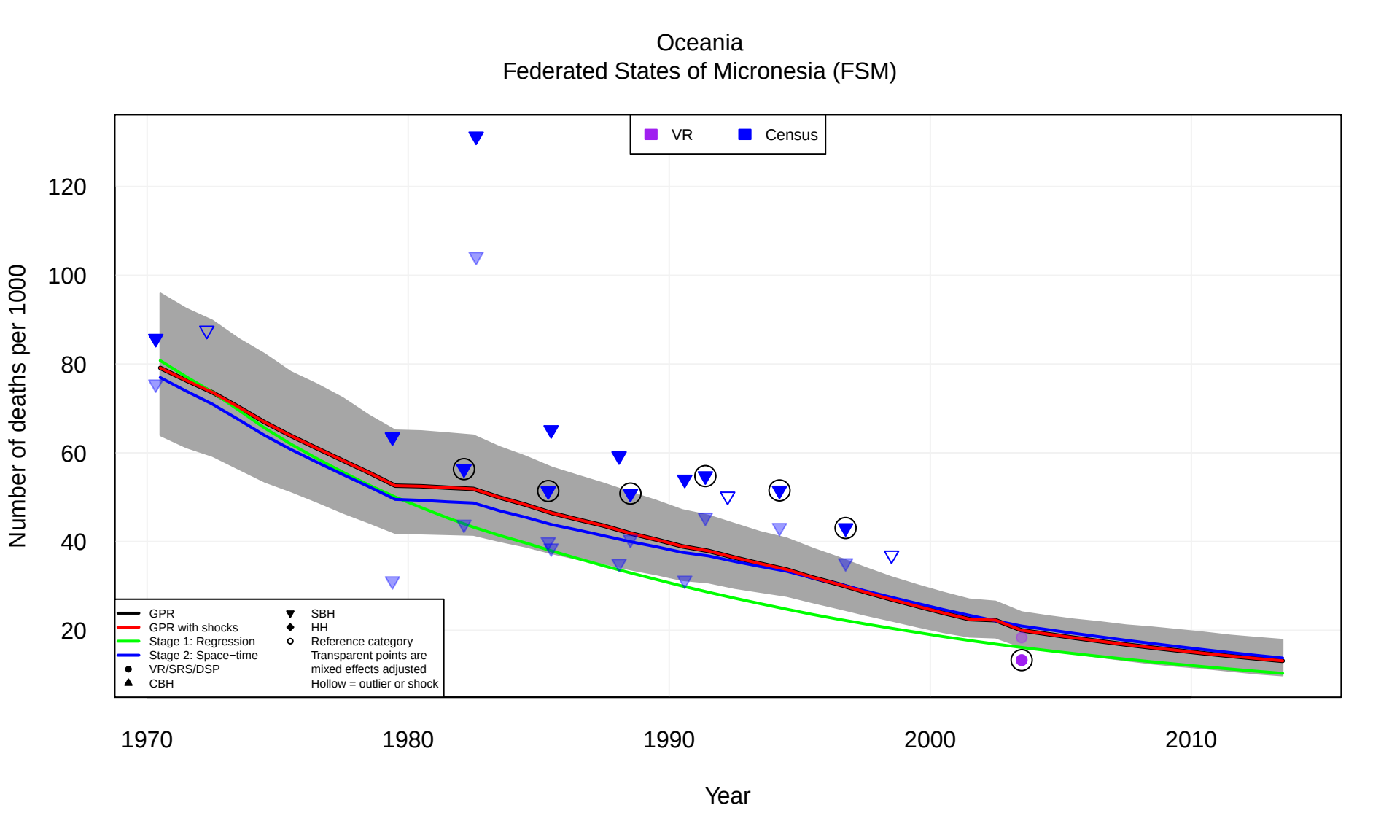

North Africa/Middle East
Turkey (TUR)
VR
Standard DHS
Other DHS
Census
Other
WFS
Number of deaths per 1000
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

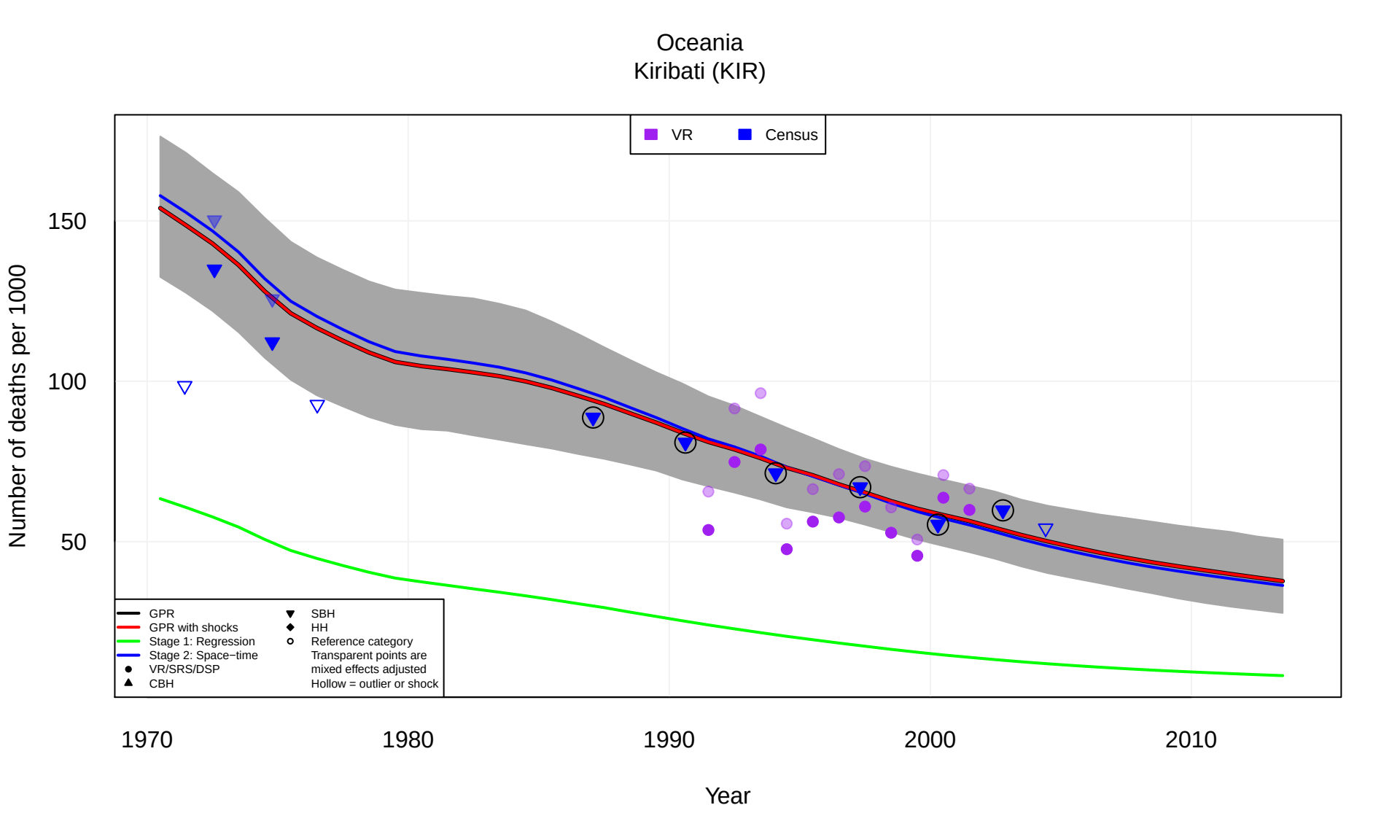

North Africa/Middle East
Yemen (YEM)
Standard DHS
Other DHS
PAPFAM
Census
Other
MICS
WFS
Number of deaths per 1000
300
250
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

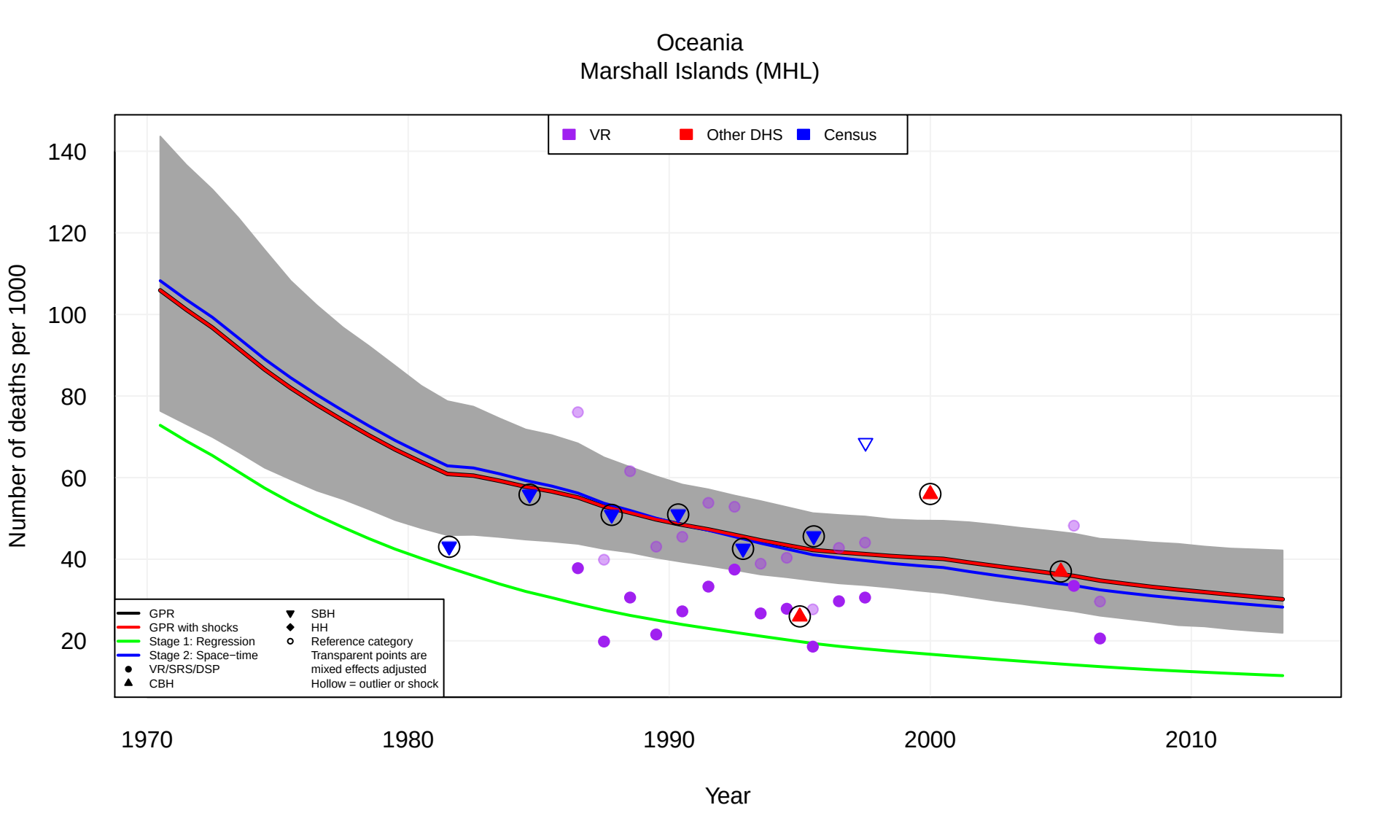

North America, High−income
Canada (CAN)
VR
Number of deaths per 1000
20
15
10
5
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

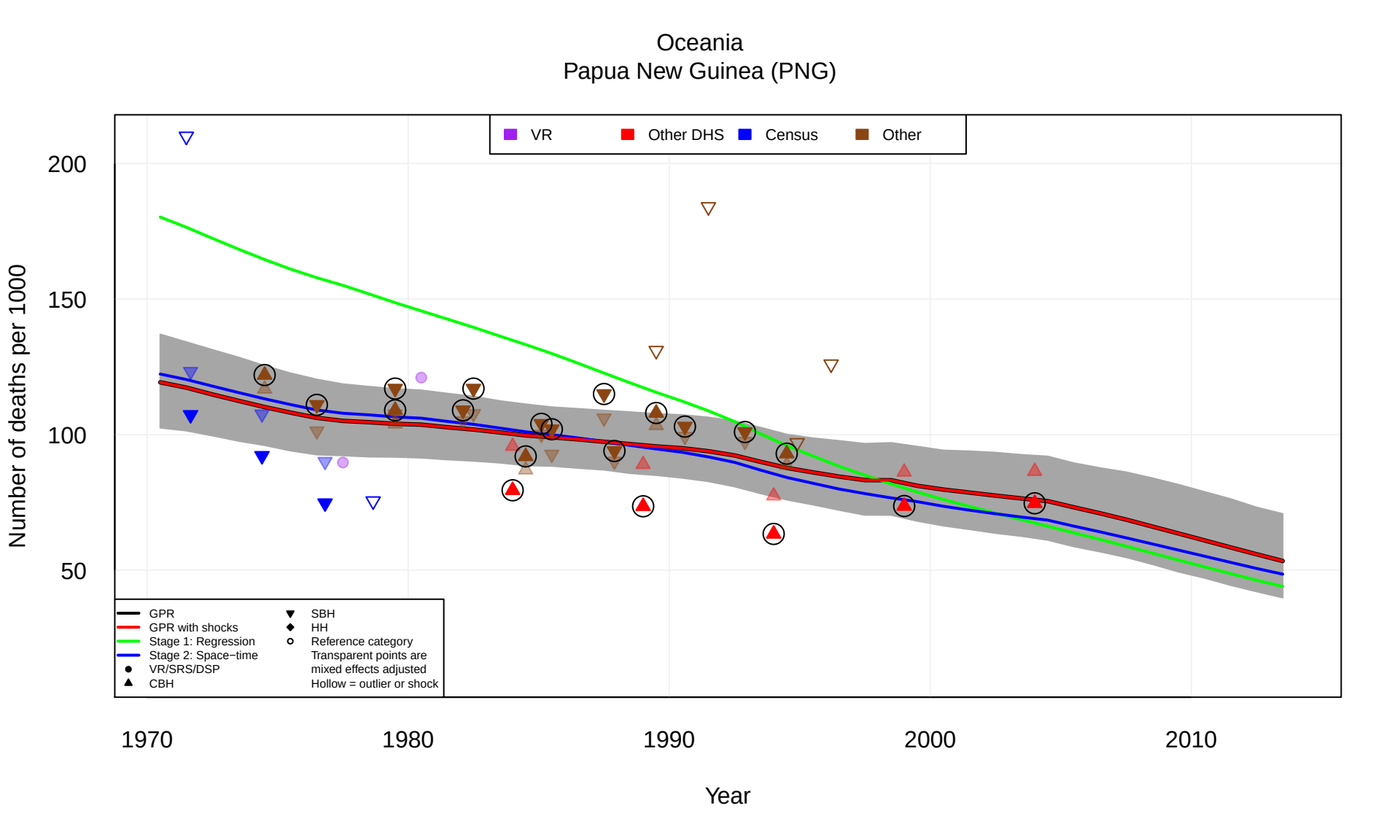

North America, High−income
United States (USA)
VR
25
20
15
10
5
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are mixed effects adjusted
Hollow = outlier or shock

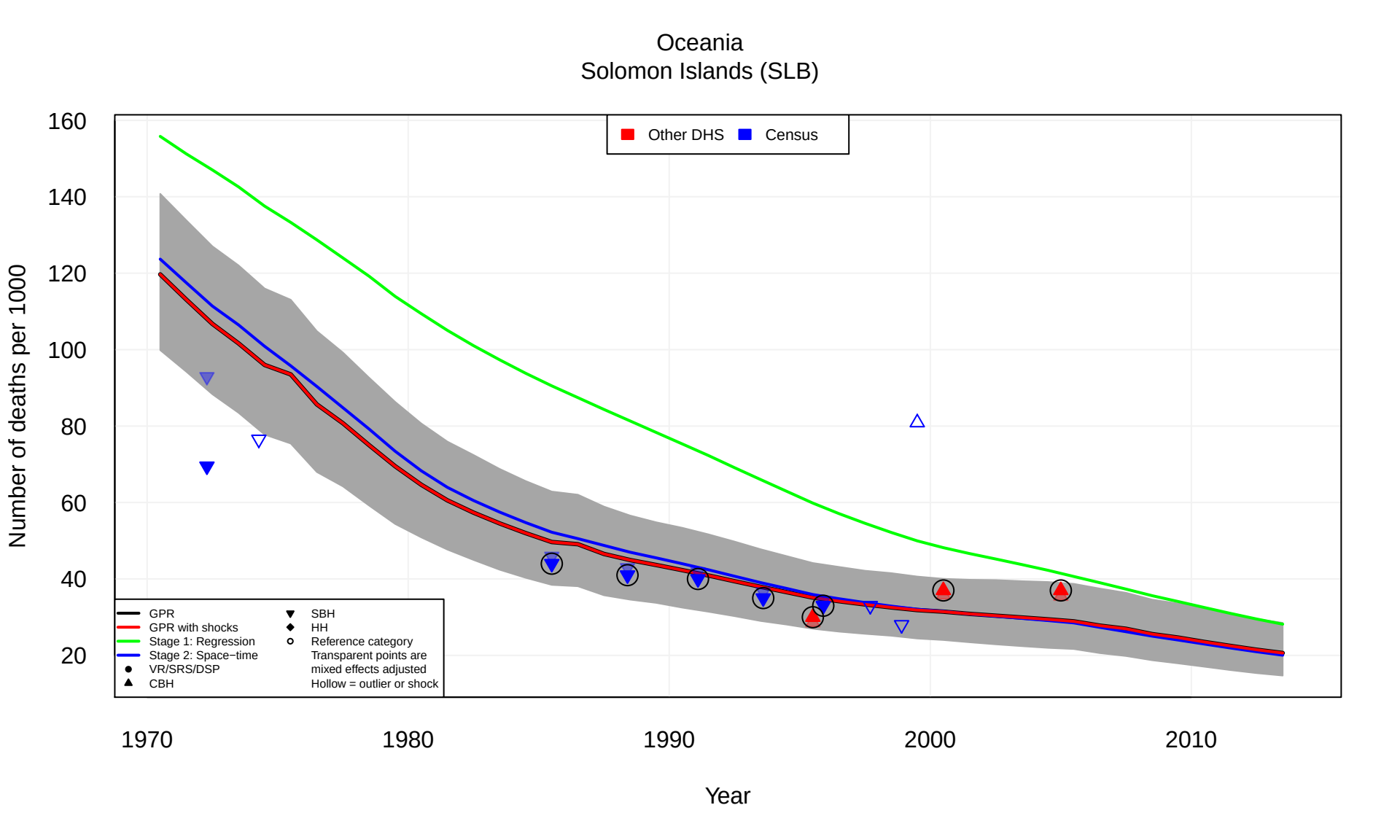

Oceania
Fiji (FJI)
VR
Census
WFS
80
60
40
20
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

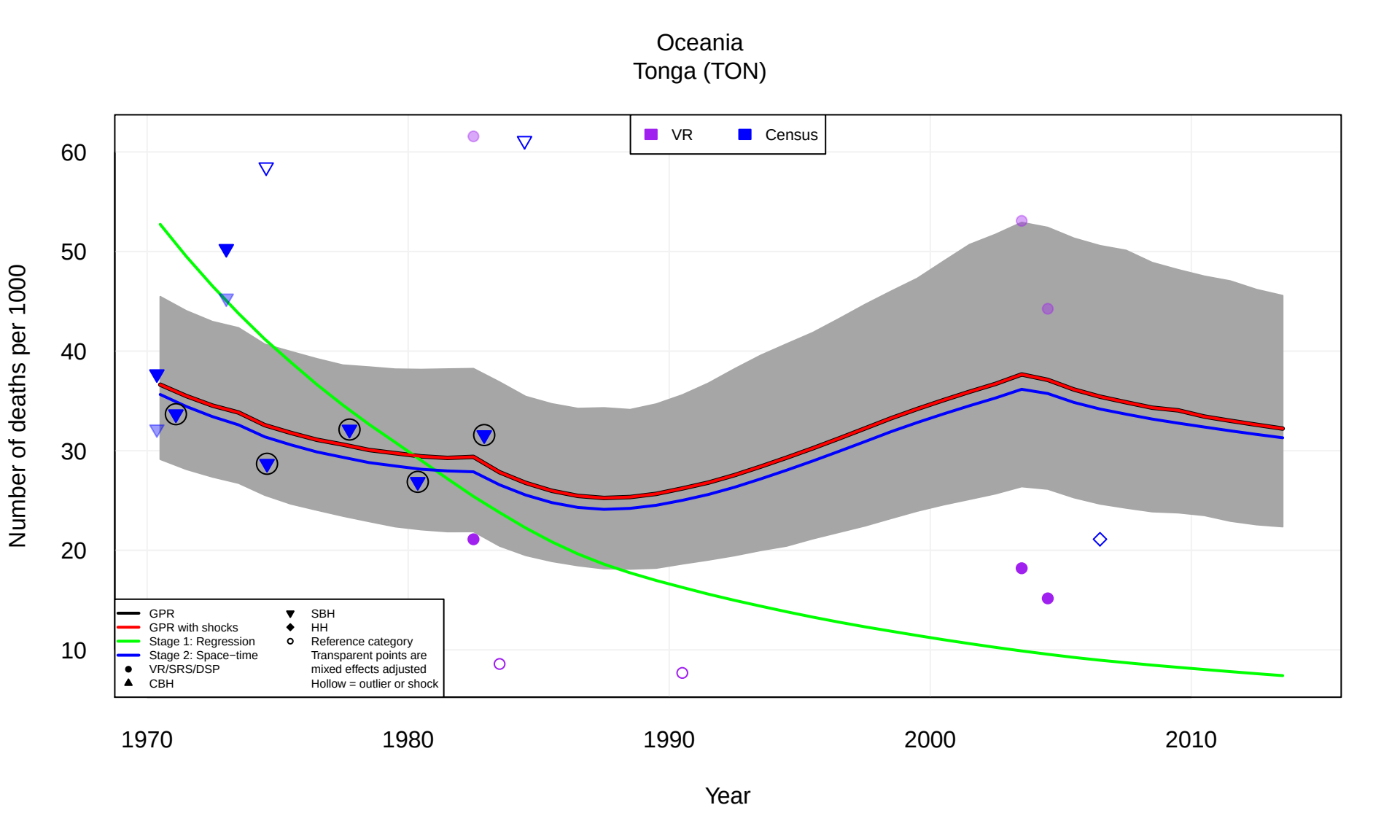

Oceania
Federated States of Micronesia (FSM)
VR
Census
Number of deaths per 1000
120
100
80
60
40
20
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

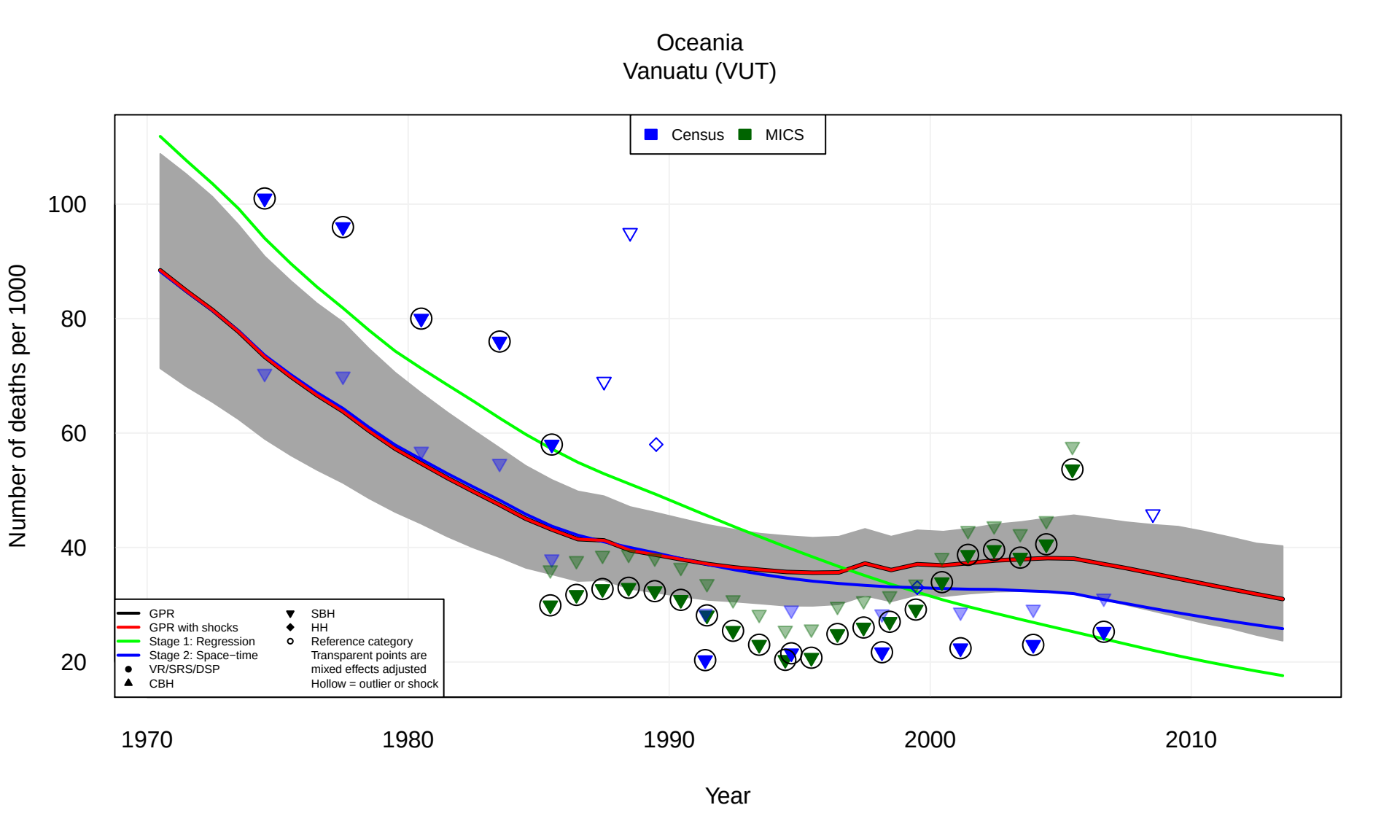

Oceania
Kiribati (KIR)
VR
Census
150
100
50
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

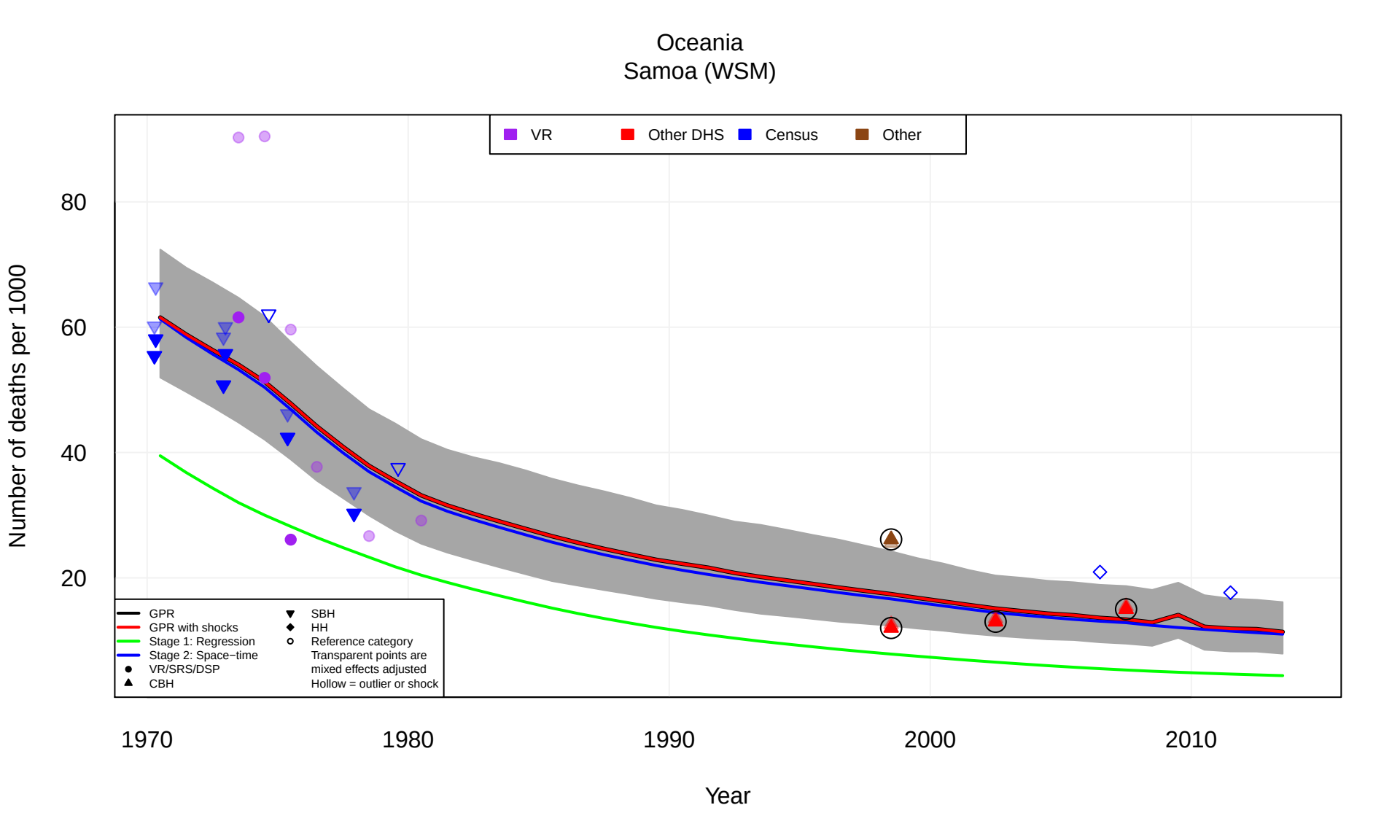

Oceania
Marshall Islands (MHL)
VR
Other DHS
Census
Number of deaths per 1000
140
120
100
80
60
40
20
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

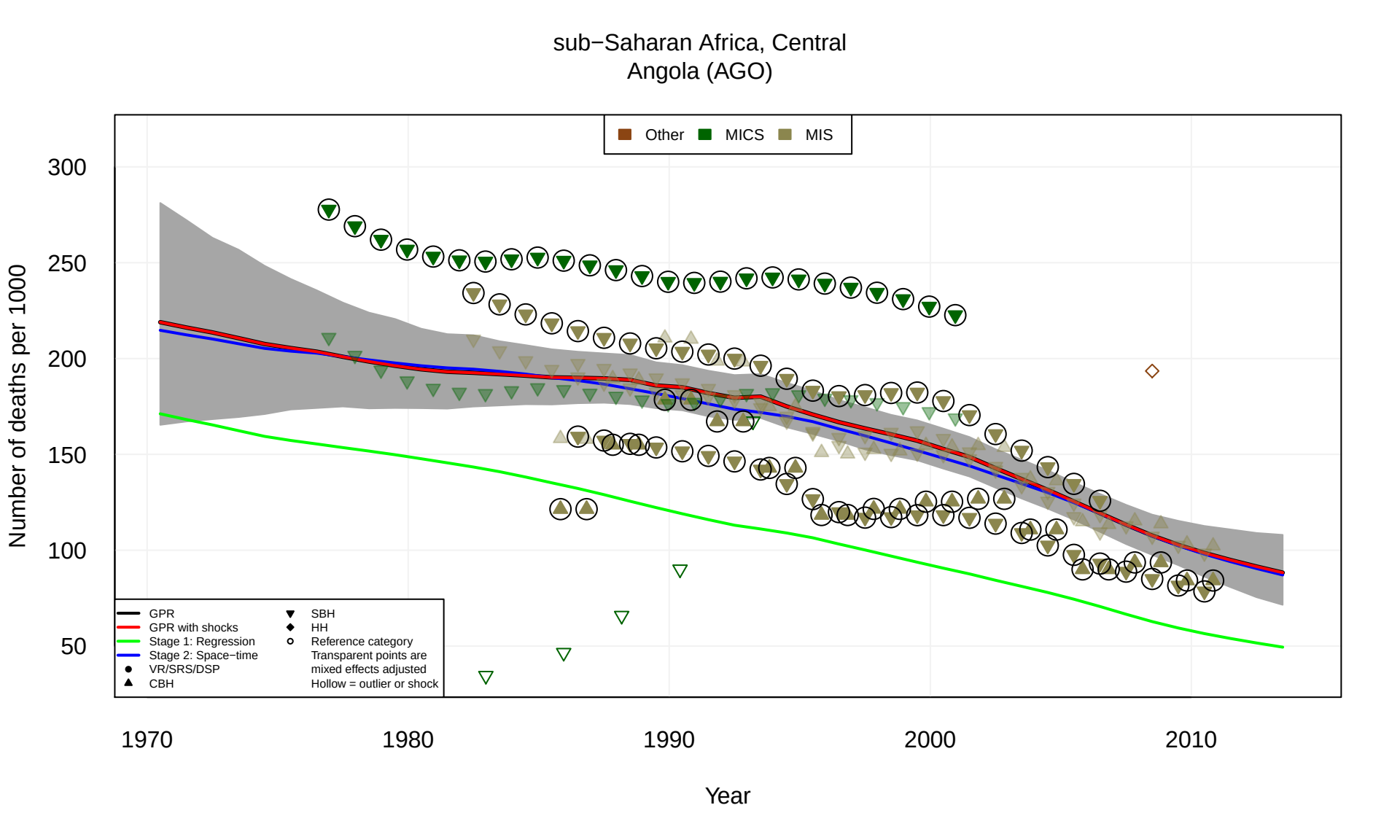

Oceania
Papua New Guinea (PNG)
VR
Other DHS
Census
Other
200
150
100
50
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

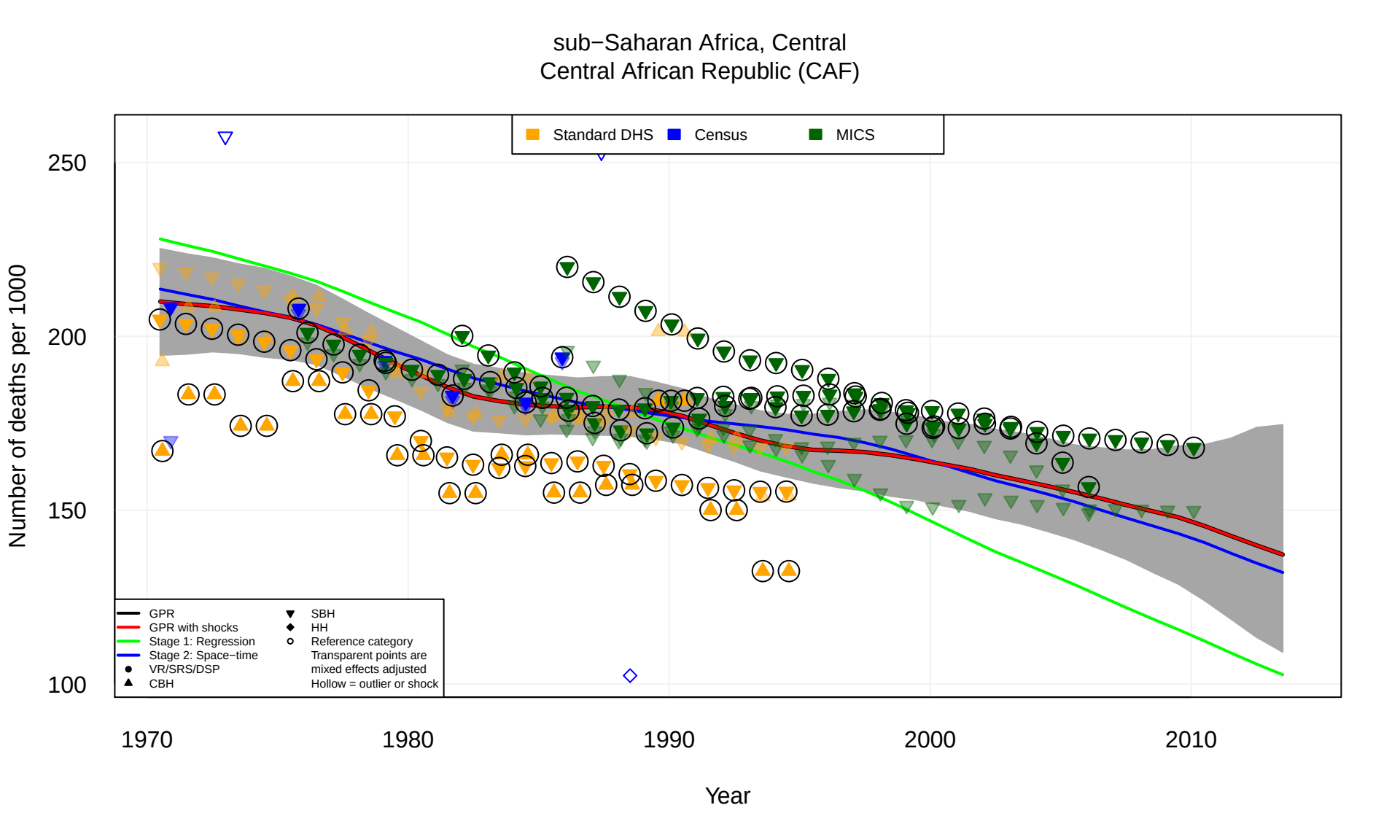

Oceania
Solomon Islands (SLB)
Other DHS
Census
Number of deaths per 1000
160
140
120
100
80
60
40
20
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

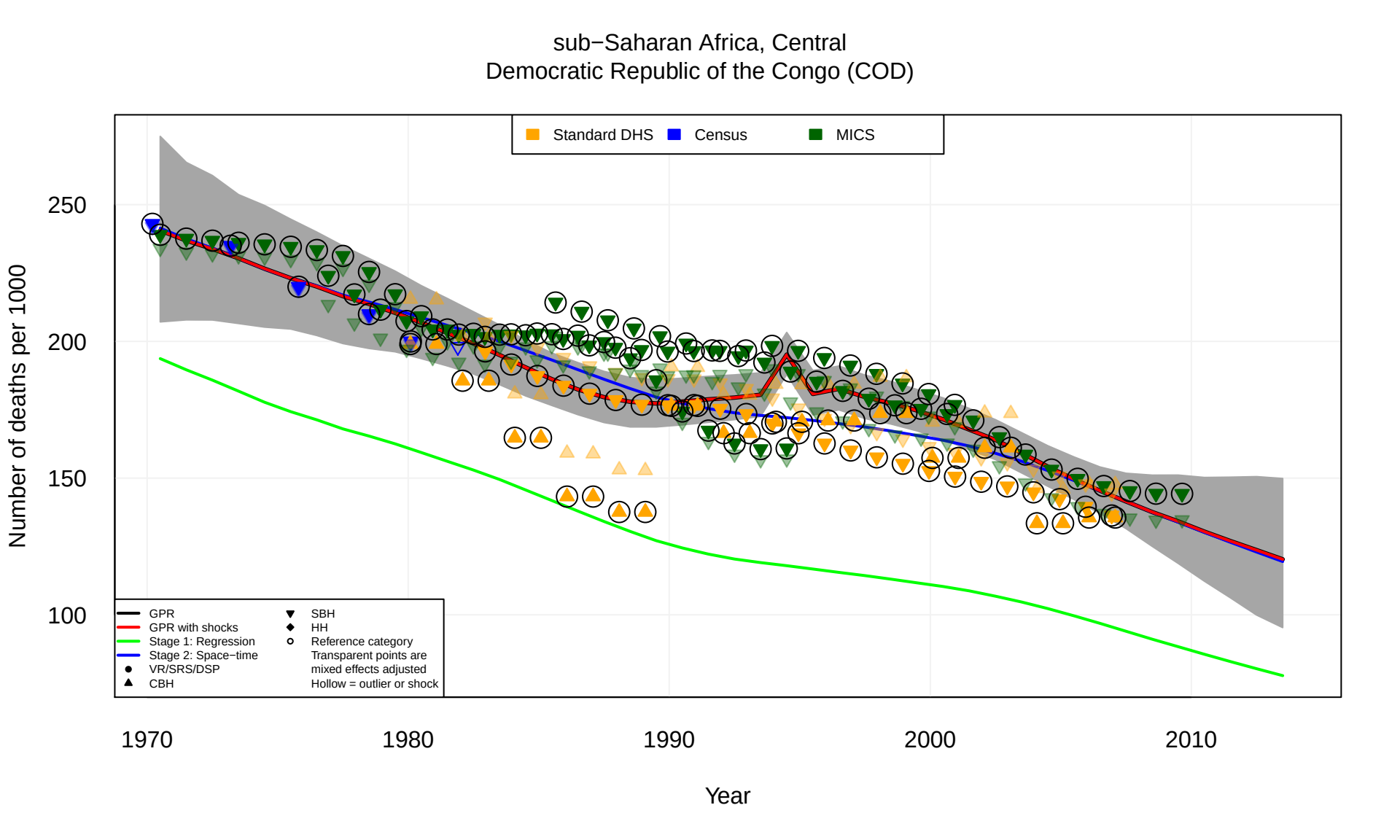

Oceania
Tonga (TON)
VR
Census
60
50
40
30
20
10
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

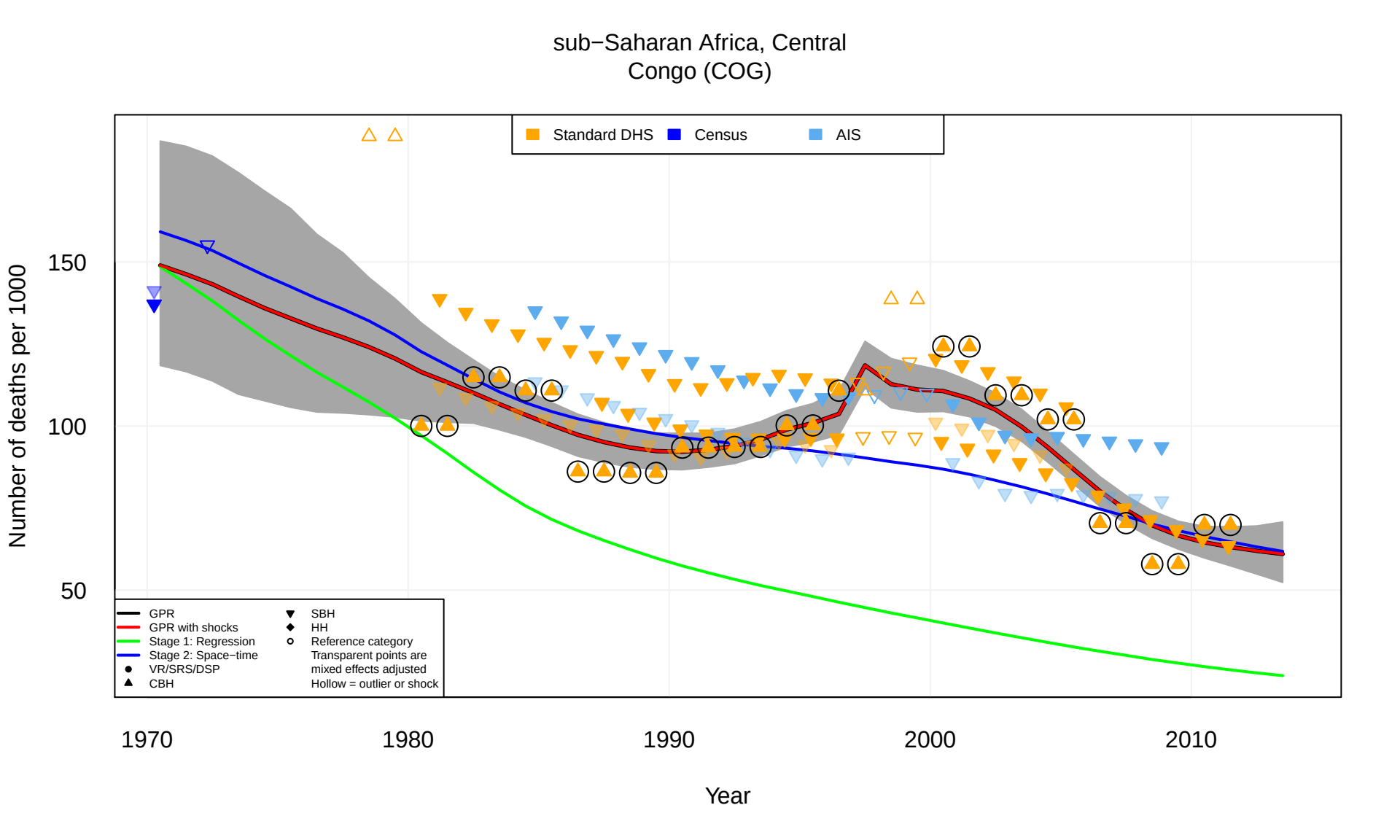

Oceania
Vanuatu (VUT)
Census
MICS
Number of deaths per 1000
100
80
60
40
20
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

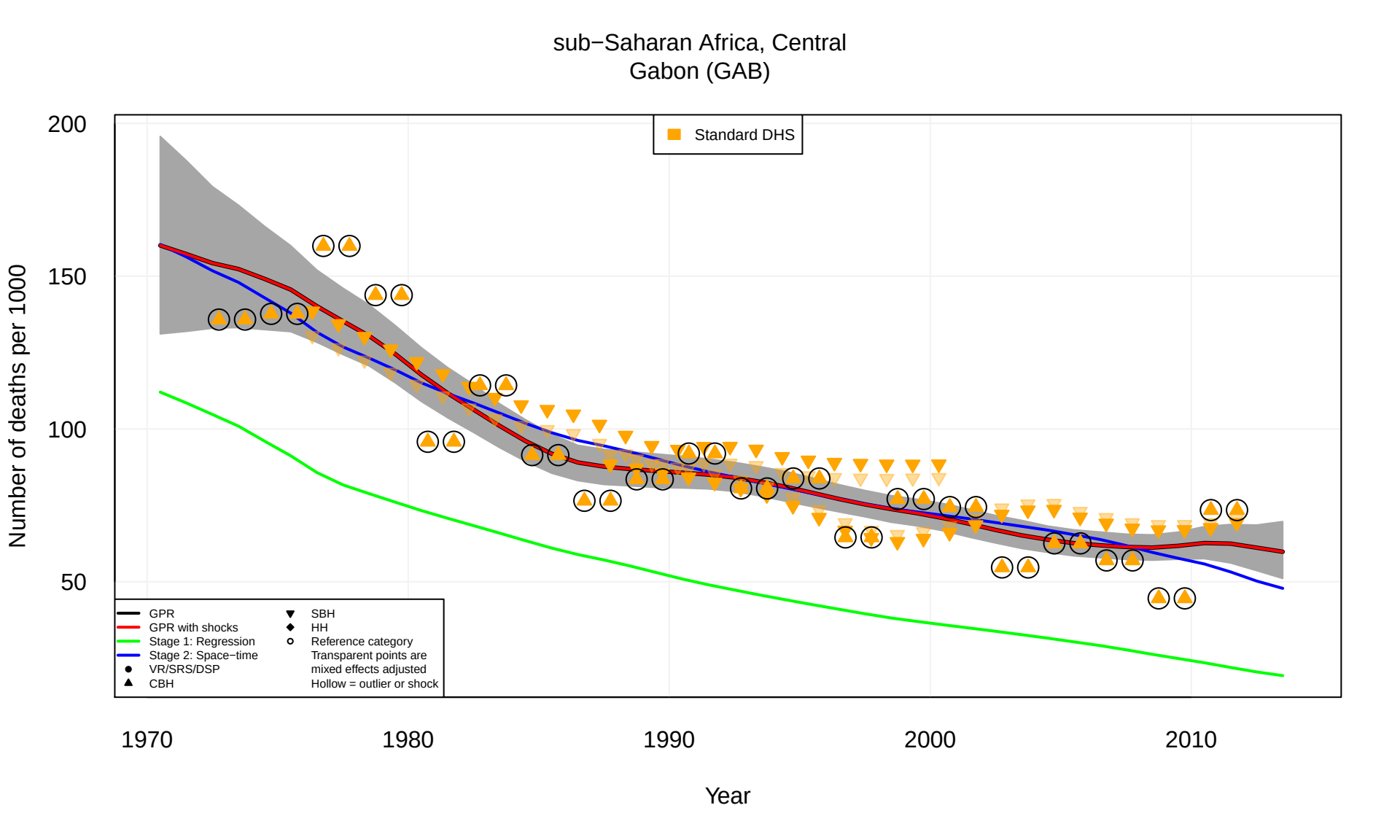

Oceania
Samoa (WSM)
VR
Other DHS
Census
Other
80
60
40
20
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

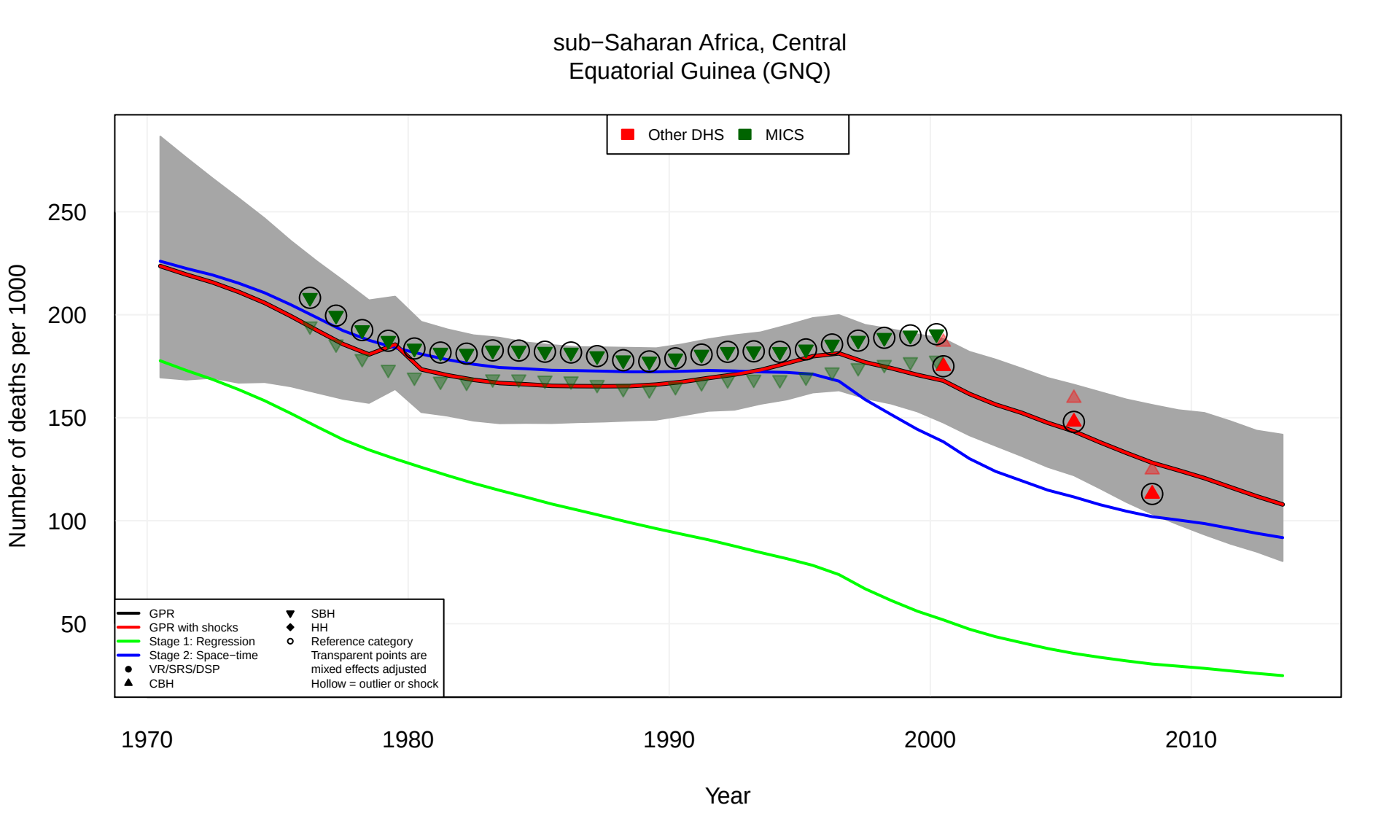

sub−Saharan Africa, Central
Angola (AGO)
Other
MICS
MIS
Number of deaths per 1000
300
250
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

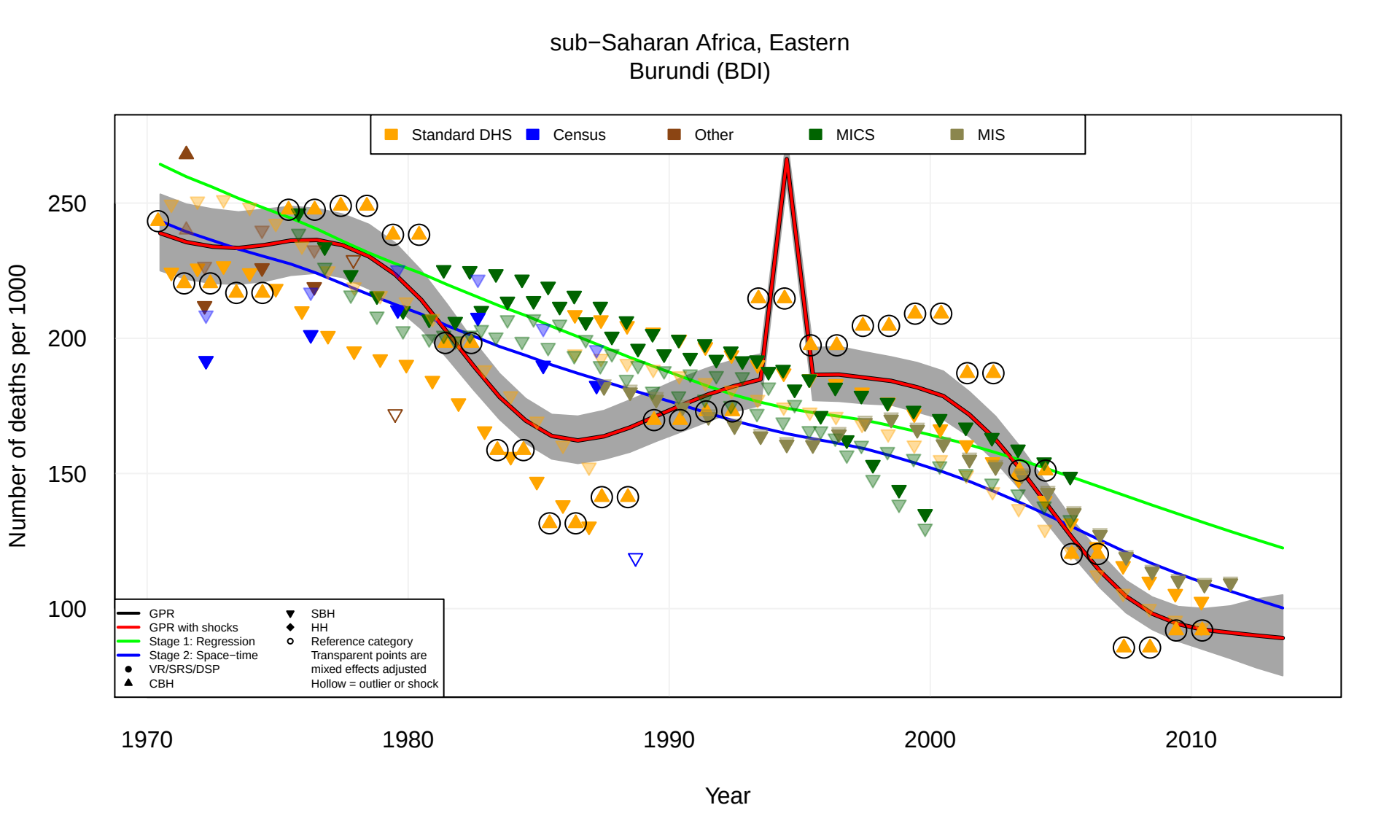

sub−Saharan Africa, Central
Central African Republic (CAF)
Standard DHS
Census
MICS
Number of deaths per 1000
250
200
150
100
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

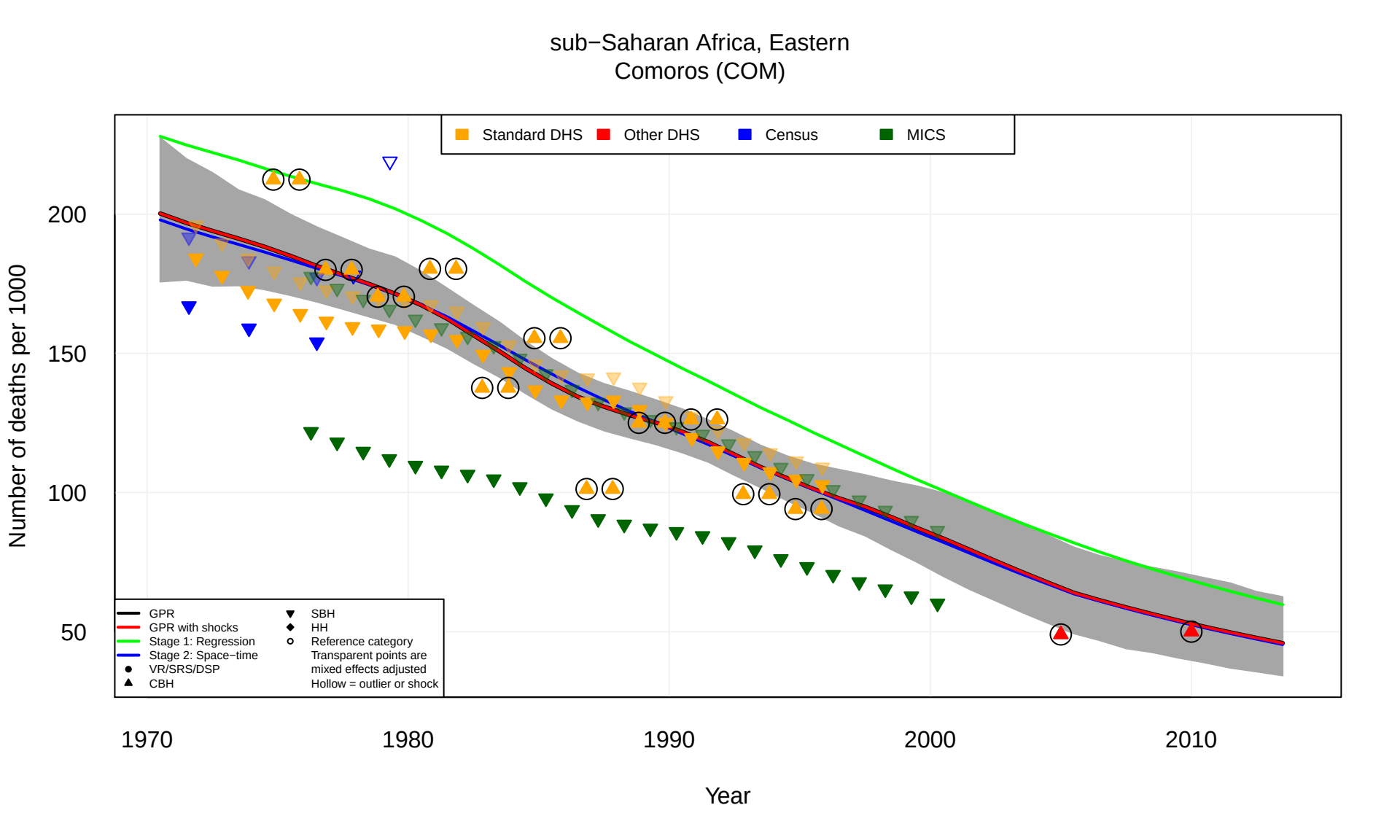

sub−Saharan Africa, Central
Democratic Republic of the Congo (COD)
Standard DHS
Census
MICS
Number of deaths per 1000
250
200
150
100
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

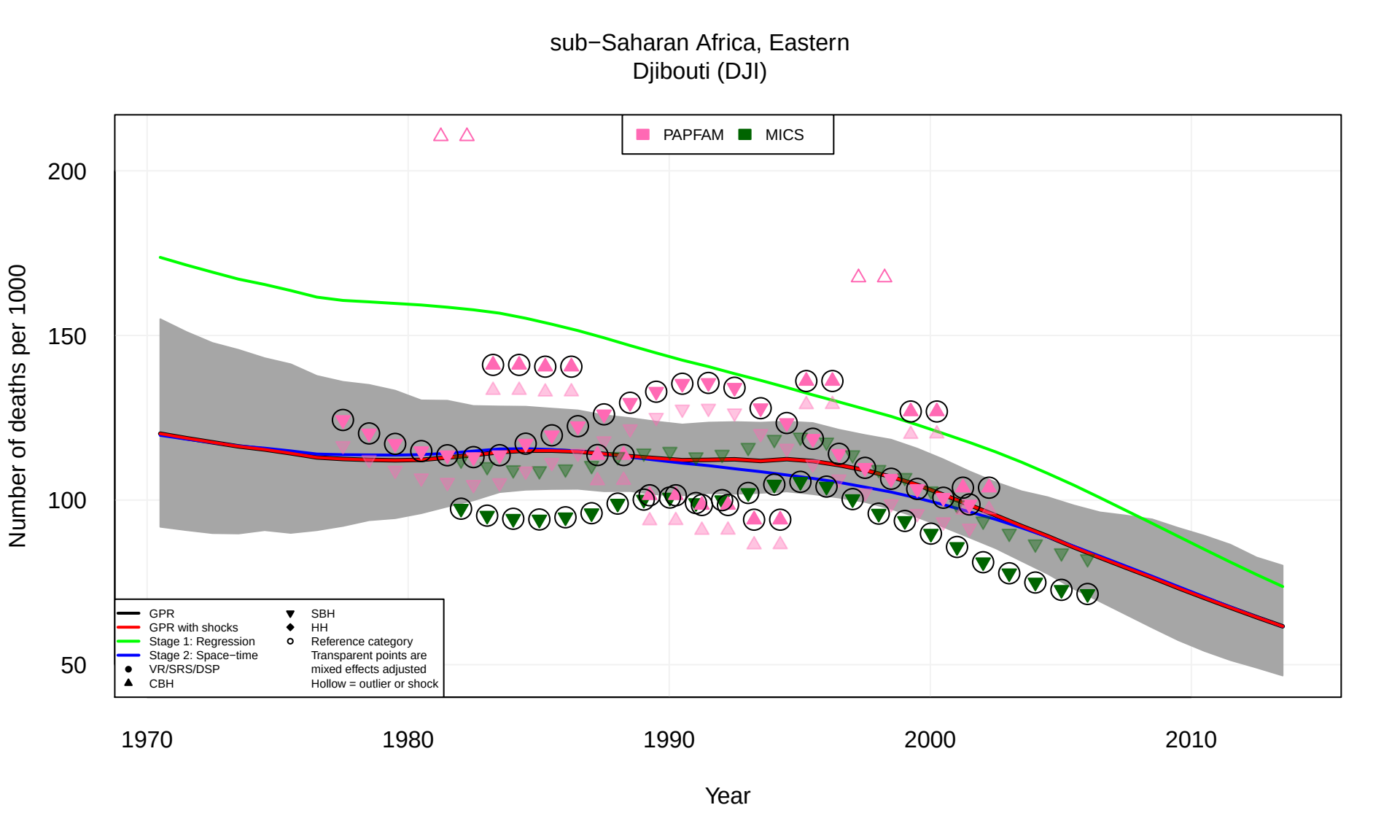

sub−Saharan Africa, Central Congo (COG)
Standard DHS
Census
AIS
Number of deaths per 1000
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are mixed effects adjusted
Hollow = outlier or shock

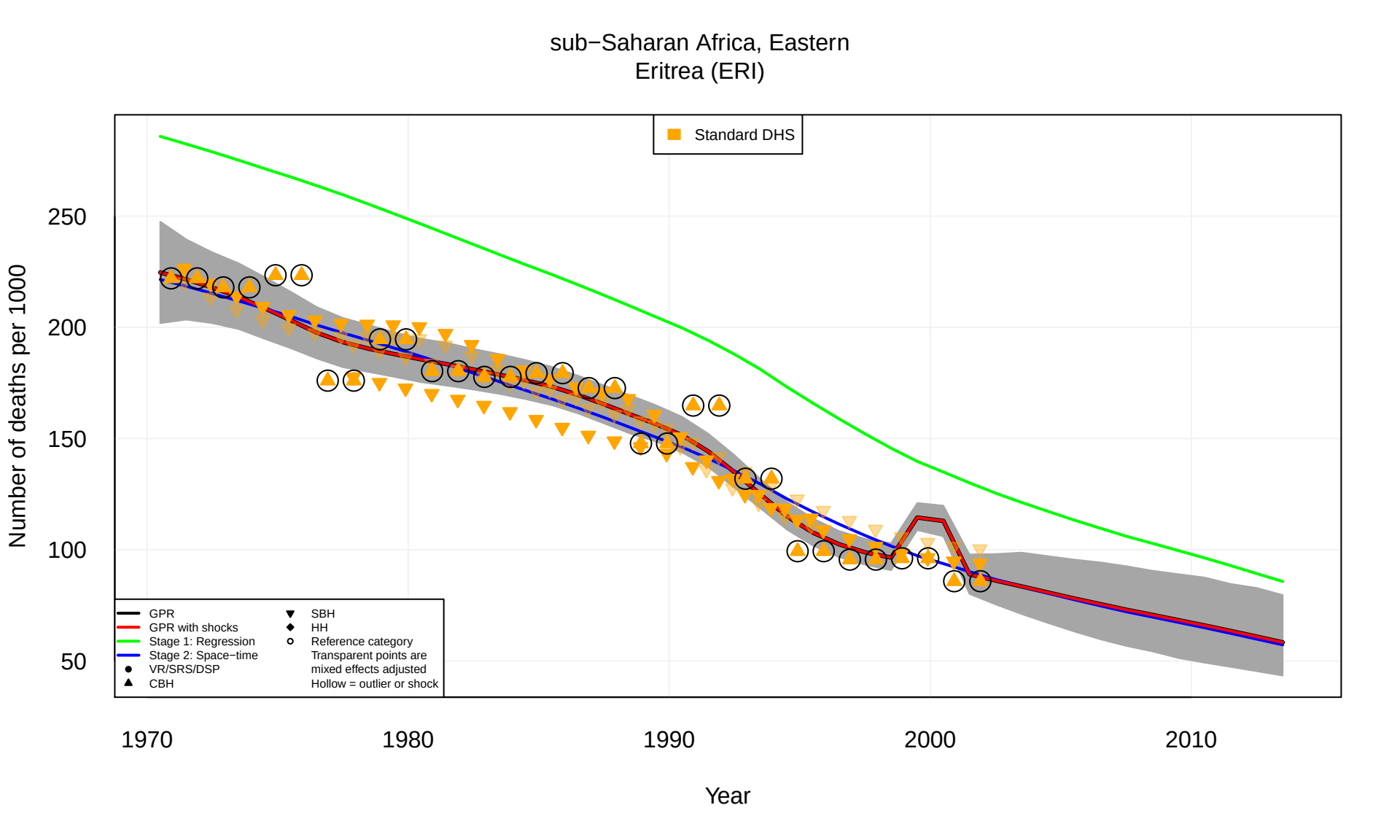

sub−Saharan Africa, Central
Gabon (GAB)
Standard DHS
Number of deaths per 1000
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

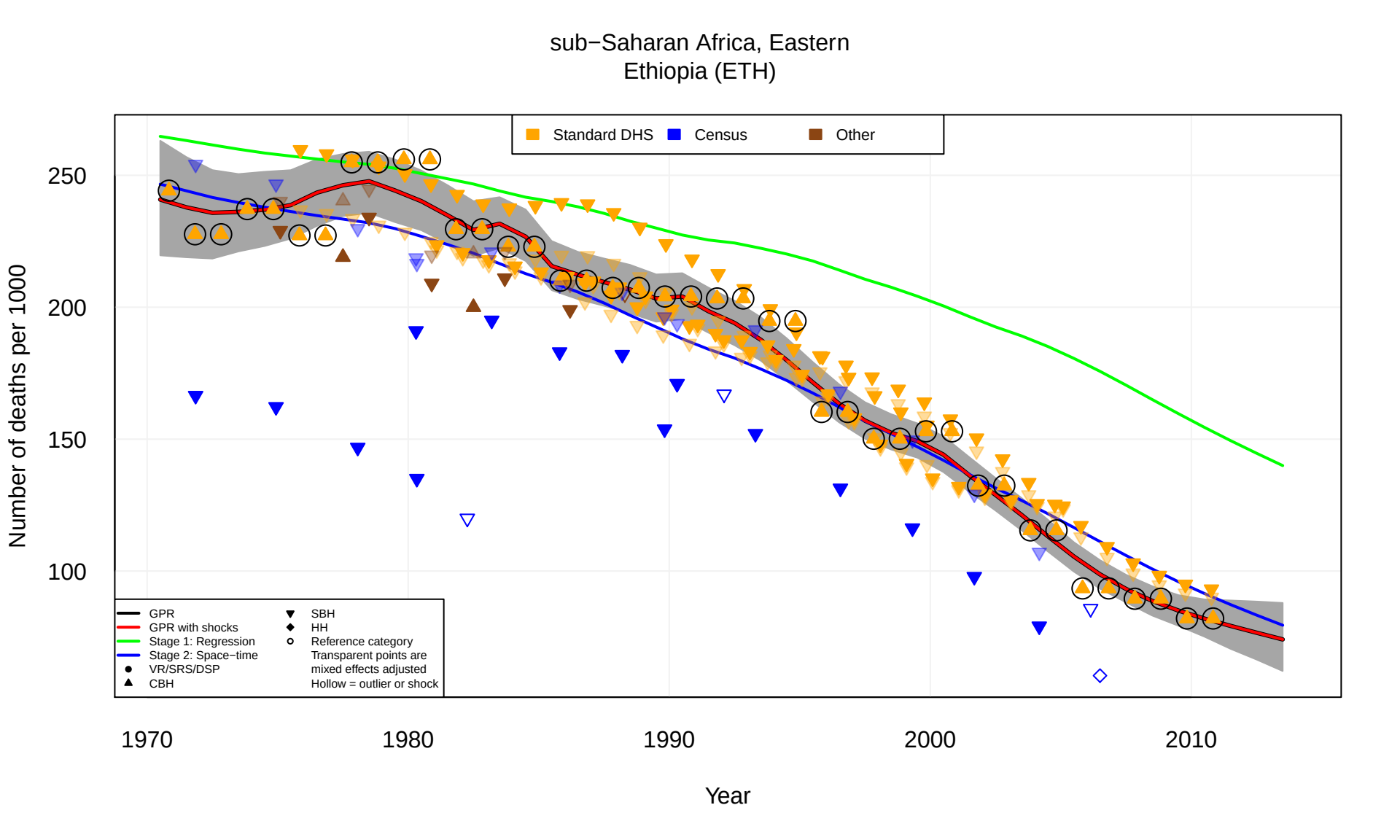

sub−Saharan Africa, Central
Equatorial Guinea (GNQ)
Other DHS
MICS
Number of deaths per 1000
250
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

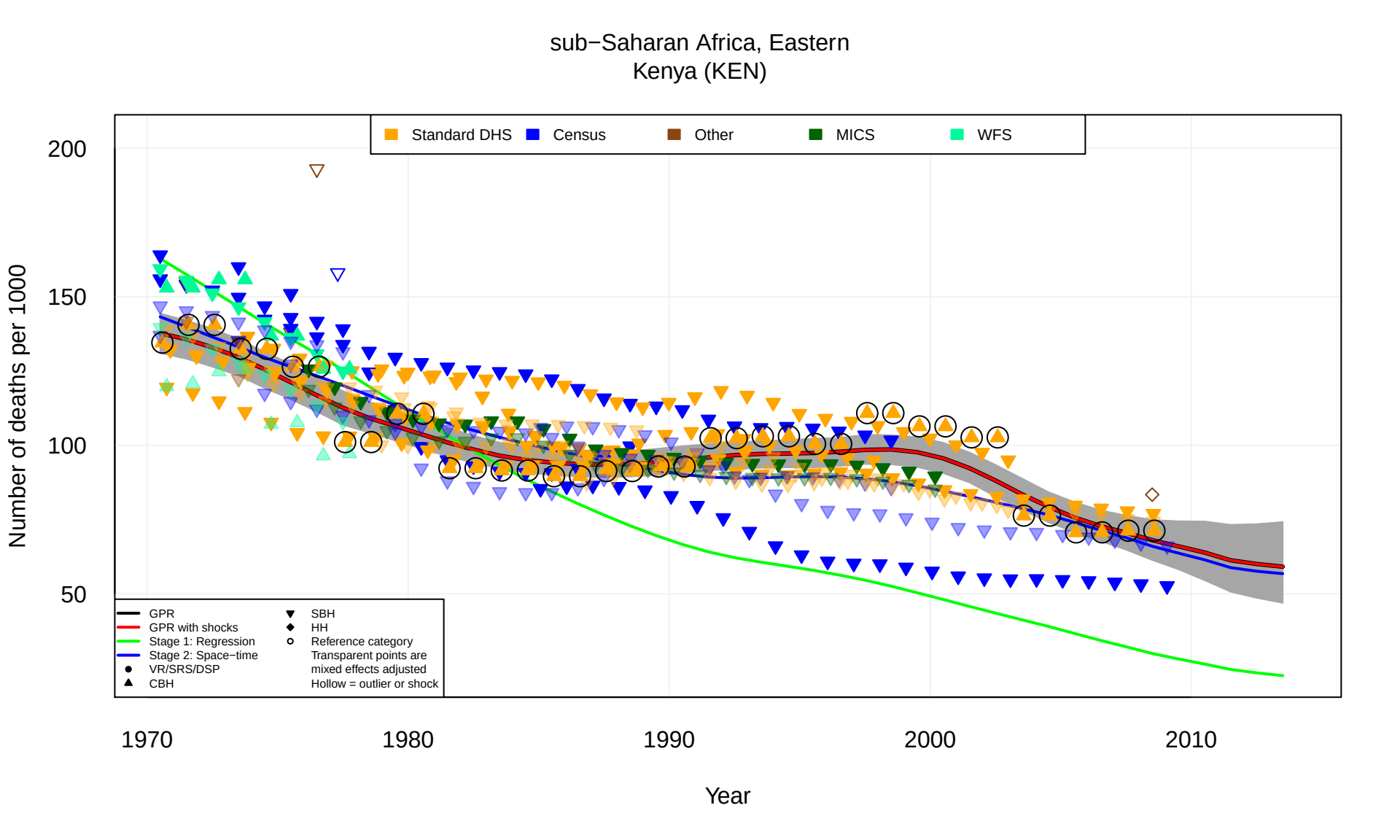

sub−Saharan Africa, Eastern
Burundi (BDI)
Standard DHS
Census
Other
MICS
MIS
Number of deaths per 1000
250
200
150
100
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

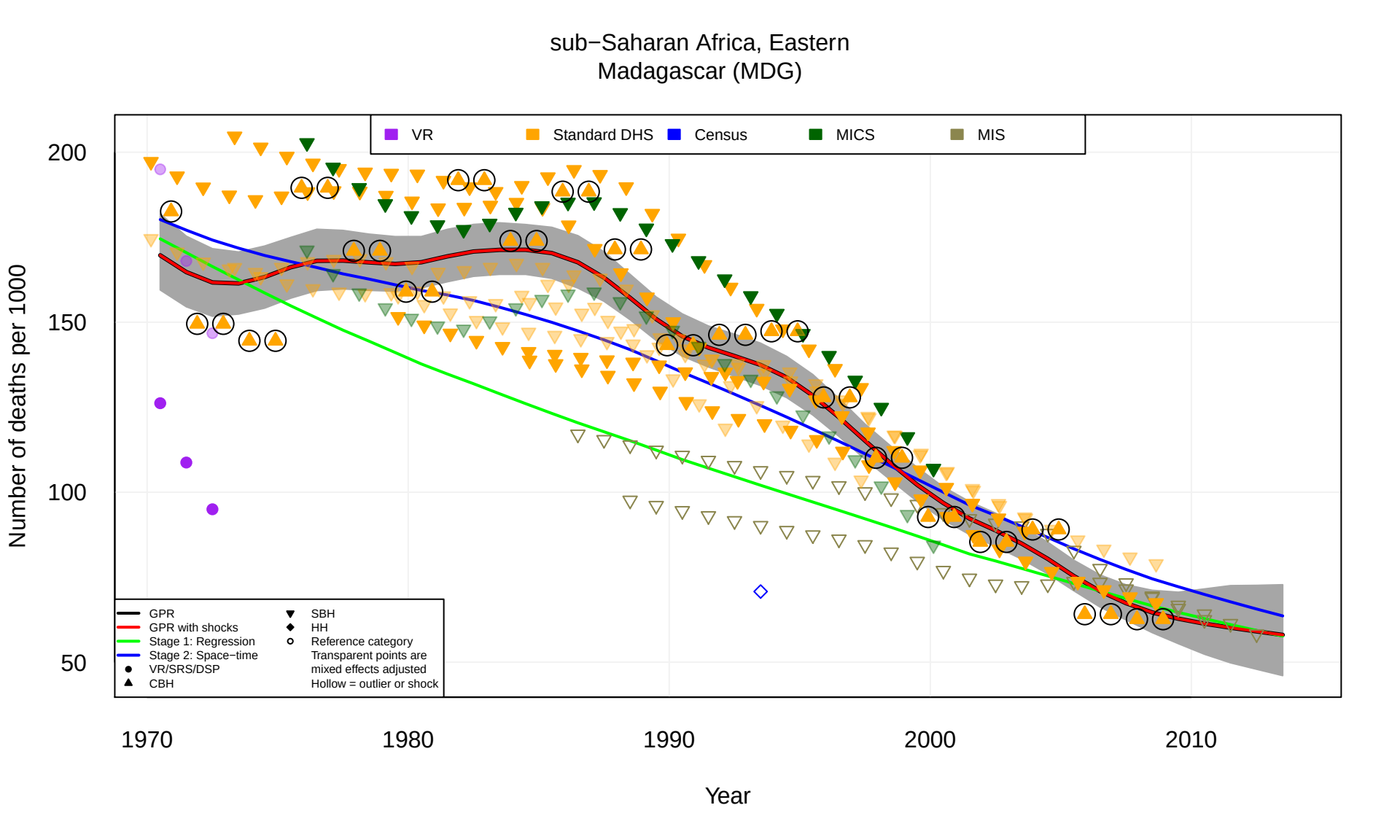

sub−Saharan Africa, Eastern
Comoros (COM)
Standard DHS
Other DHS
Census
MICS
Number of deaths per 1000
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

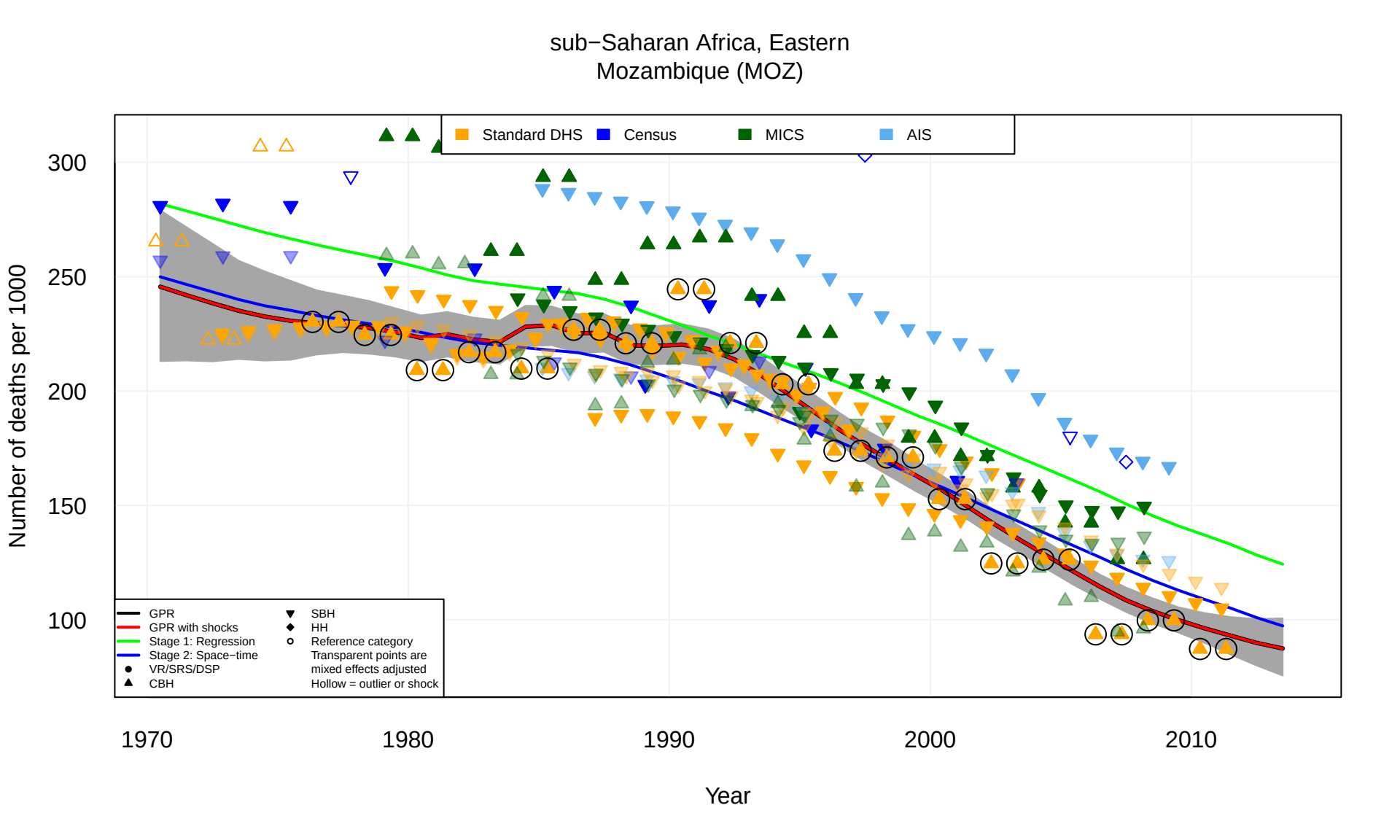

sub−Saharan Africa, Eastern
Djibouti (DJI)
PAPFAM
MICS
200
150
100
50
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

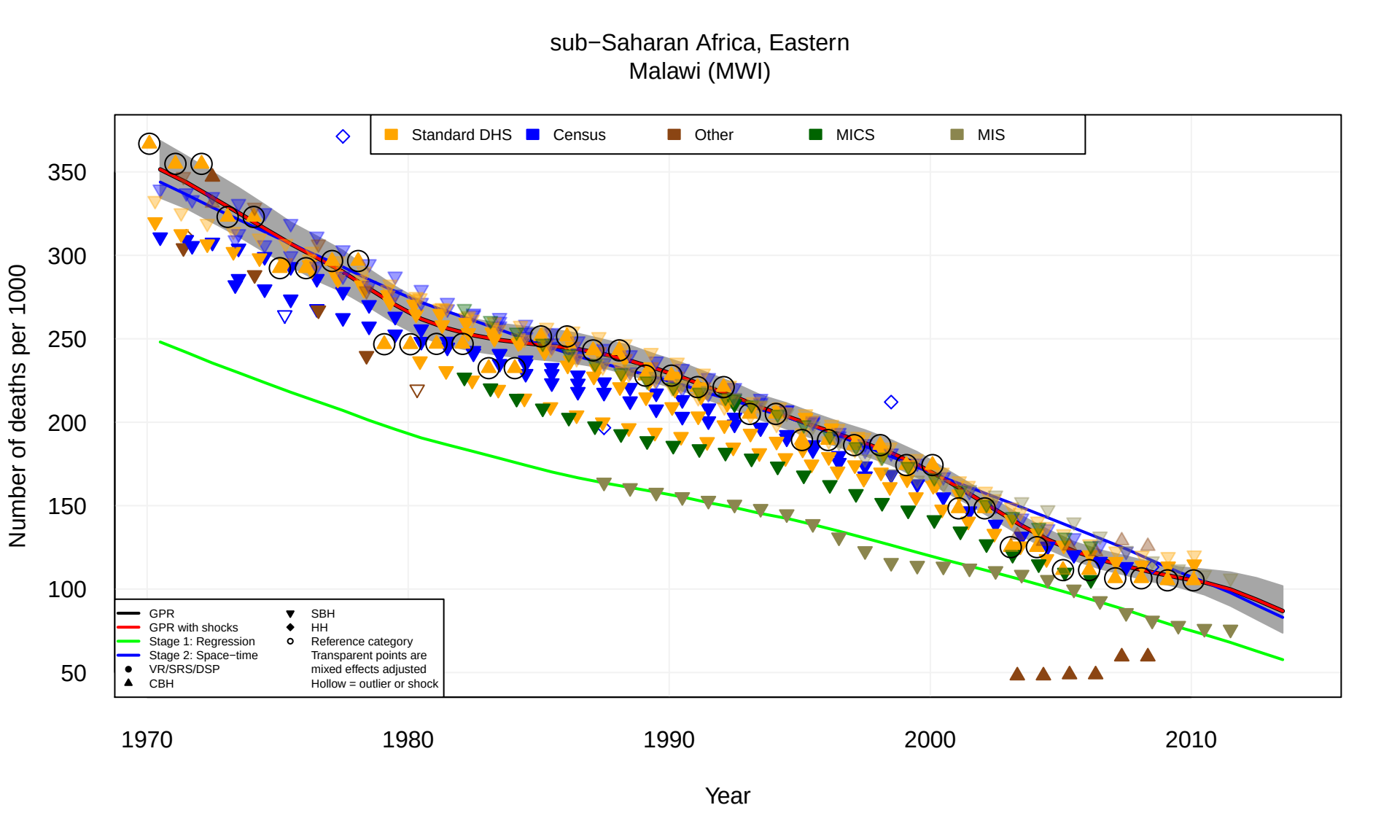

sub−Saharan Africa, Eastern
Eritrea (ERI)
Standard DHS
Number of deaths per 1000
250
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

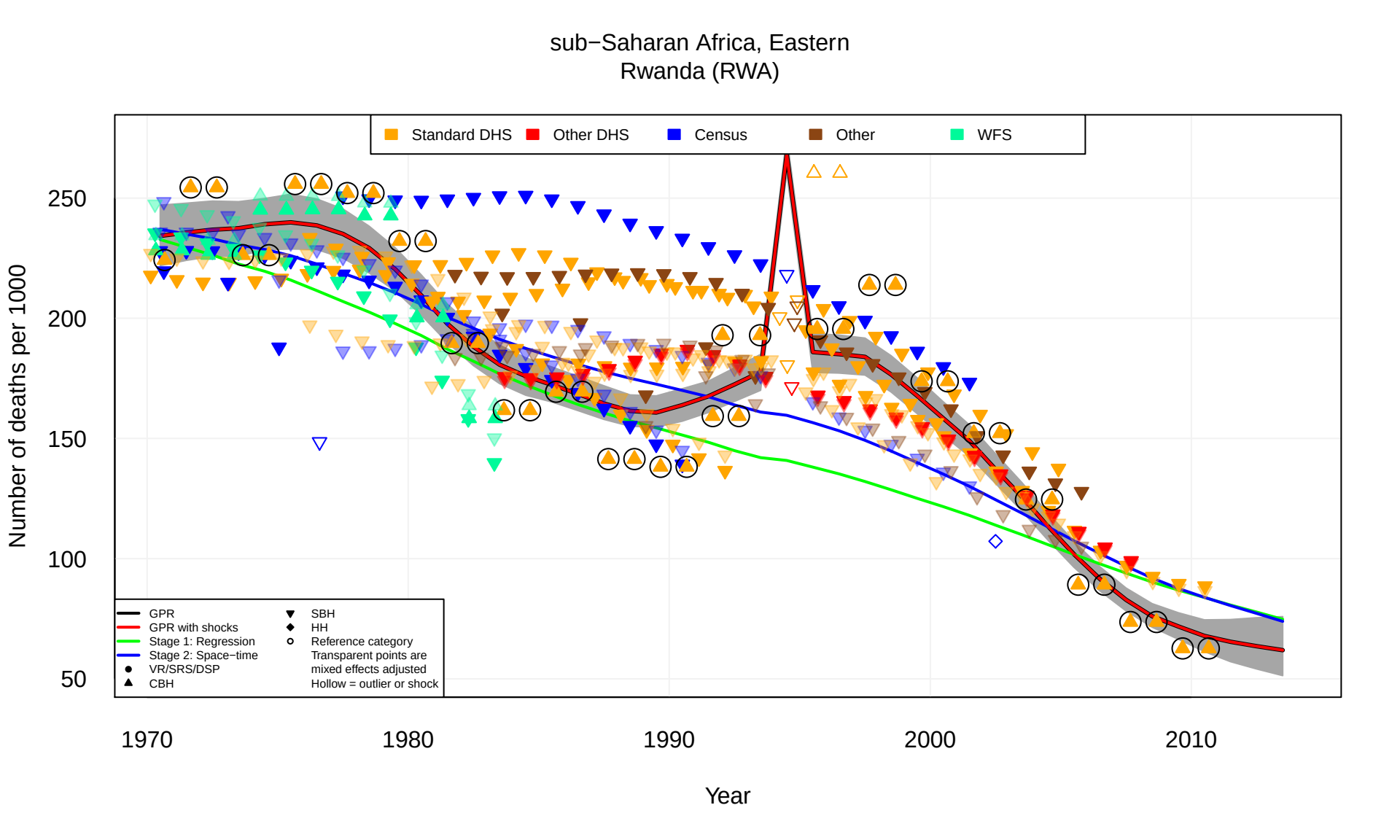

sub−Saharan Africa, Eastern
Ethiopia (ETH)
Standard DHS
Census
Other
Number of deaths per 1000
250
200
150
100
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

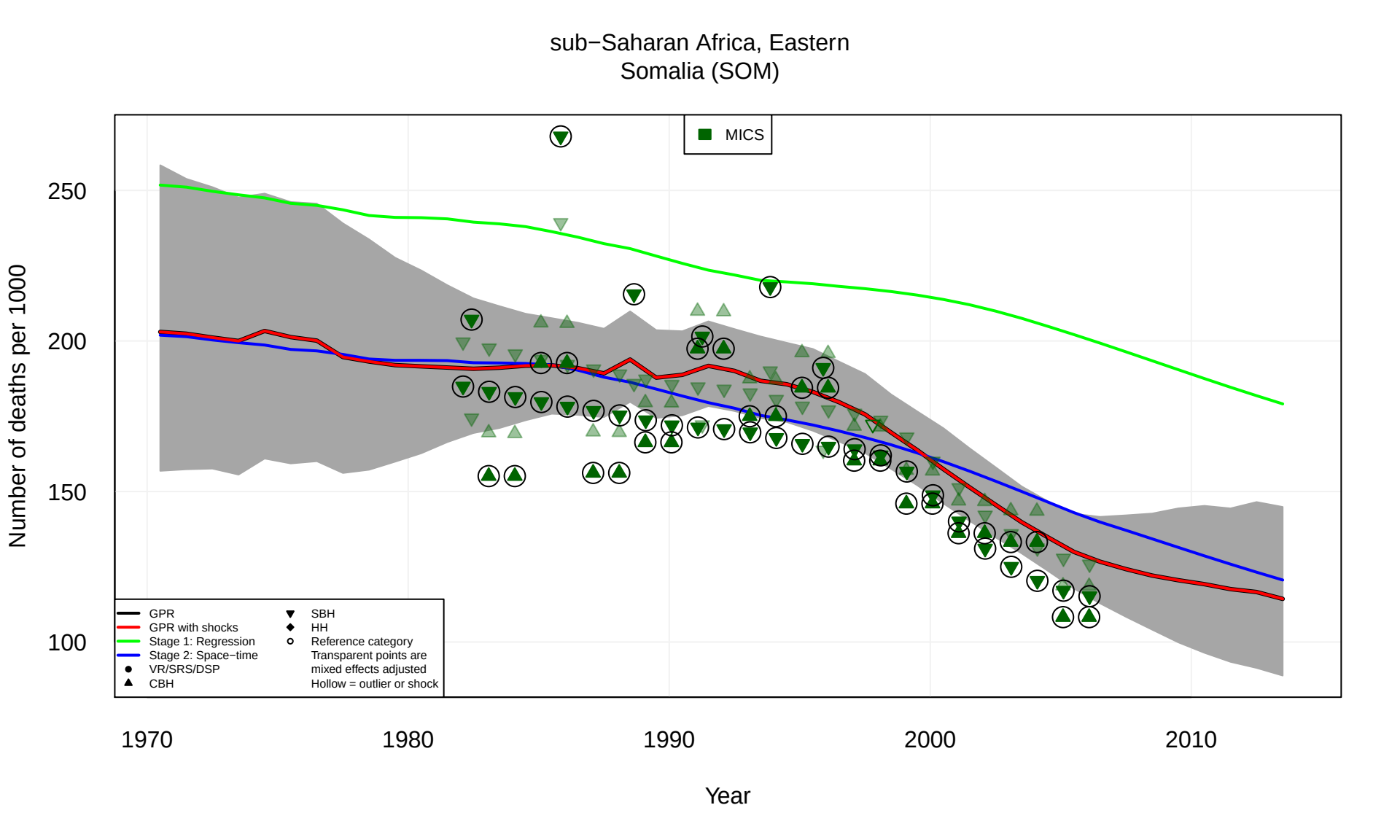

sub−Saharan Africa, Eastern
Kenya (KEN)
Standard DHS
Census
Other
MICS
WFS
200
150
100
50
Number of deaths per 1000
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock
1970
1980
1990
2000
2010
Year

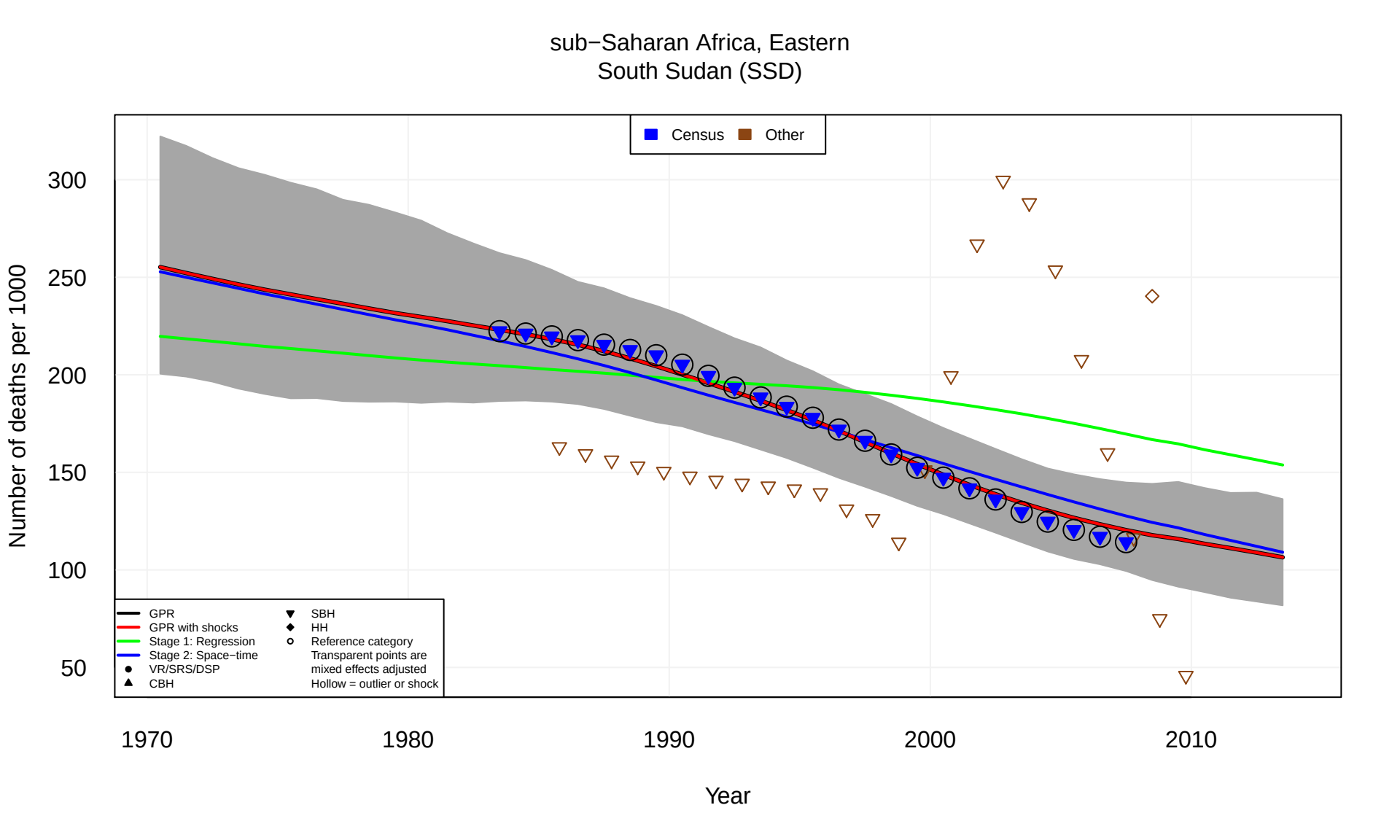

sub−Saharan Africa, Eastern
Madagascar (MDG)
VR
Standard DHS
Census
MICS
MIS
Number of deaths per 1000
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

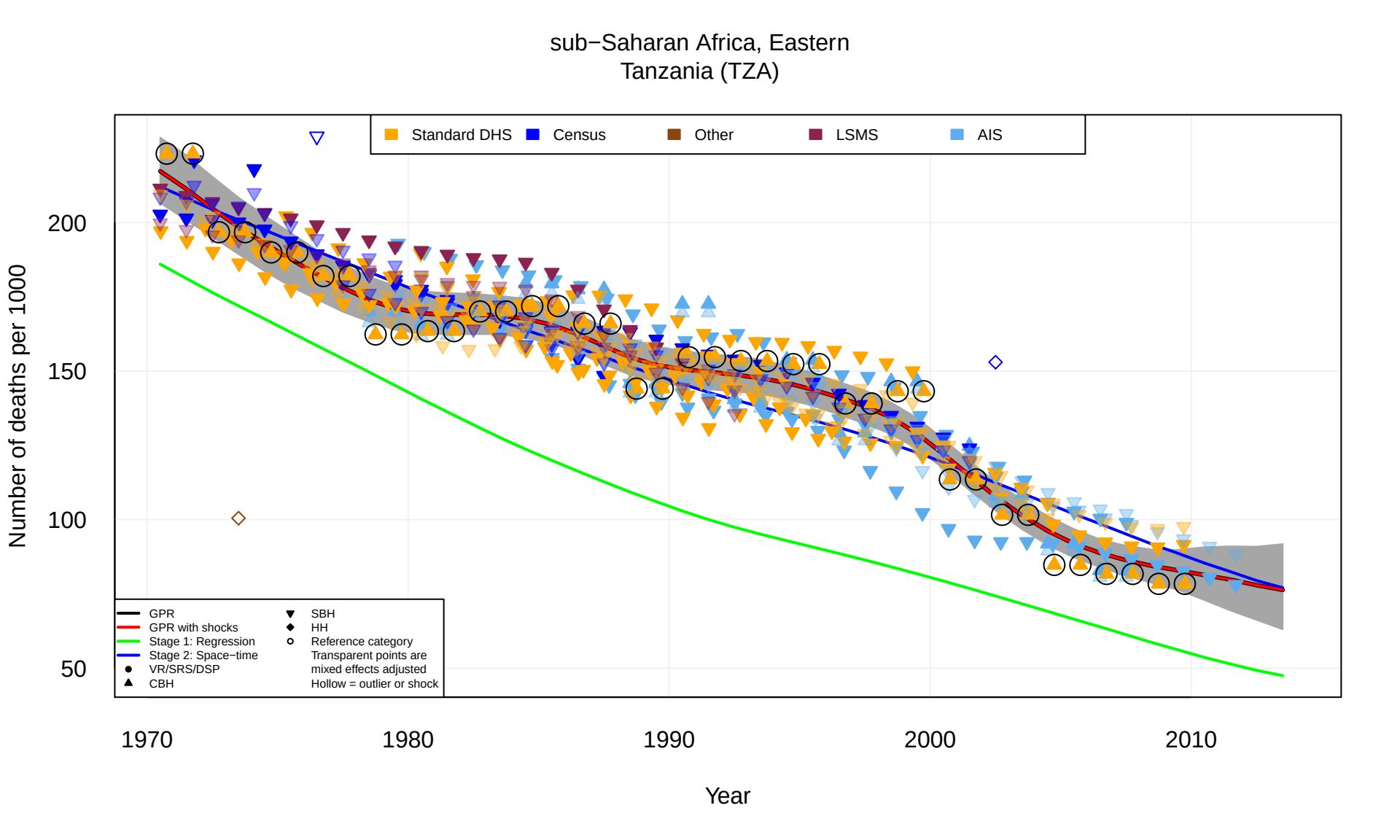

sub−Saharan Africa, Eastern
Mozambique (MOZ)
Standard DHS
Census
MICS
AIS
Number of deaths per 1000
300
250
200
150
100
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

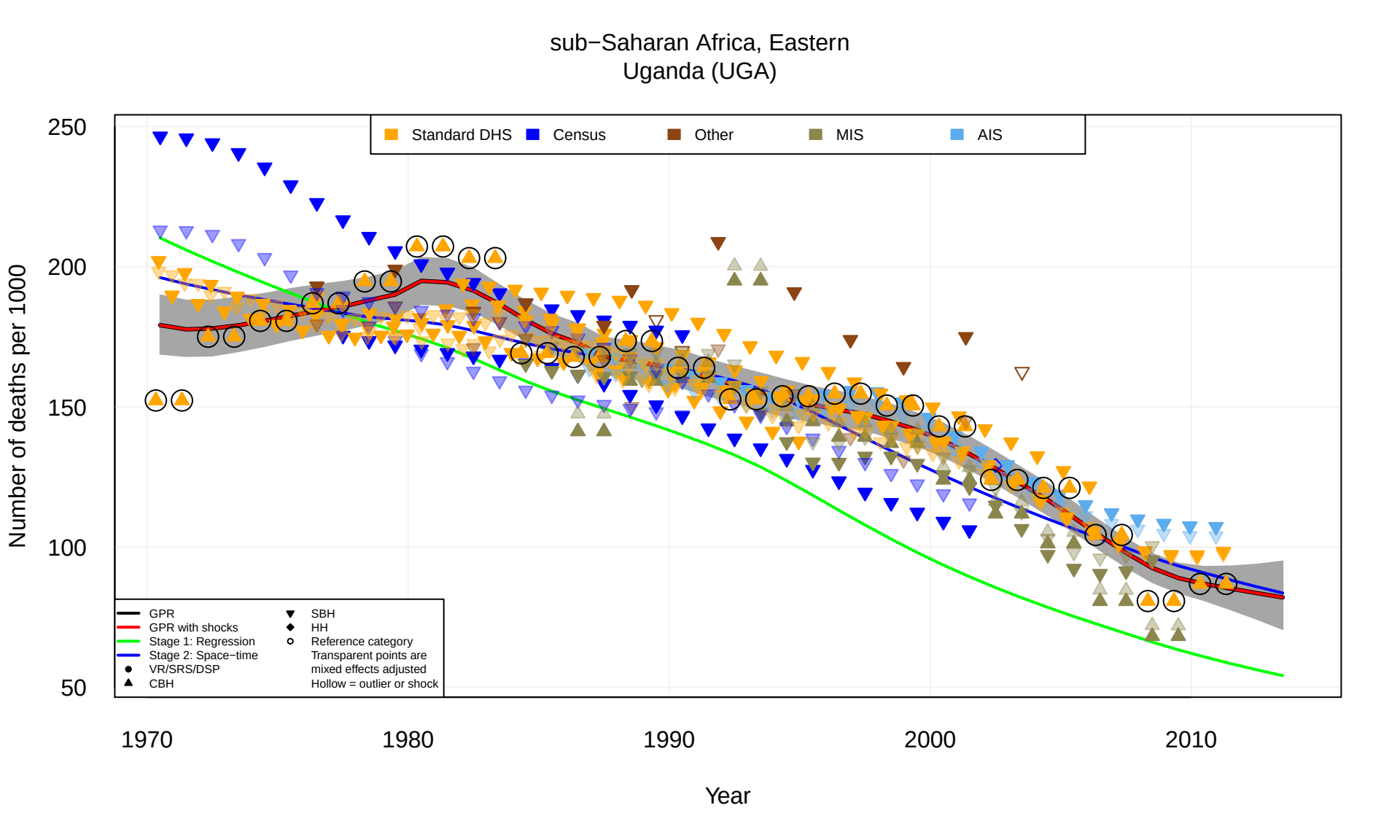

sub−Saharan Africa, Eastern
Malawi (MWI)
Standard DHS
Census
Other
MICS
MIS
Number of deaths per 1000
350
300
250
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

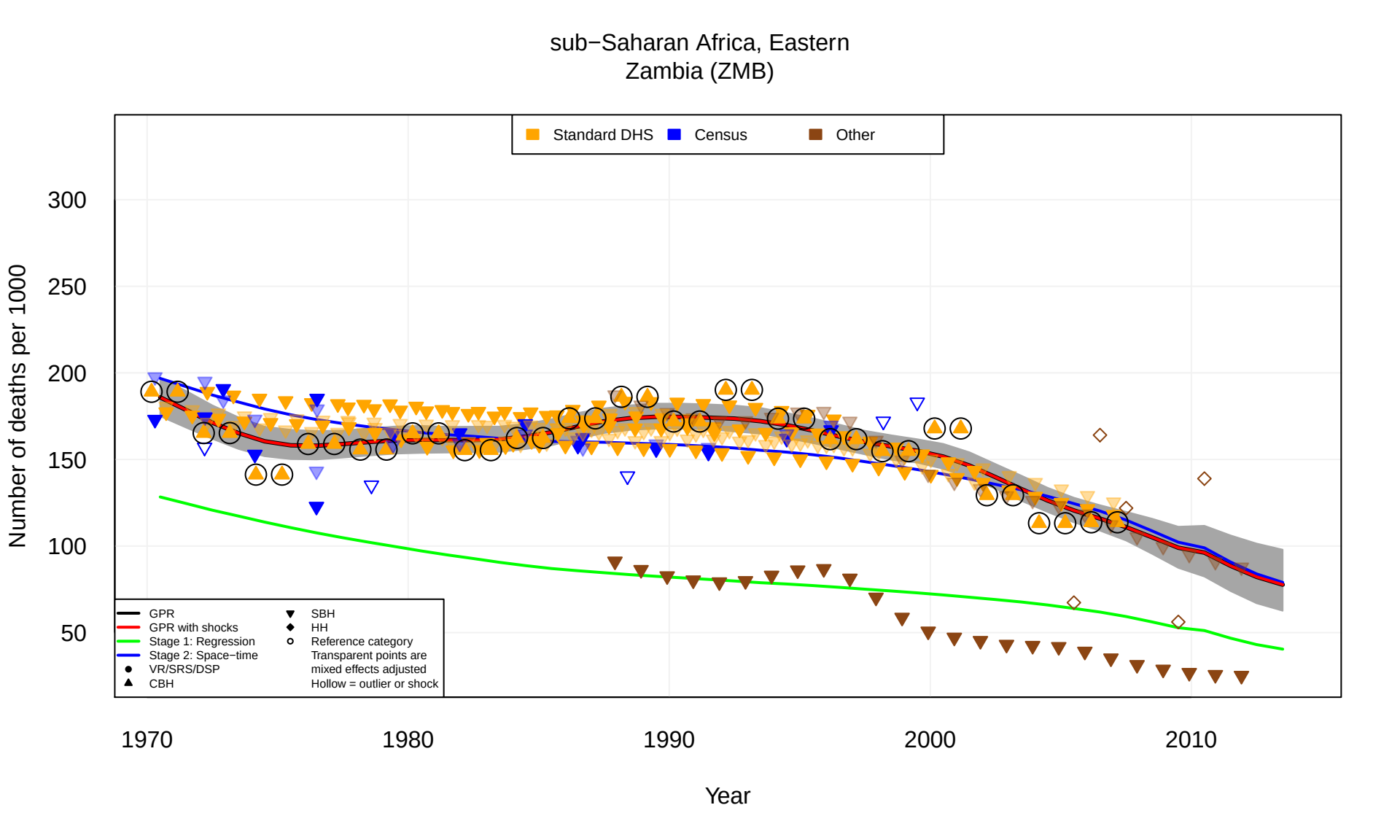

sub−Saharan Africa, Eastern
Rwanda (RWA)
Standard DHS
Other DHS
Census
Other
WFS
Number of deaths per 1000
250
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

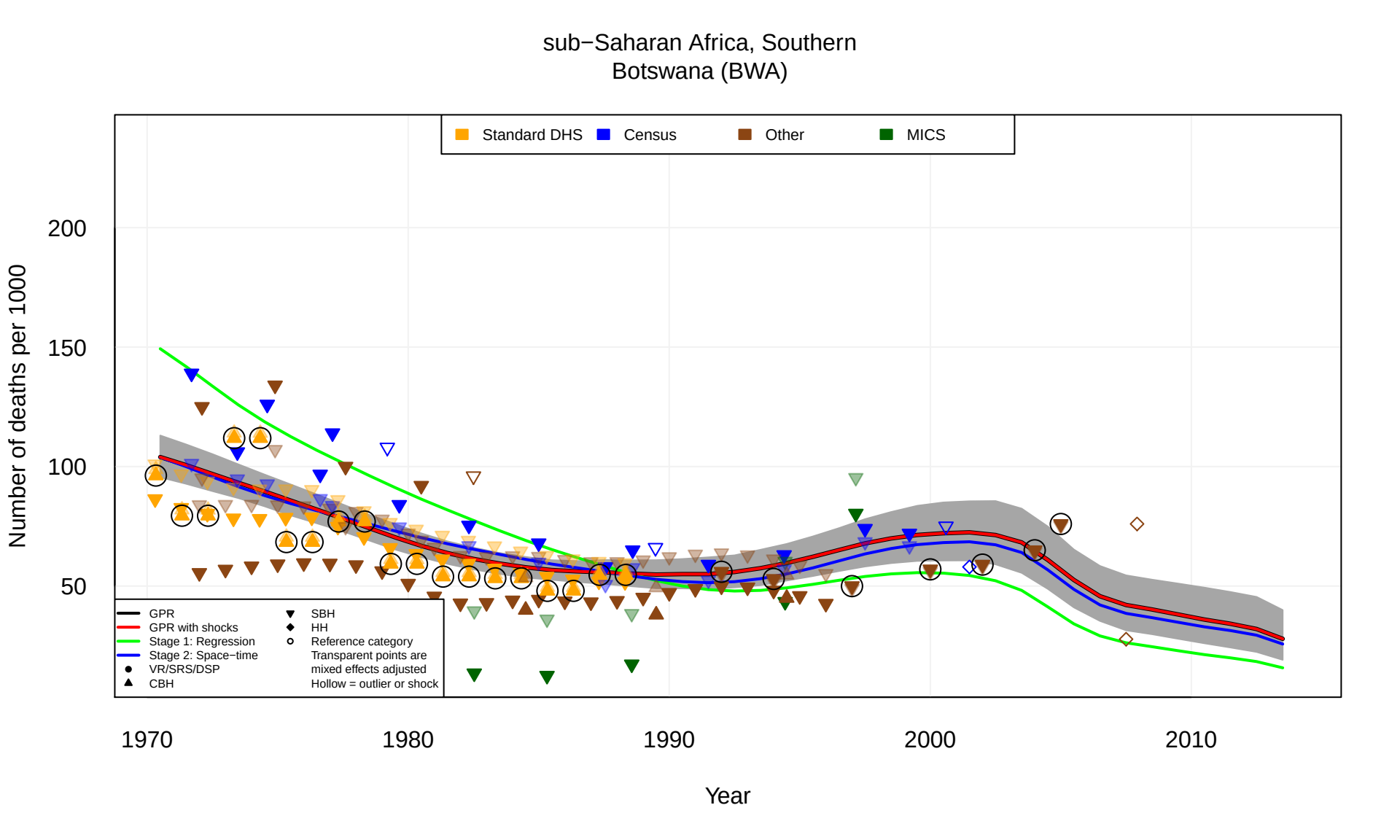

sub−Saharan Africa, Eastern
Somalia (SOM)
MICS
250
200
150
100
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

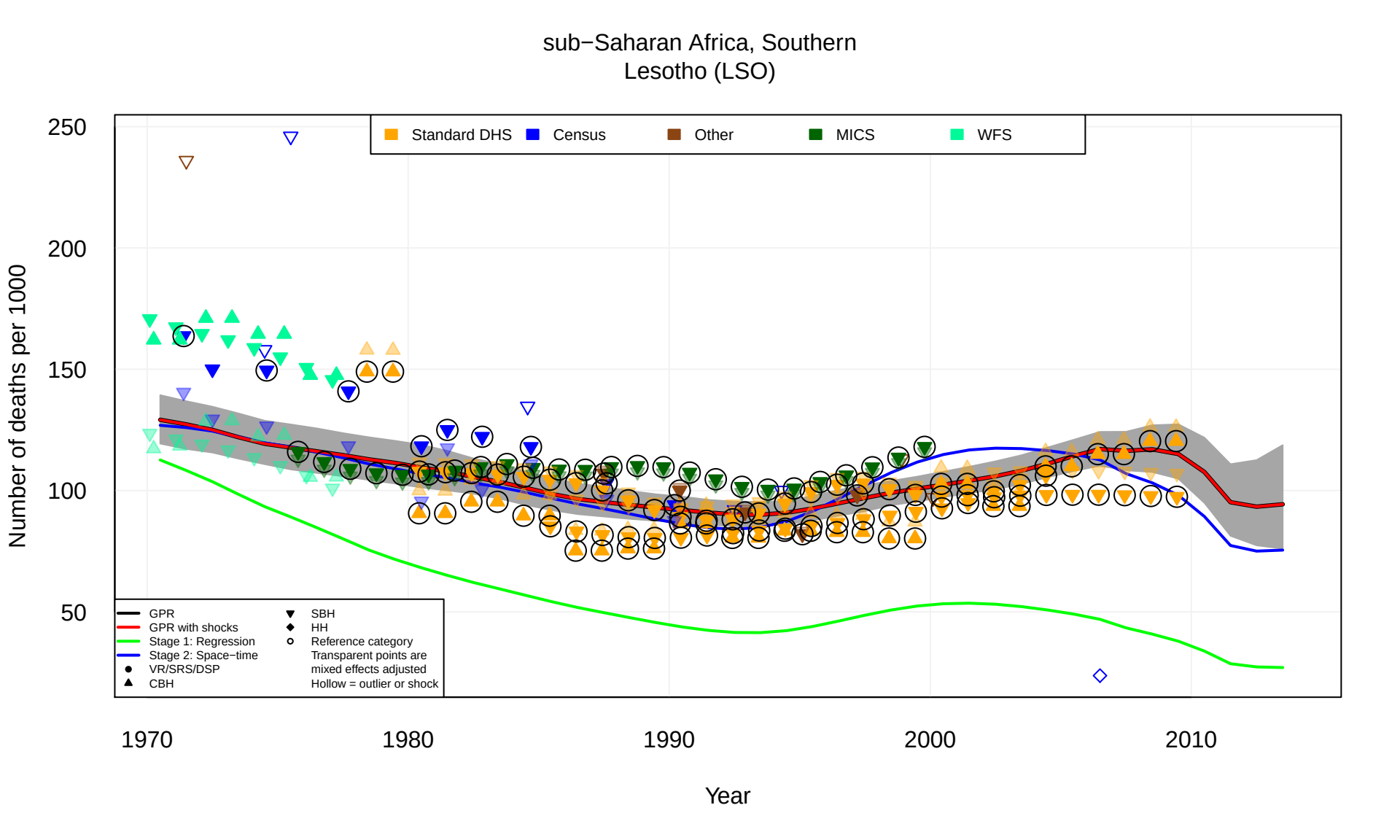

sub−Saharan Africa, Eastern
South Sudan (SSD)
Census
Other
Number of deaths per 1000
300
250
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

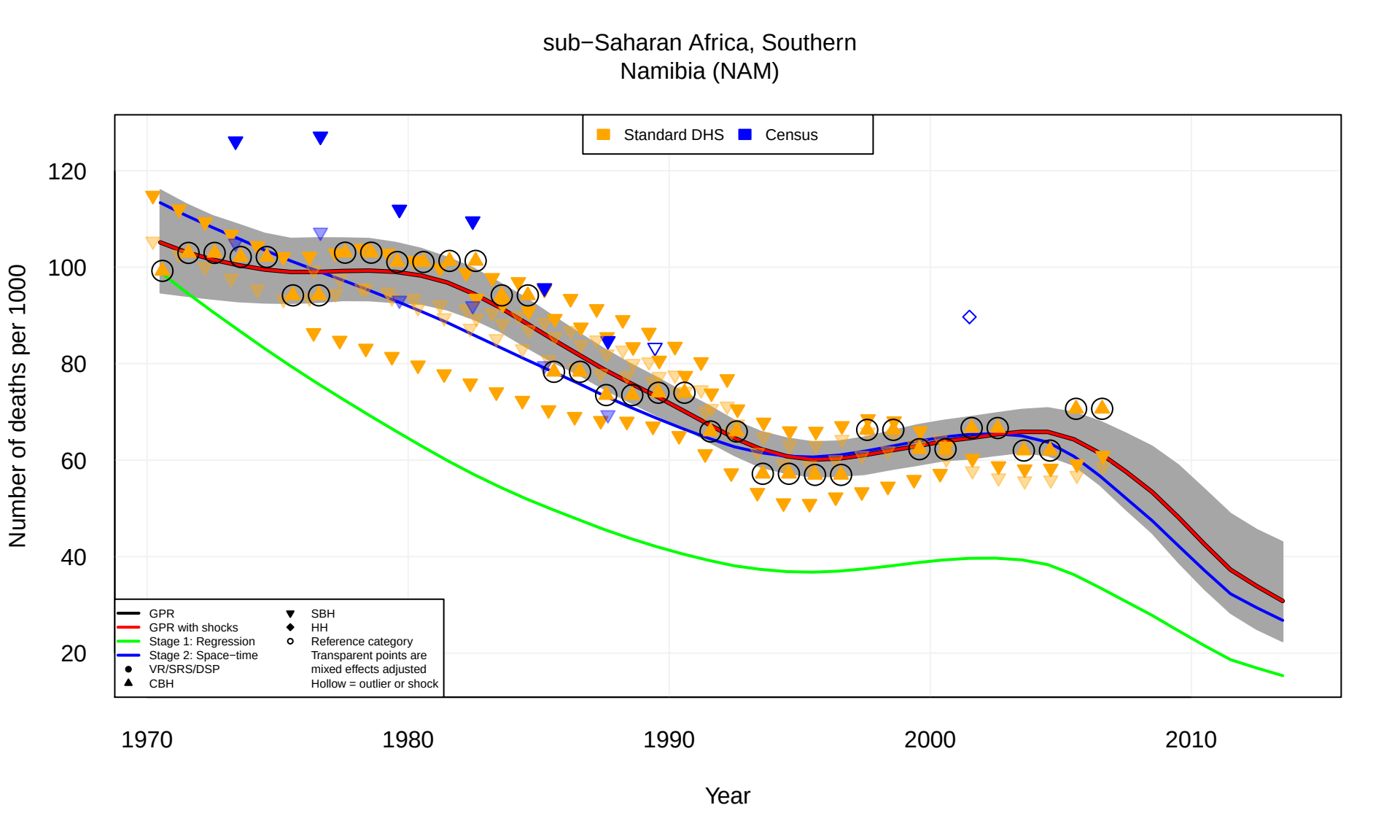

sub−Saharan Africa, Eastern
Tanzania (TZA)
Standard DHS
Census
Other
LSMS
AIS
Number of deaths per 1000
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

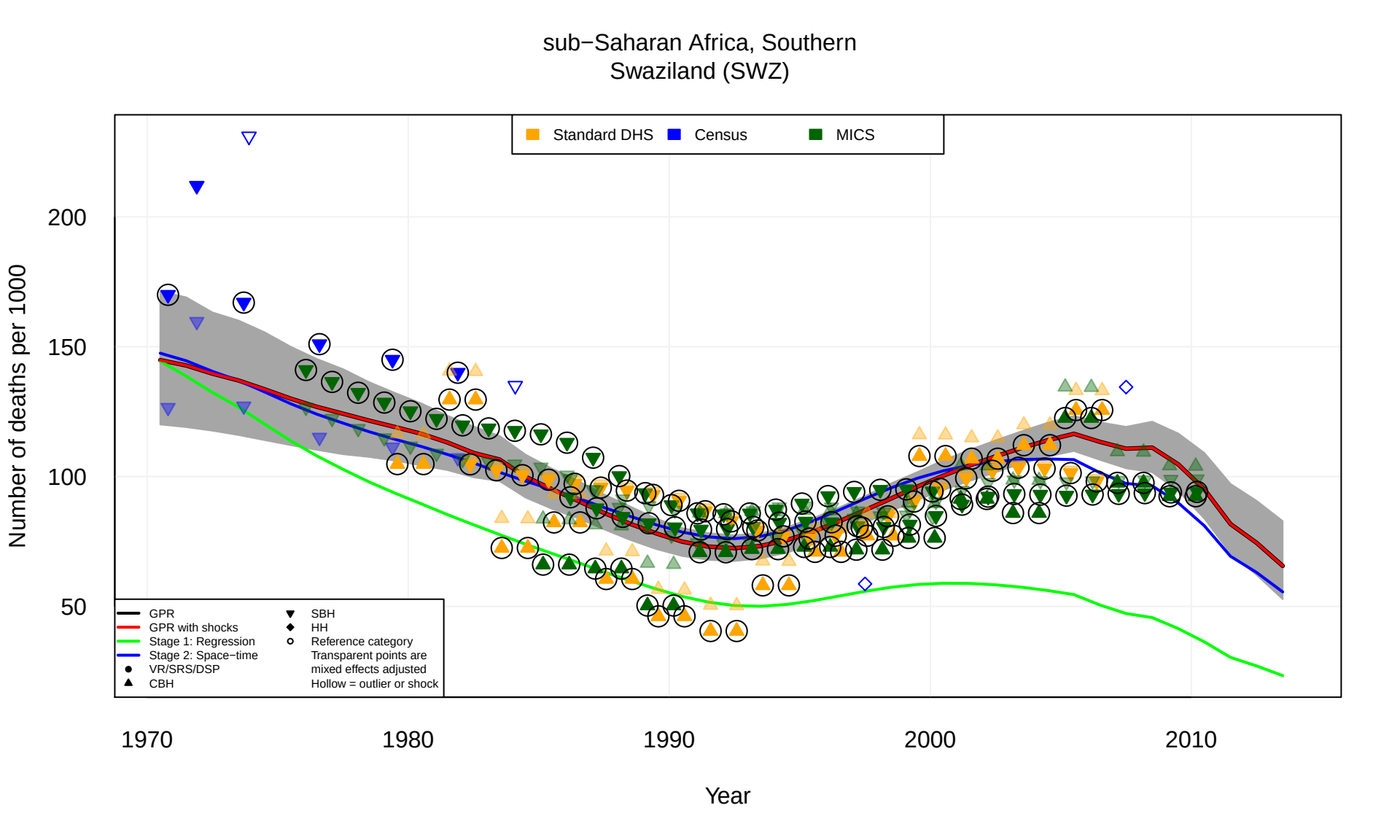

sub−Saharan Africa, Eastern
Uganda (UGA)
Standard DHS
Census
Other
MIS
AIS
Number of deaths per 1000
250
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

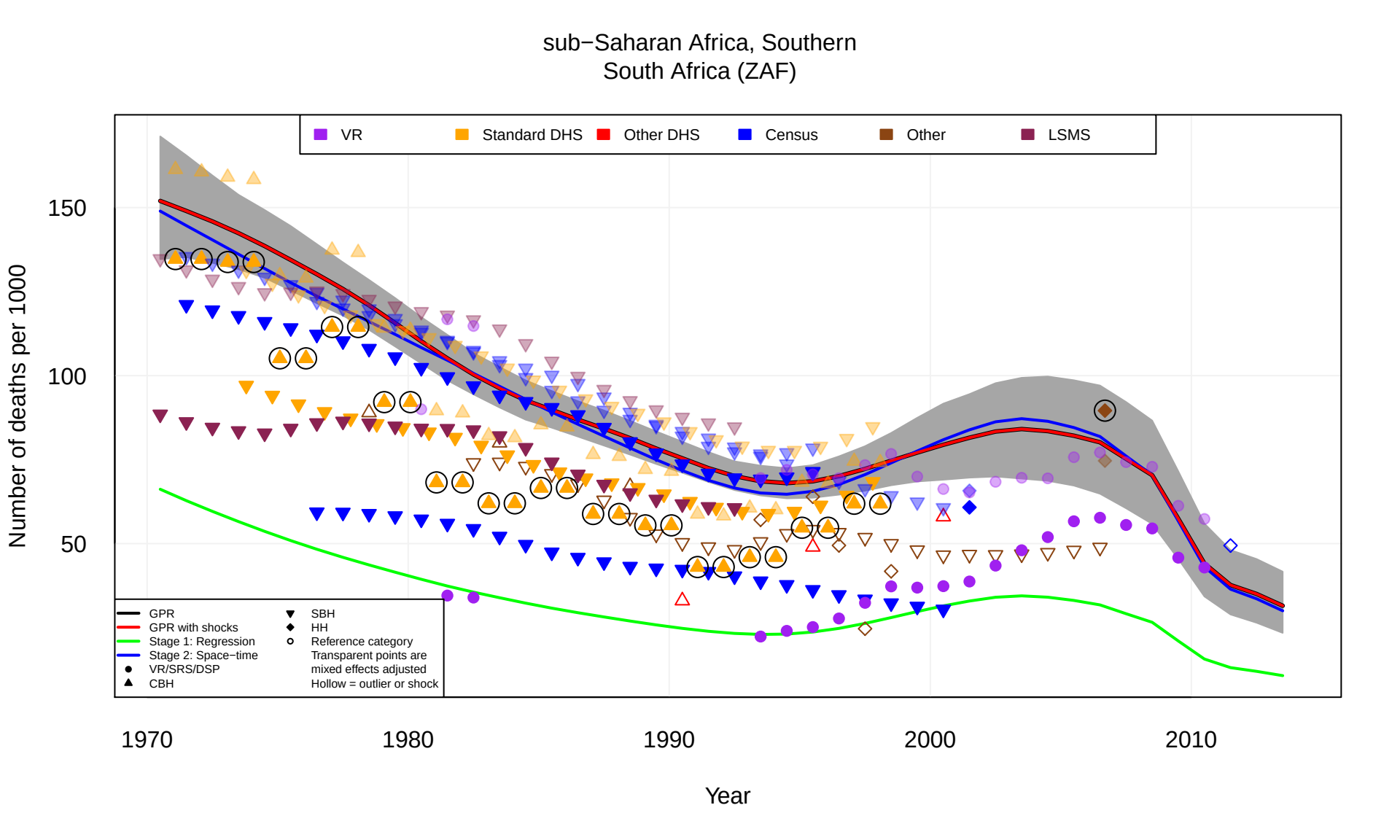

sub−Saharan Africa, Eastern
Zambia (ZMB)
Standard DHS
Census
Other
300
250
200
150
100
50
Number of deaths per 1000
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock
1970
1980
1990
2000
2010
Year

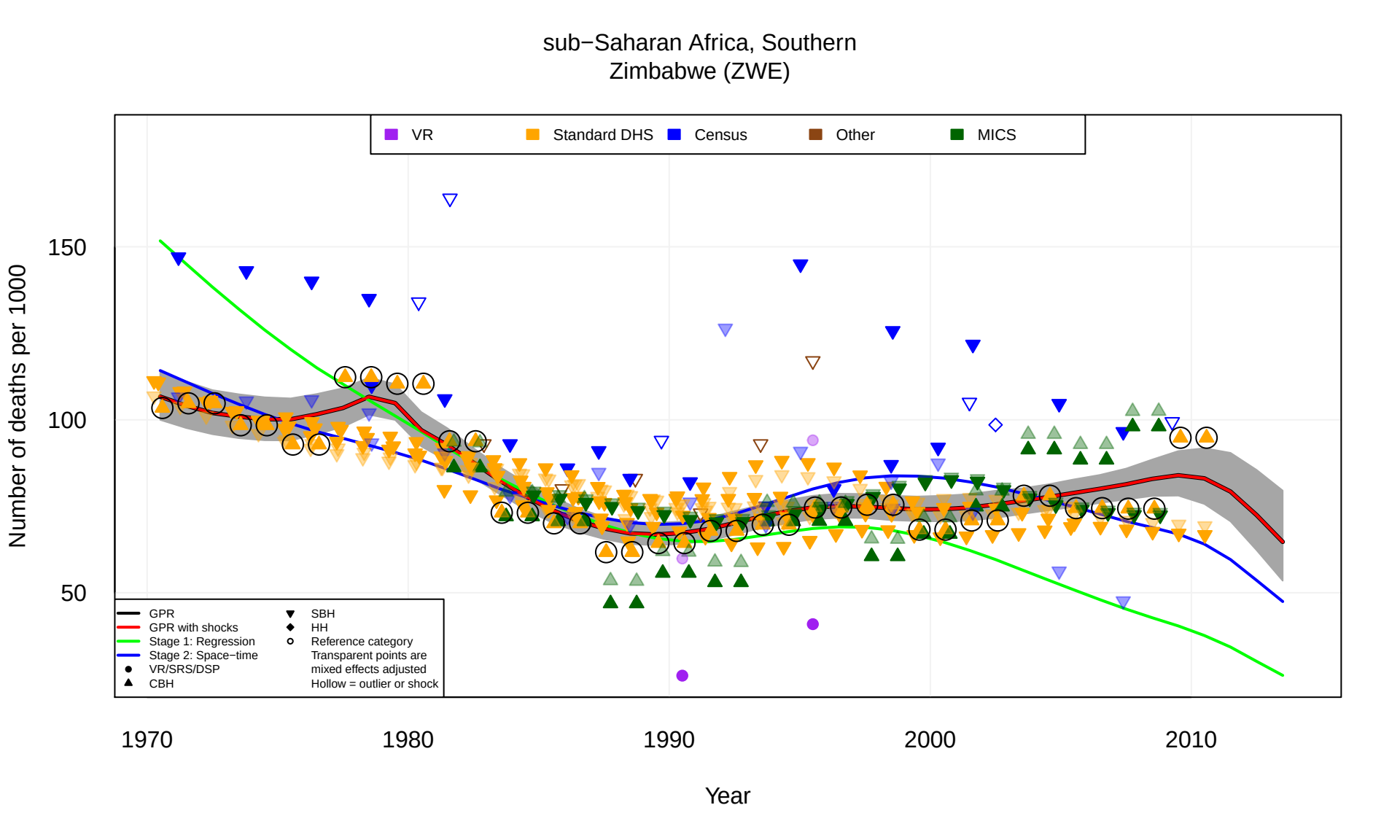

sub−Saharan Africa, Southern
Botswana (BWA)
Standard DHS
Census
Other
MICS
Number of deaths per 1000
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

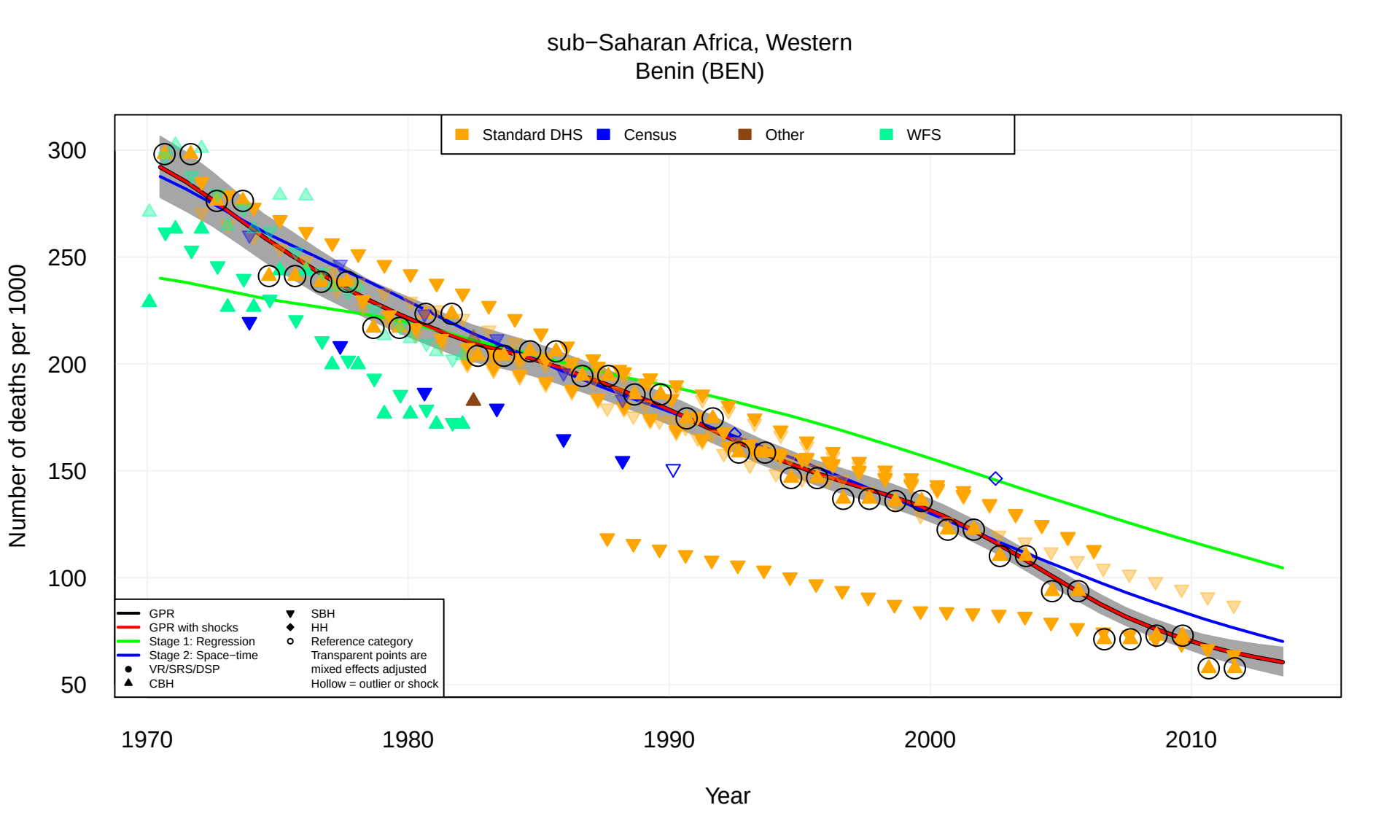

sub−Saharan Africa, Southern
Lesotho (LSO)
Standard DHS
Census
Other
MICS
WFS
Number of deaths per 1000
250
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

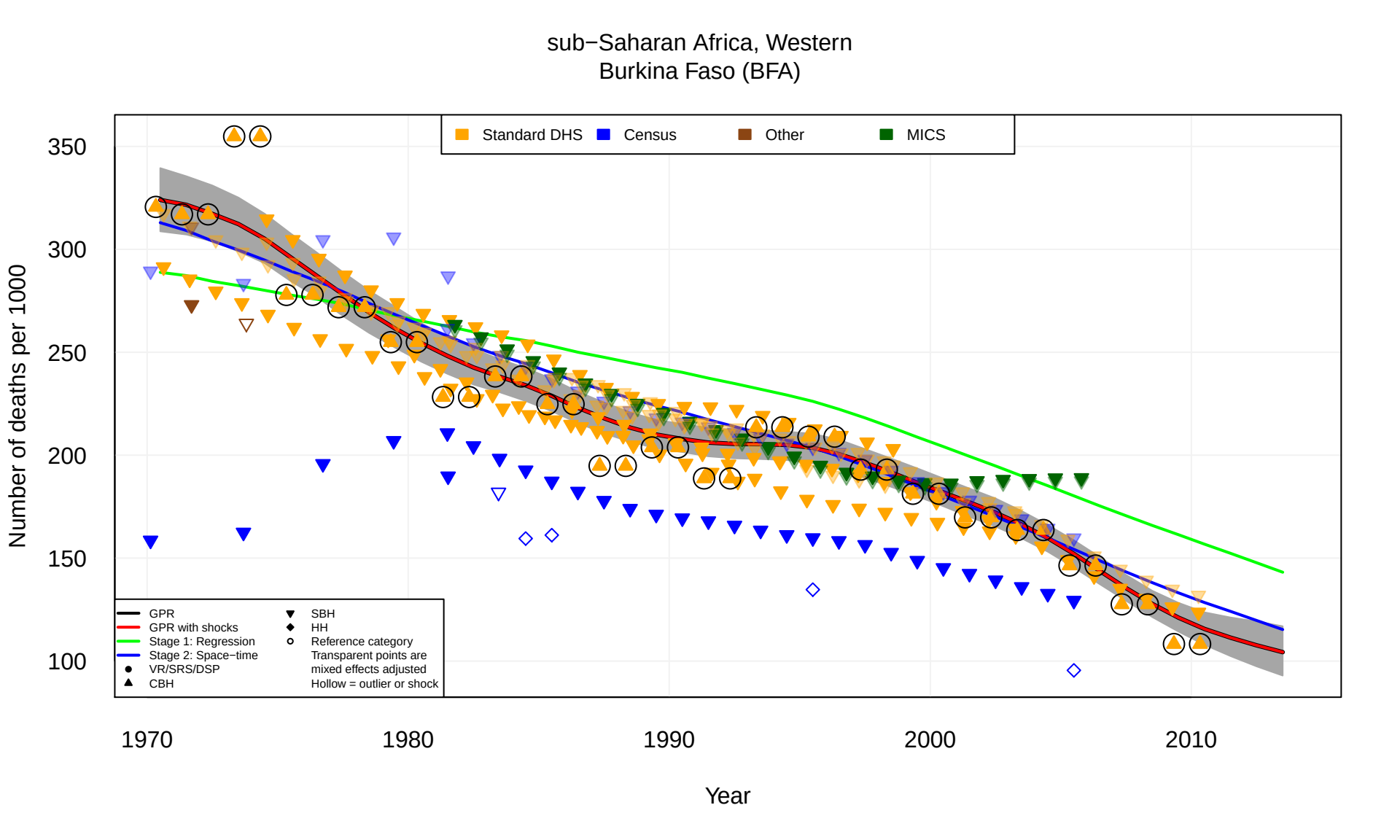

sub−Saharan Africa, Southern
Namibia (NAM)
Standard DHS
Census
Number of deaths per 1000
120
100
80
60
40
20
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

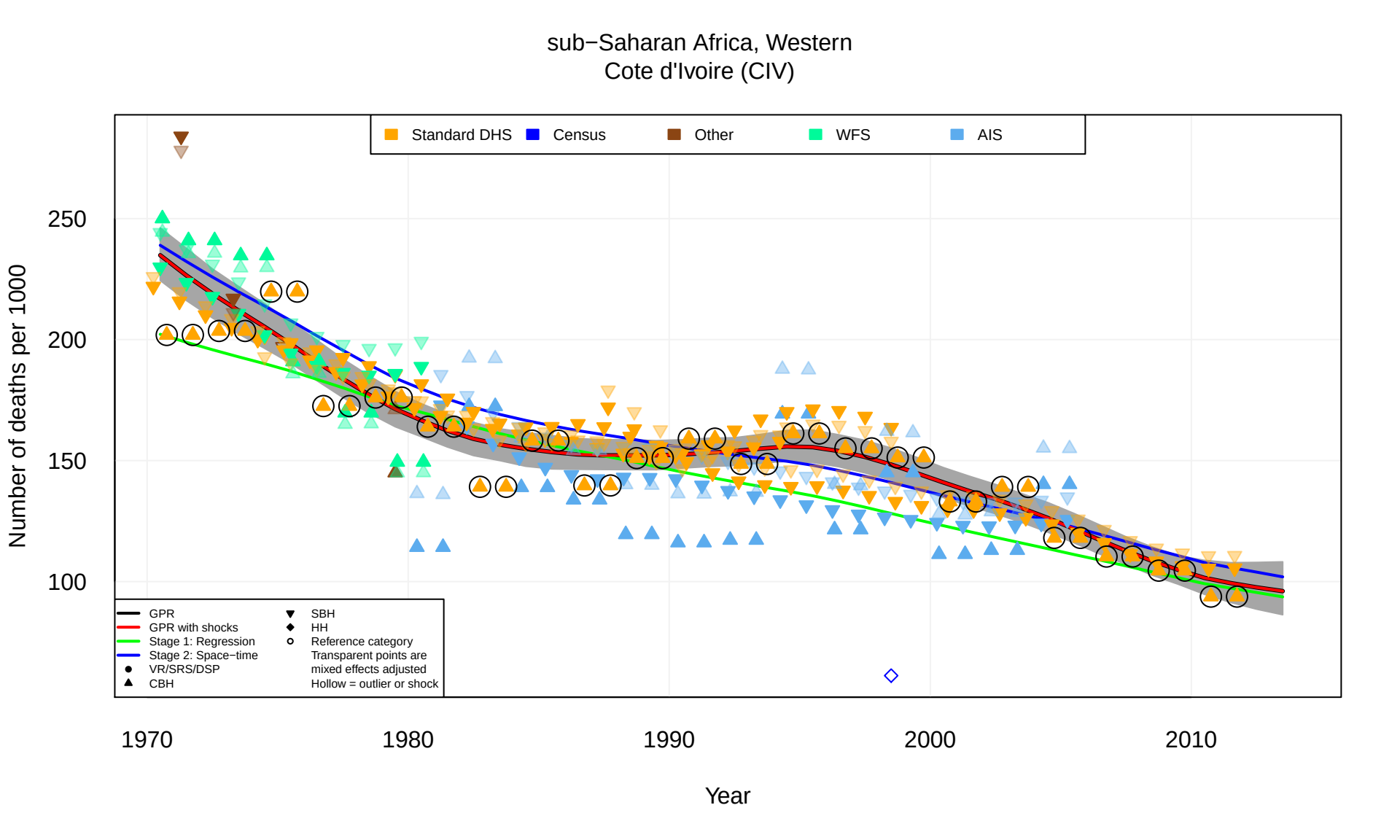

sub−Saharan Africa, Southern
Swaziland (SWZ)
Standard DHS
Census
MICS
Number of deaths per 1000
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

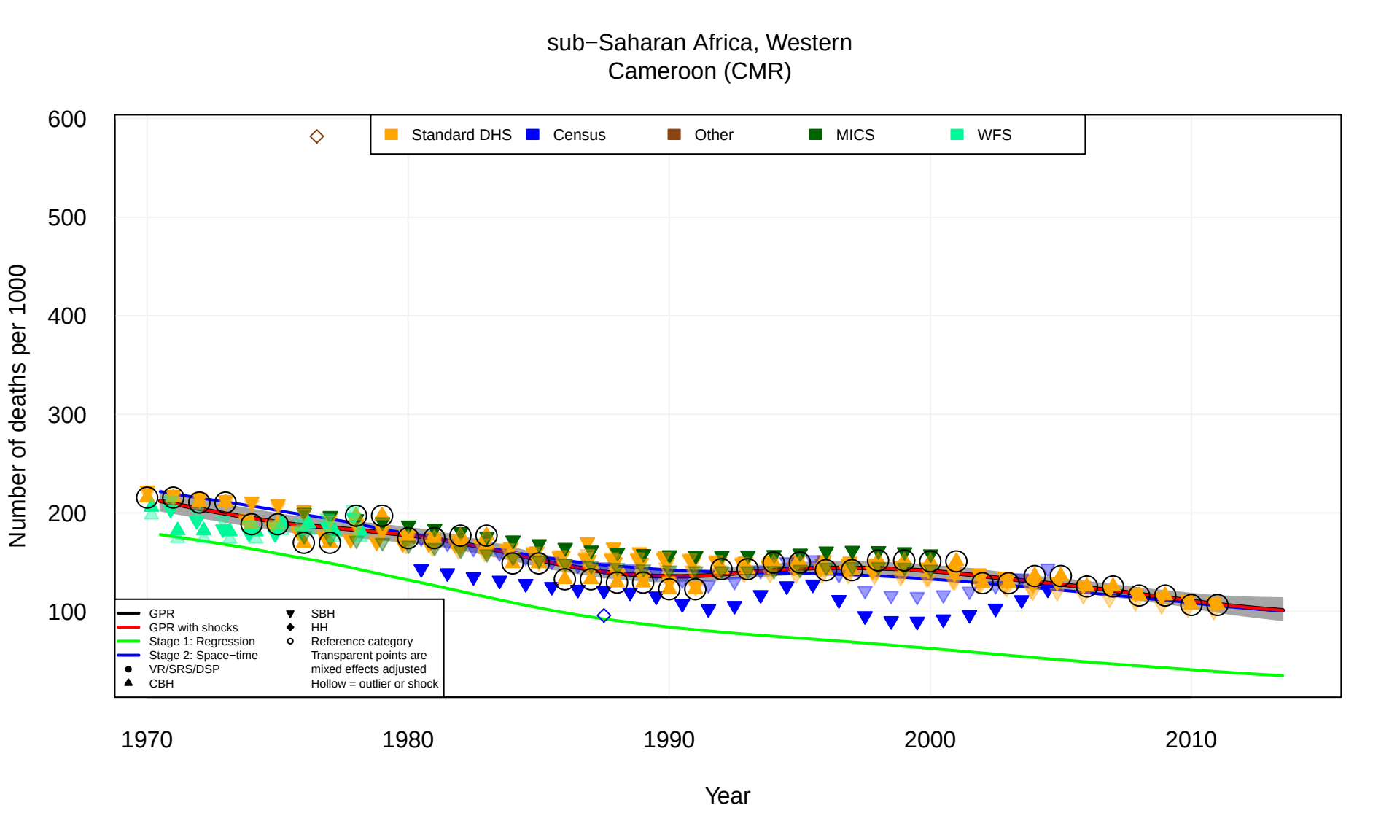

sub−Saharan Africa, Southern
South Africa (ZAF)
VR
Standard DHS
Other DHS
Census
Other
LSMS
Number of deaths per 1000
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

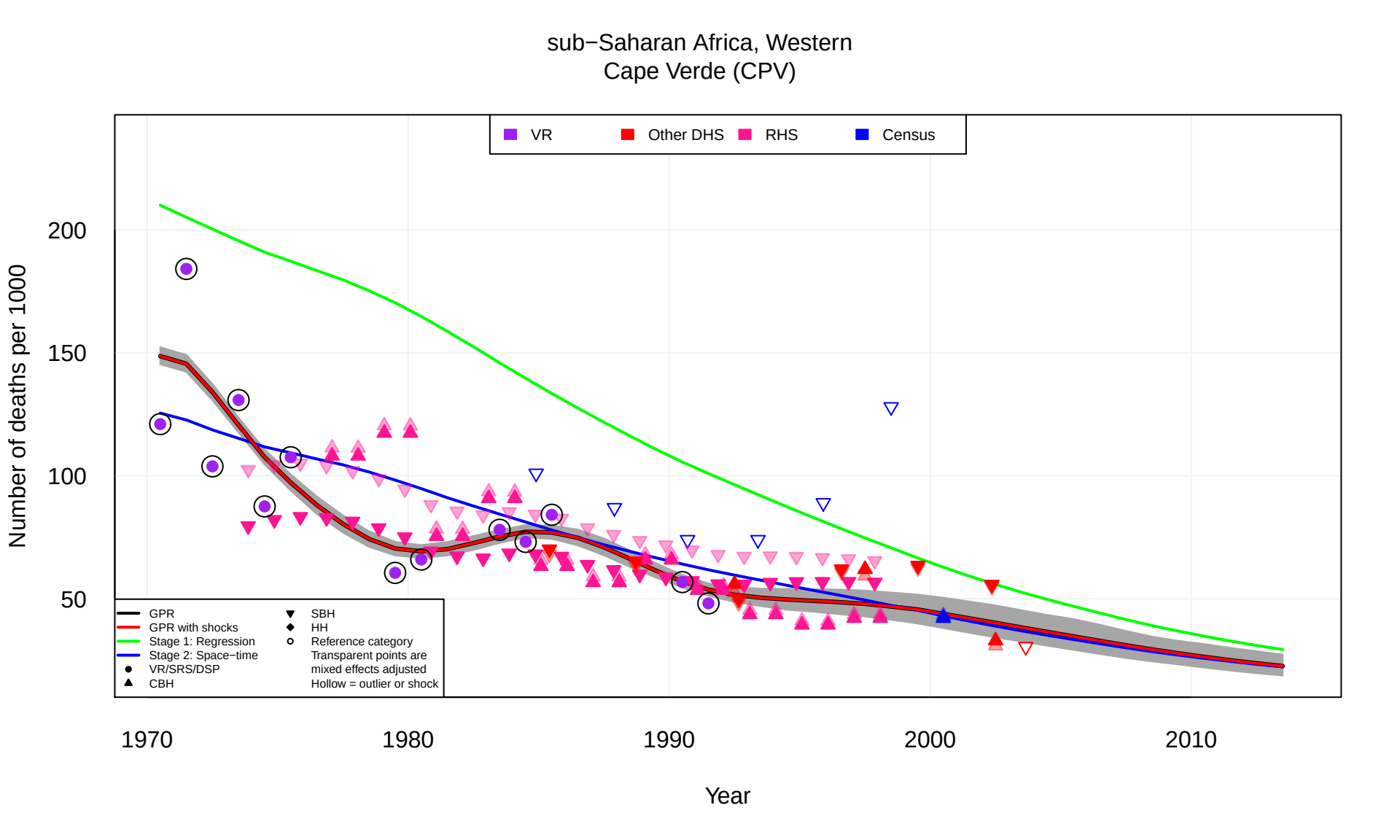

sub−Saharan Africa, Southern
Zimbabwe (ZWE)
VR
Standard DHS
Census
Other
MICS
Number of deaths per 1000
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

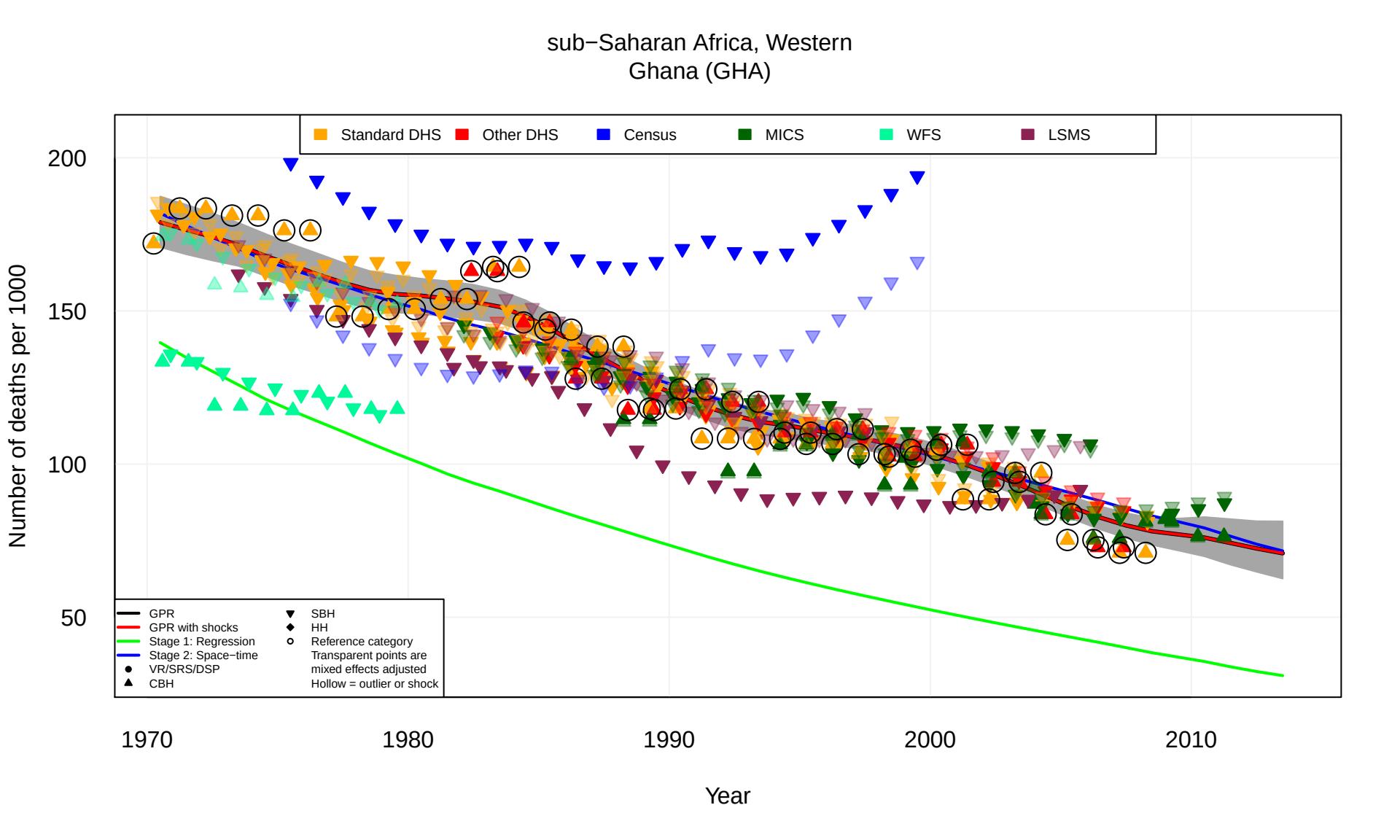

sub−Saharan Africa, Western
Benin (BEN)
Standard DHS
Census
Other
WFS
Number of deaths per 1000
300
250
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

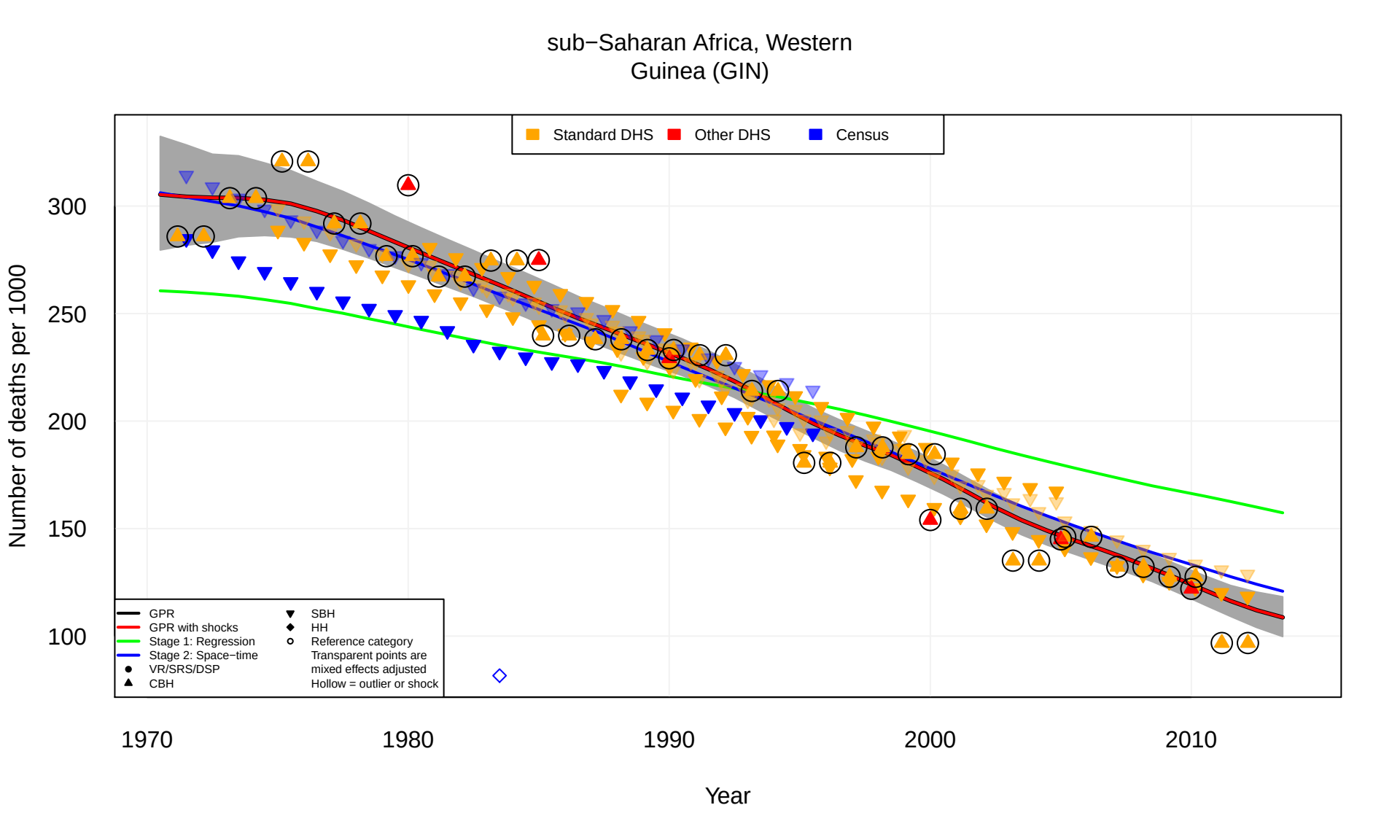

sub−Saharan Africa, Western
Burkina Faso (BFA)
Standard DHS
Census
Other
MICS
Number of deaths per 1000
350
300
250
200
150
100
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

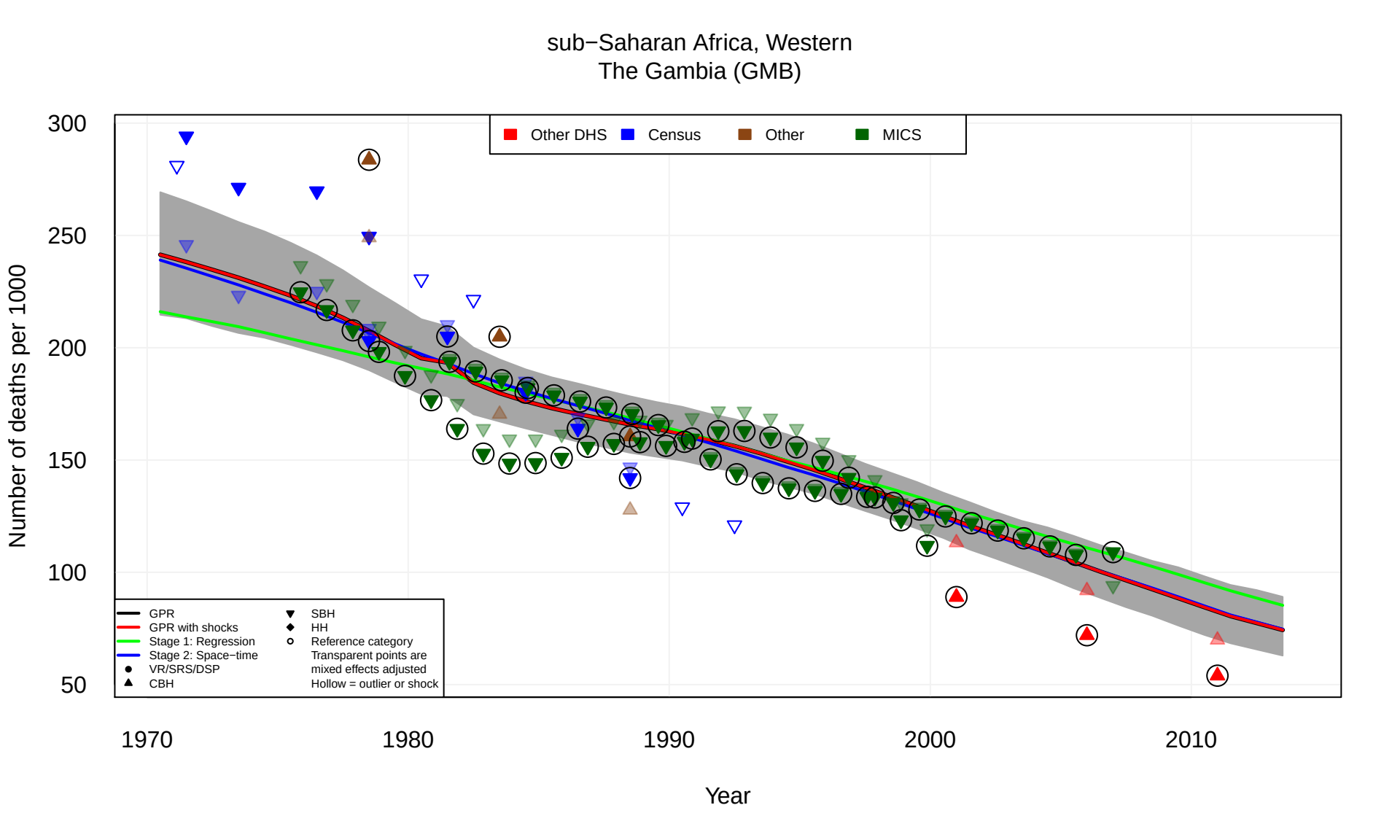

sub−Saharan Africa, Western
Cote d'Ivoire (CIV)
Standard DHS
Census
Other
WFS
AIS
Number of deaths per 1000
250
200
150
100
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

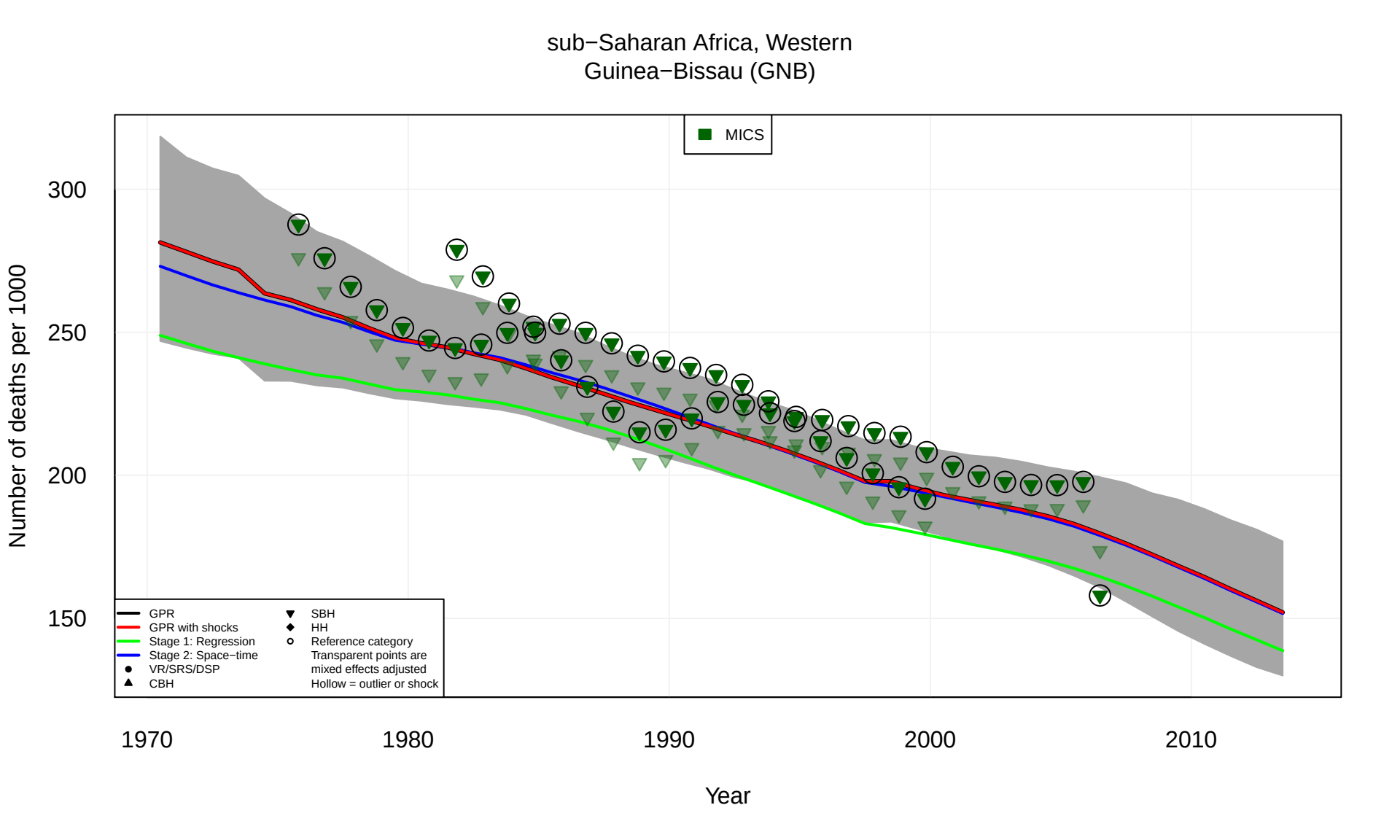

sub−Saharan Africa, Western
Cameroon (CMR)
Standard DHS
Census
Other
MICS
WFS
600
500
400
300
200
100
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

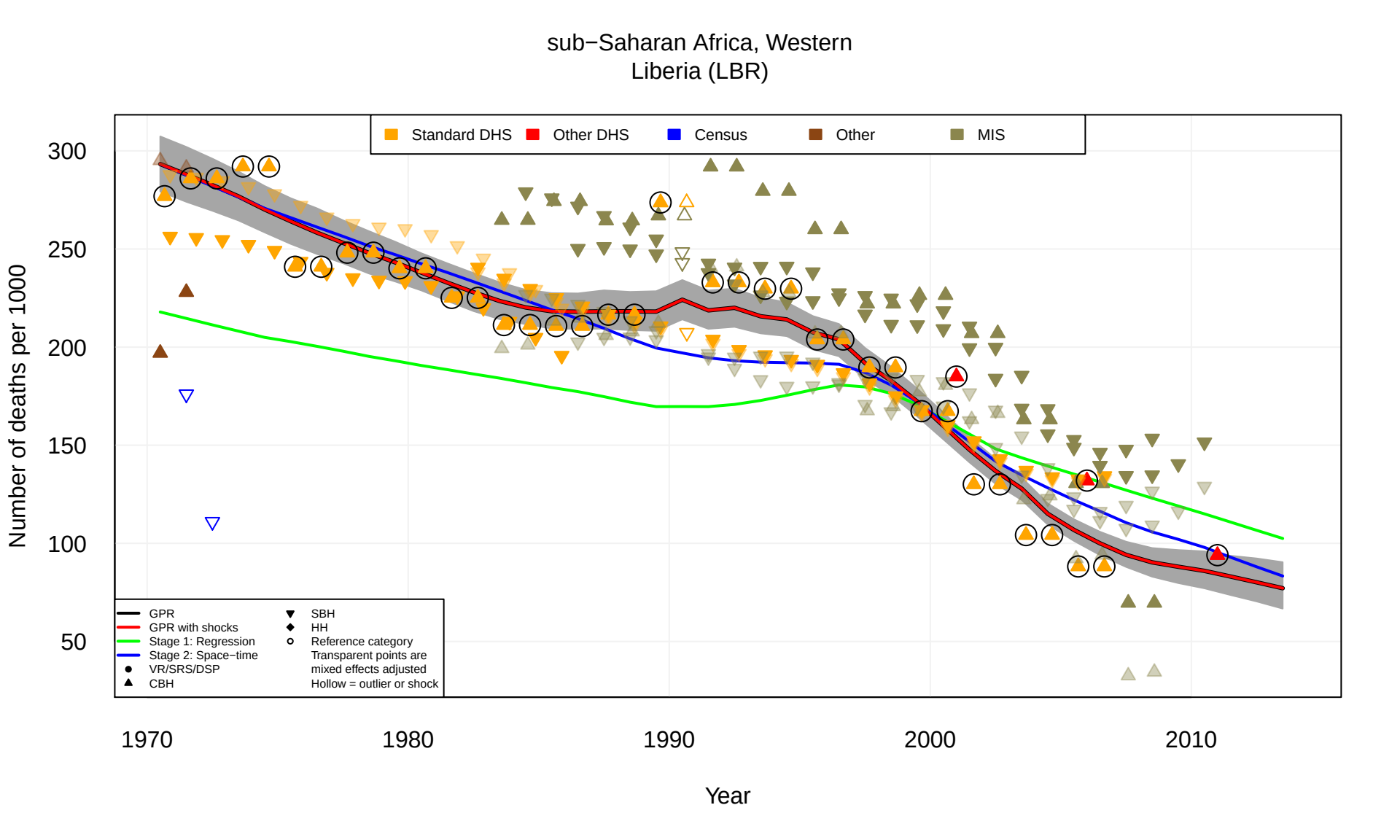

sub−Saharan Africa, Western
Cape Verde (CPV)
VR
Other DHS
RHS
Census
Number of deaths per 1000
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

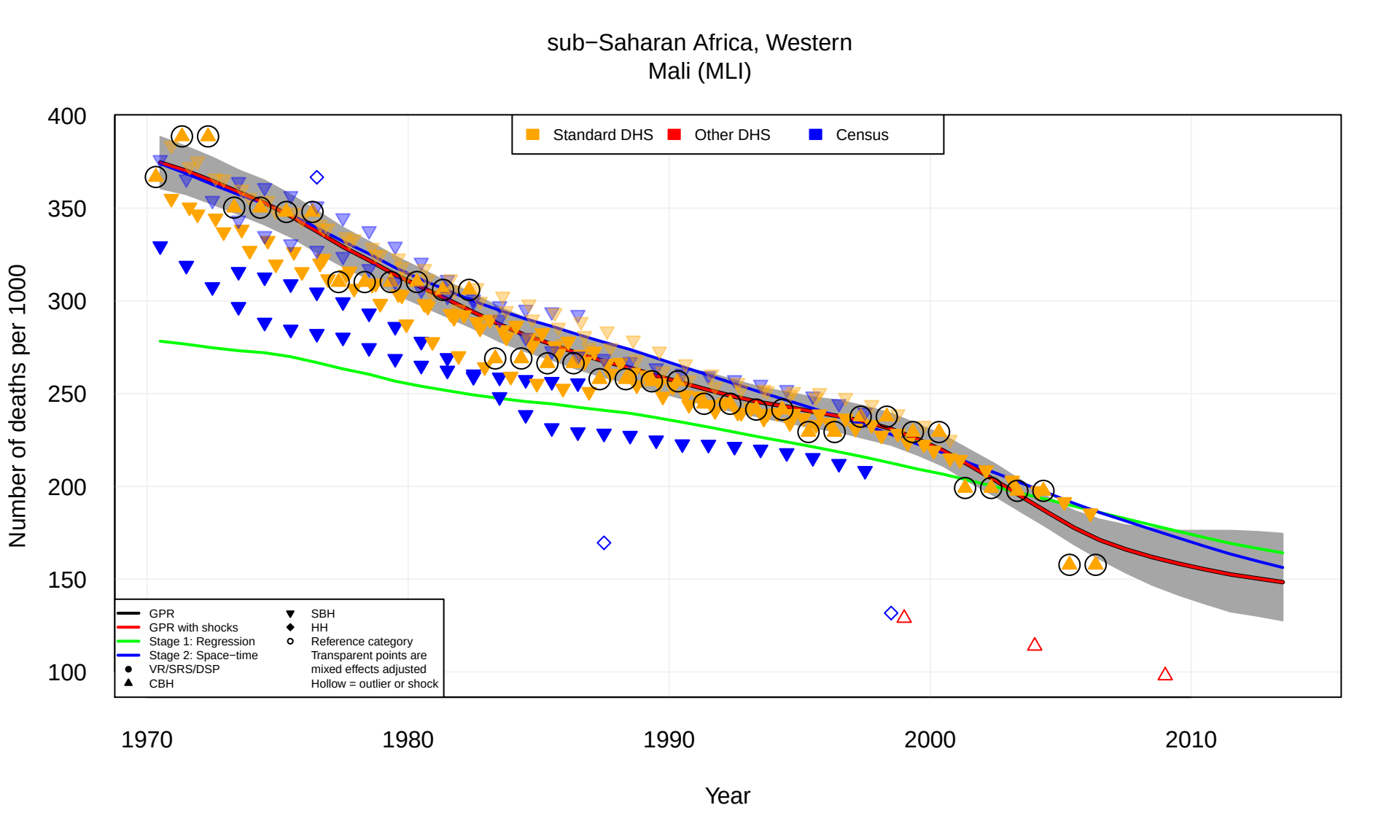

sub−Saharan Africa, Western
Ghana (GHA)
Standard DHS
Other DHS
Census
MICS
WFS
LSMS
200
150
100
50
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

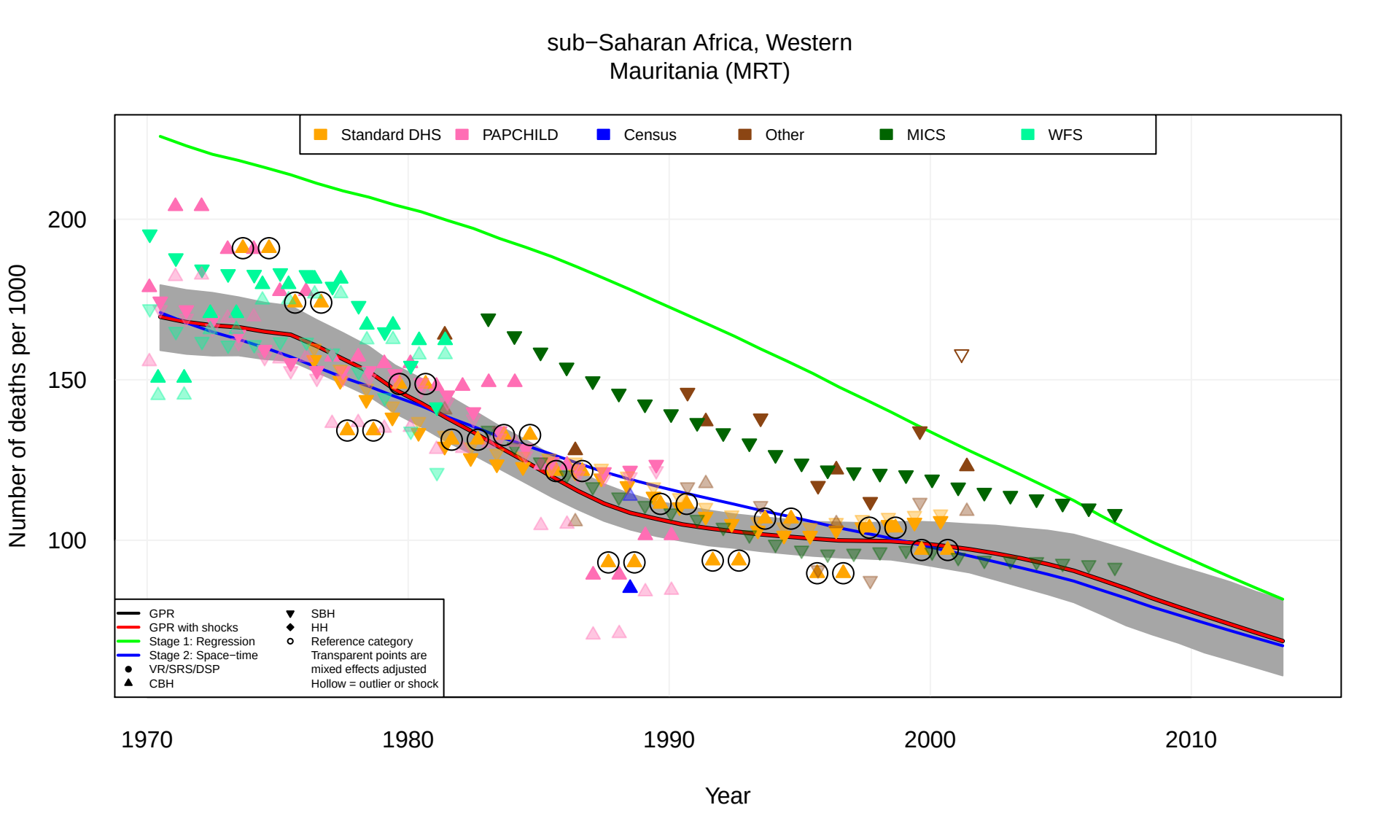

sub−Saharan Africa, Western
Guinea (GIN)
Standard DHS
Other DHS
Census
Number of deaths per 1000
300
250
200
150
100
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

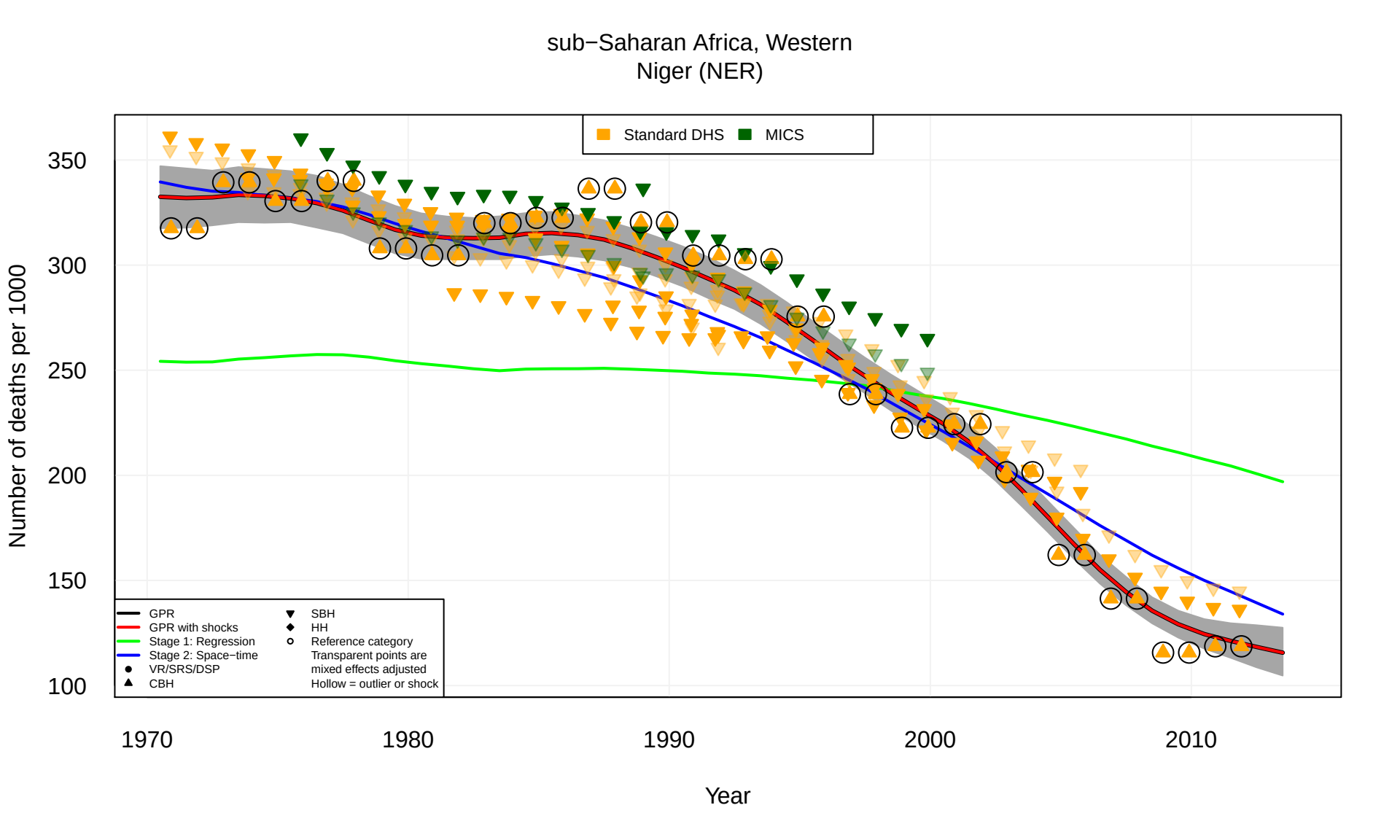

sub−Saharan Africa, Western
The Gambia (GMB)
Other DHS
Census
Other
MICS
Number of deaths per 1000
300
250
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

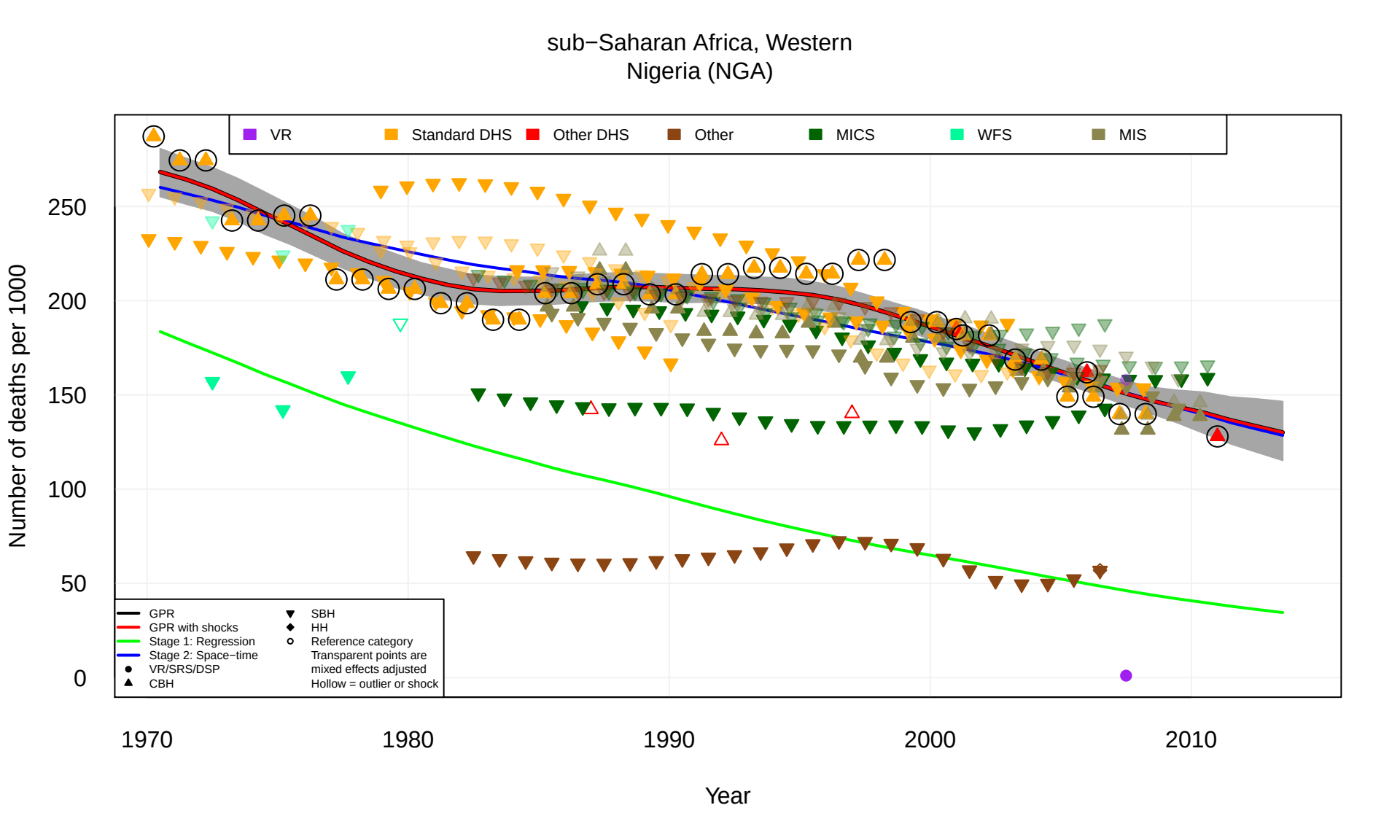

sub−Saharan Africa, Western
Guinea−Bissau (GNB)
MICS
300
250
200
150
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

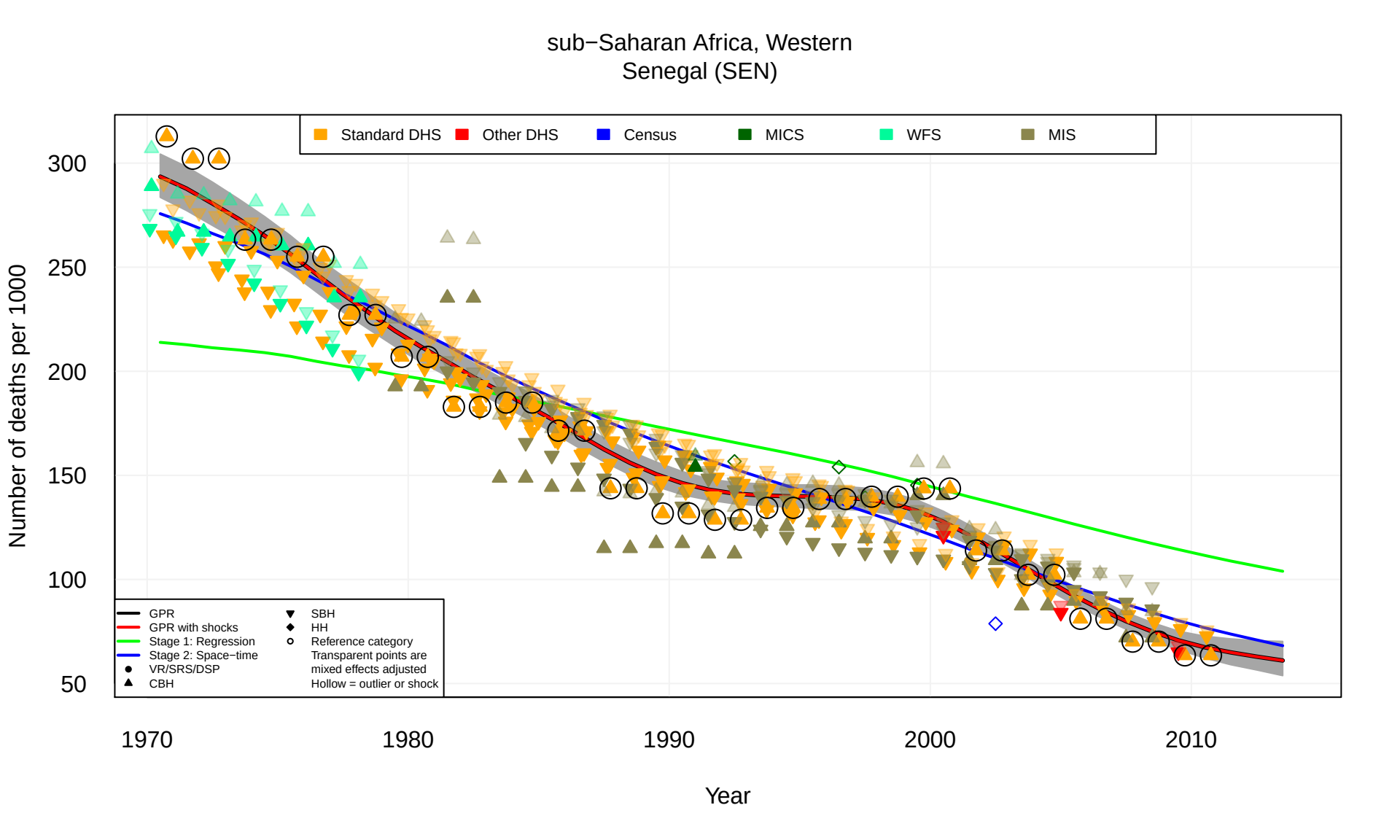

sub−Saharan Africa, Western
Liberia (LBR)
Standard DHS
Other DHS
Census
Other
MIS
Number of deaths per 1000
300
250
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

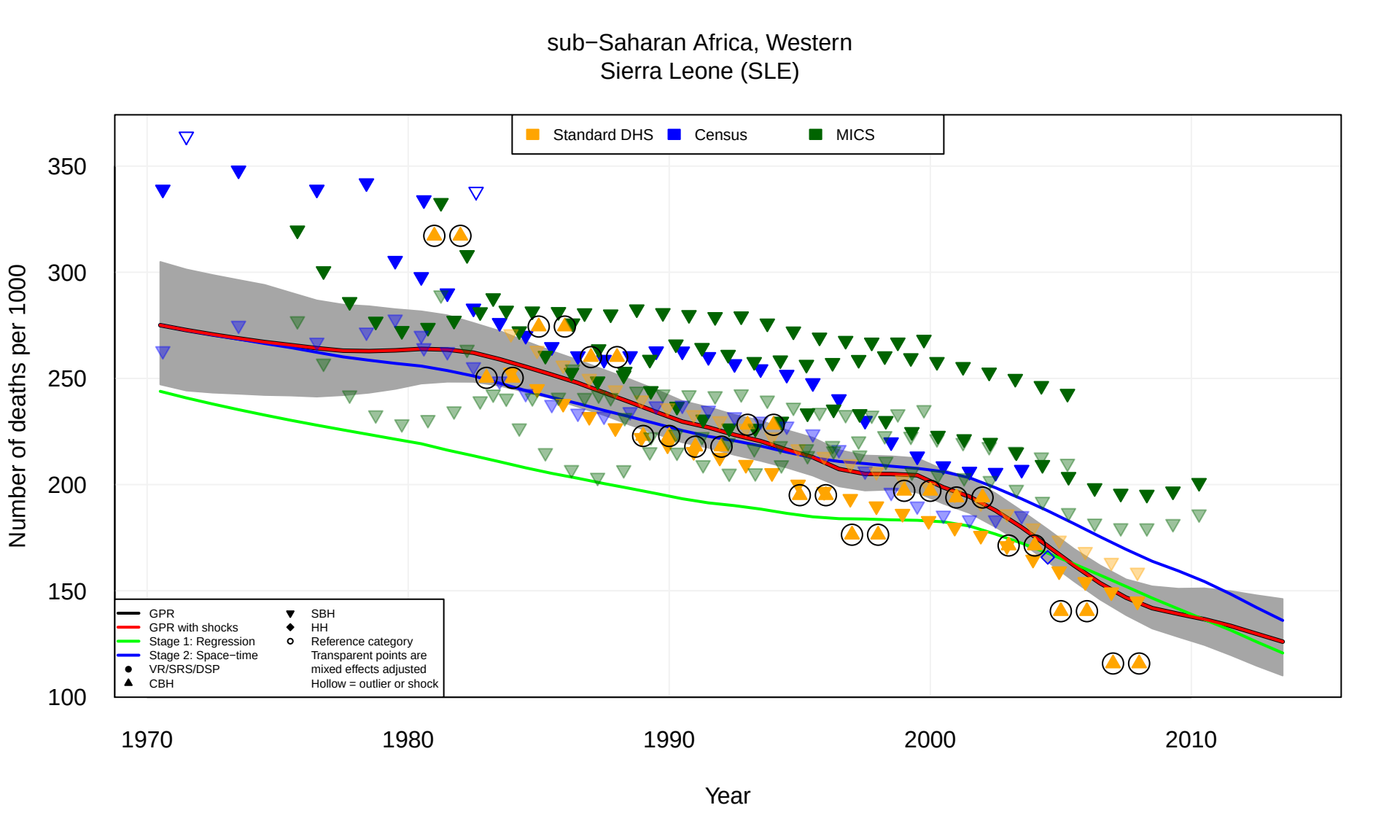

sub−Saharan Africa, Western
Mali (MLI)
Standard DHS
Other DHS
Census
Number of deaths per 1000
400
350
300
250
200
150
100
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

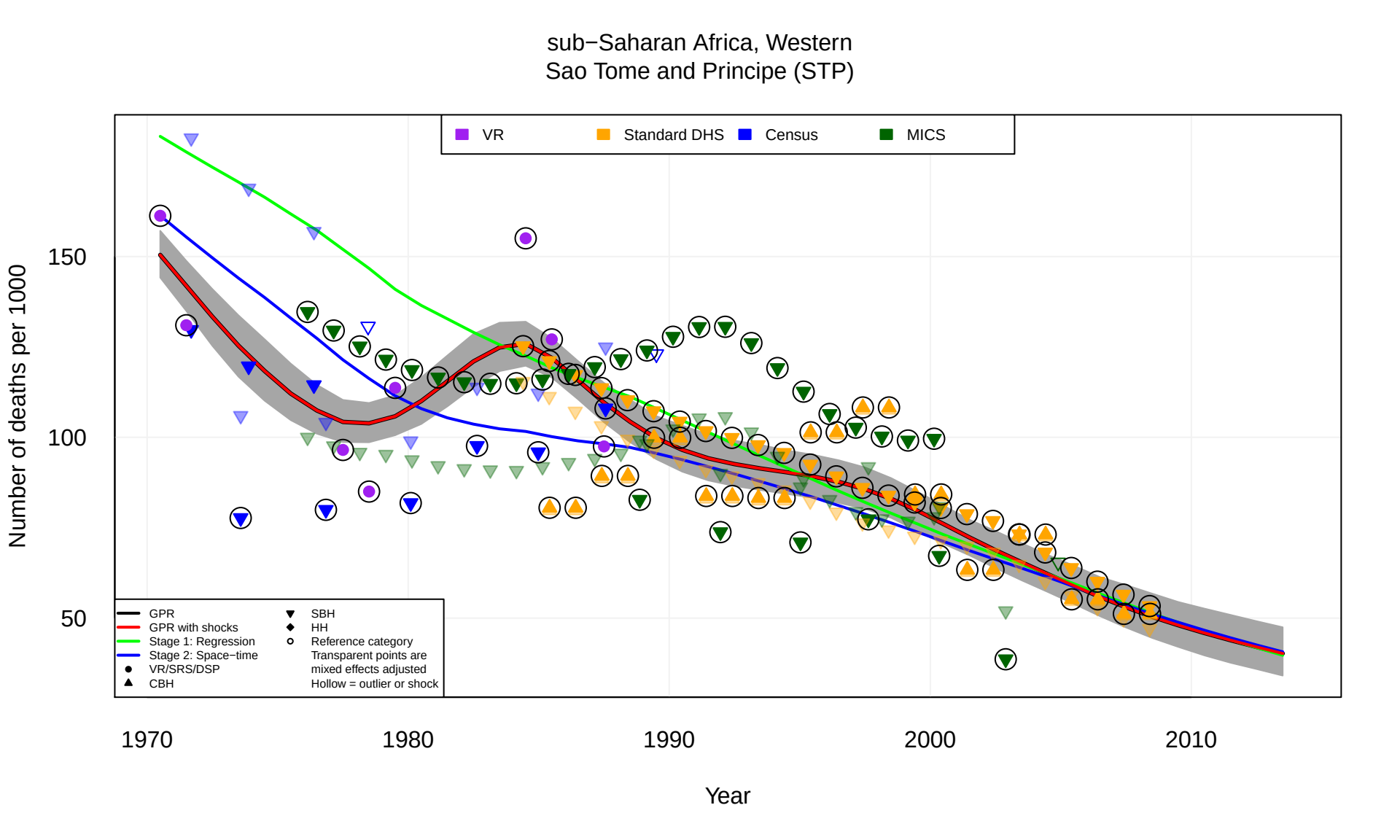

sub−Saharan Africa, Western
Mauritania (MRT)
Standard DHS
PAPCHILD
Census
Other
MICS
WFS
Number of deaths per 1000
200
150
100
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

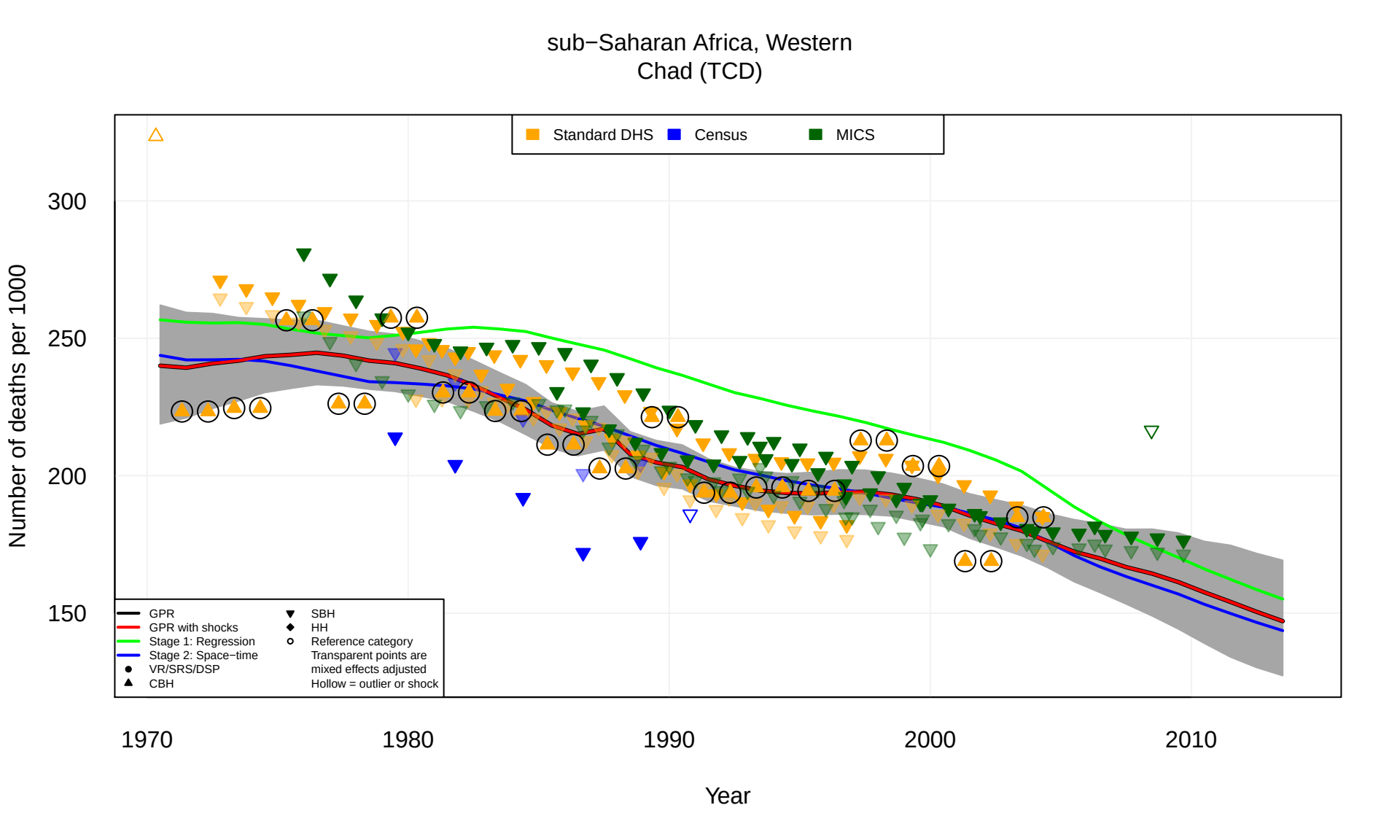

sub−Saharan Africa, Western
Niger (NER)
Standard DHS
MICS
Number of deaths per 1000
350
300
250
200
150
100
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

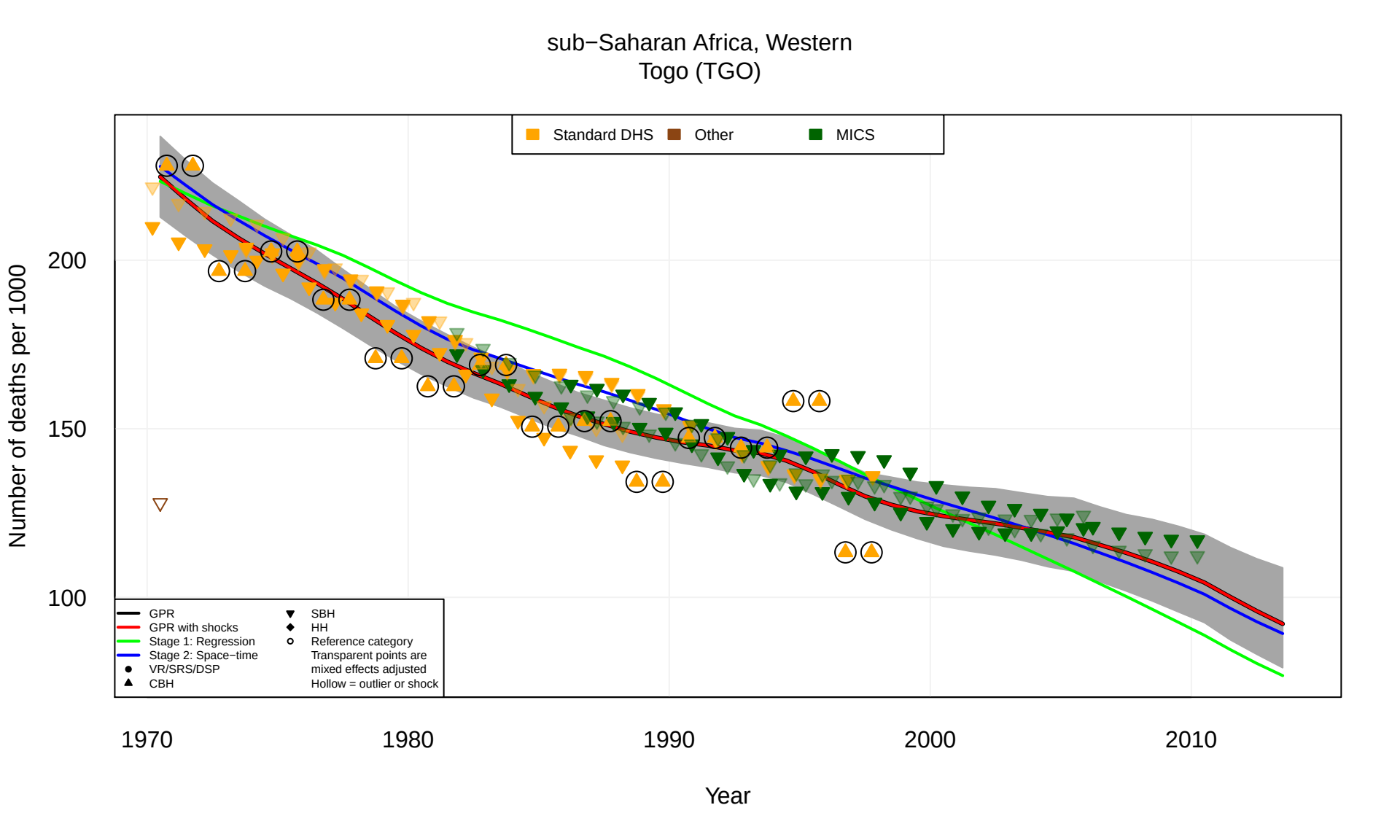

sub−Saharan Africa, Western
Nigeria (NGA)
VR
Standard DHS
Other DHS
Other
MICS
WFS
MIS
Number of deaths per 1000
250
200
150
100
50
0
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock


sub−Saharan Africa, Western
Senegal (SEN)
Standard DHS
Other DHS
Census
MICS
WFS
MIS
Number of deaths per 1000
300
250
200
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

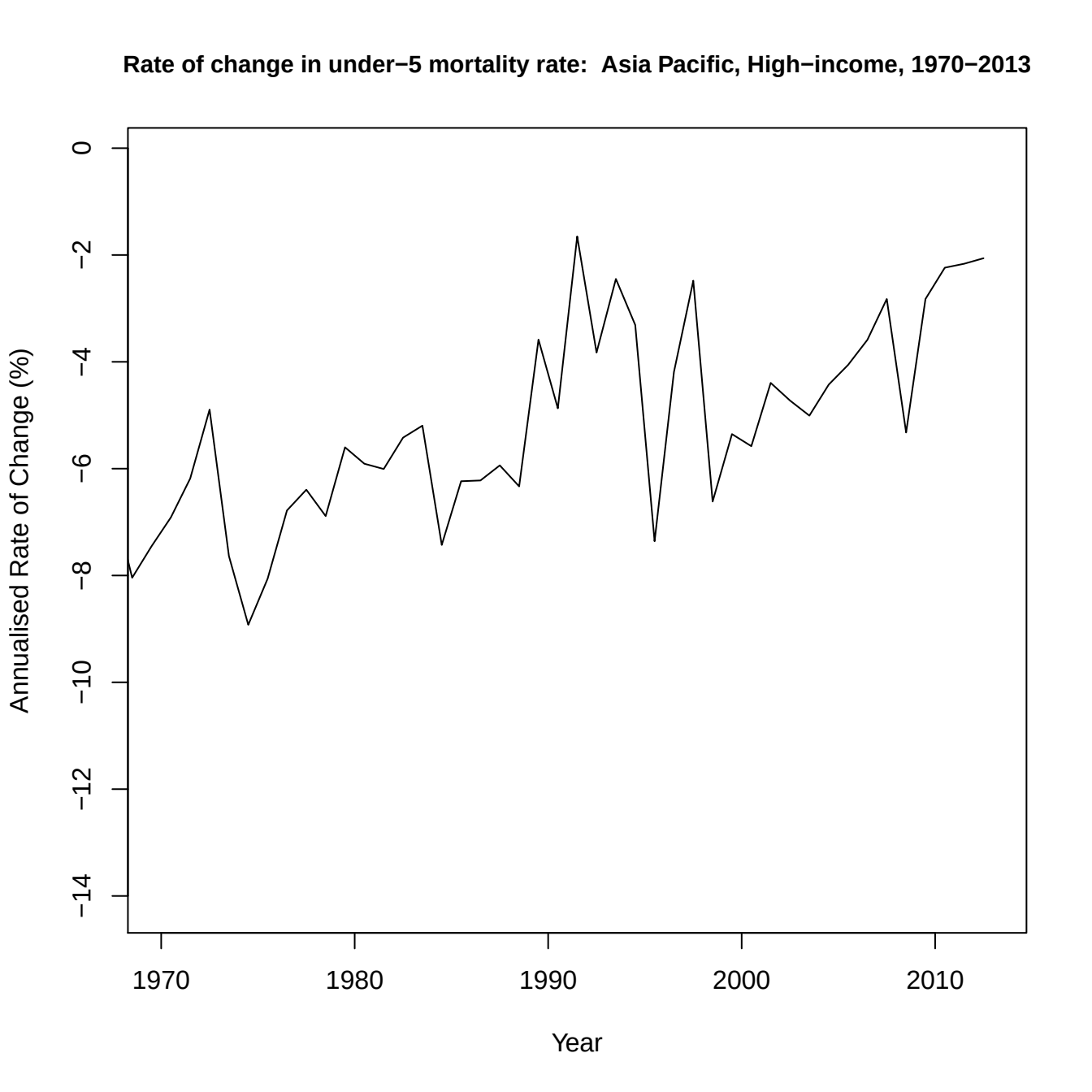

sub−Saharan Africa, Western
Sierra Leone (SLE)
Standard DHS
Census
MICS
Number of deaths per 1000
350
300
250
200
150
100
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

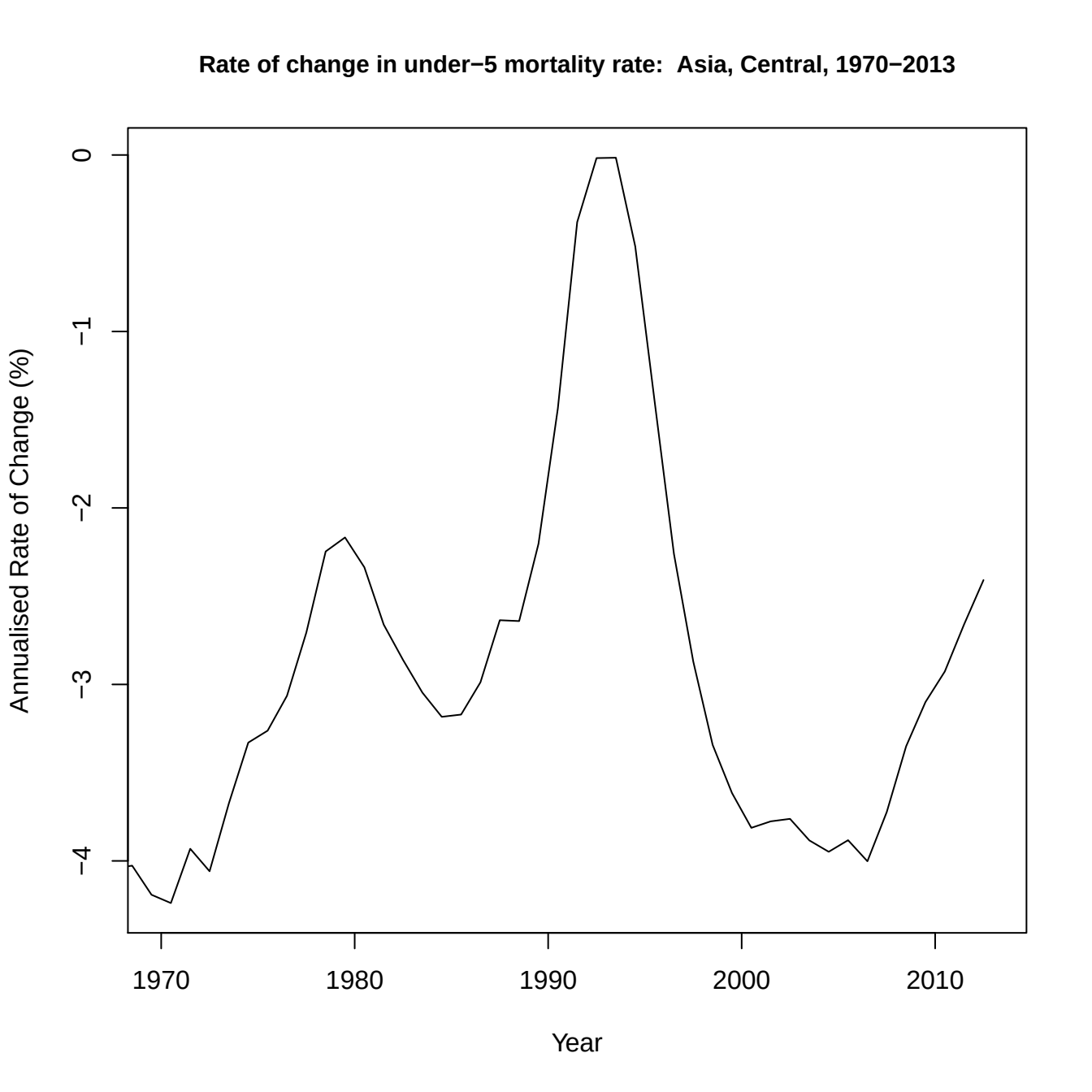

sub−Saharan Africa, Western
Sao Tome and Principe (STP)
VR
Standard DHS
Census
MICS
Number of deaths per 1000
150
100
50
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

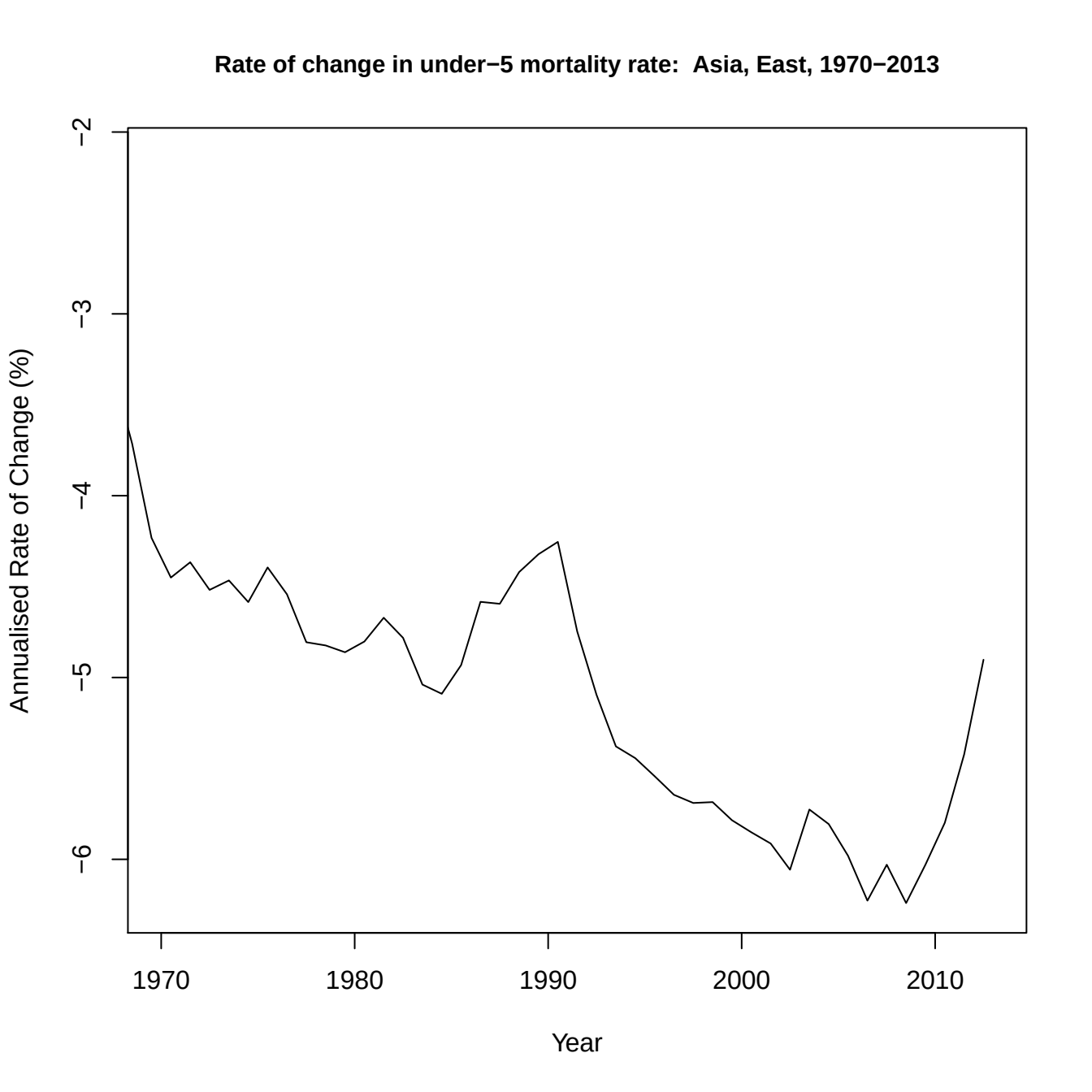

sub−Saharan Africa, Western
Chad (TCD)
Standard DHS
Census
MICS
300
250
200
150
Number of deaths per 1000
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

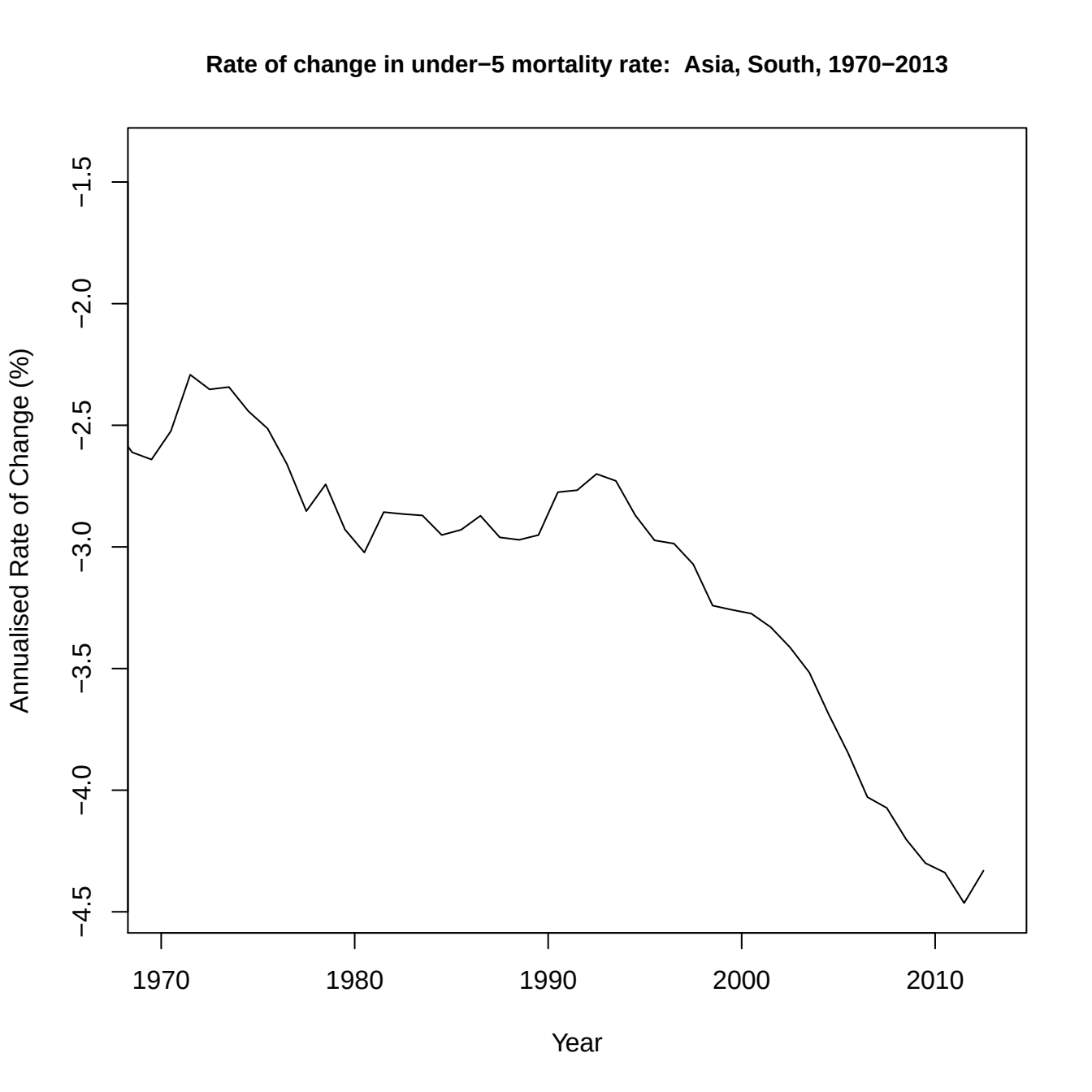

sub−Saharan Africa, Western
Togo (TGO)
Standard DHS
Other
MICS
Number of deaths per 1000
200
150
100
1970
1980
1990
2000
2010
Year
GPR
GPR with shocks
Stage 1: Regression
Stage 2: Space−time
VR/SRS/DSP
CBH
SBH
HH
Reference category
Transparent points are
mixed effects adjusted
Hollow = outlier or shock

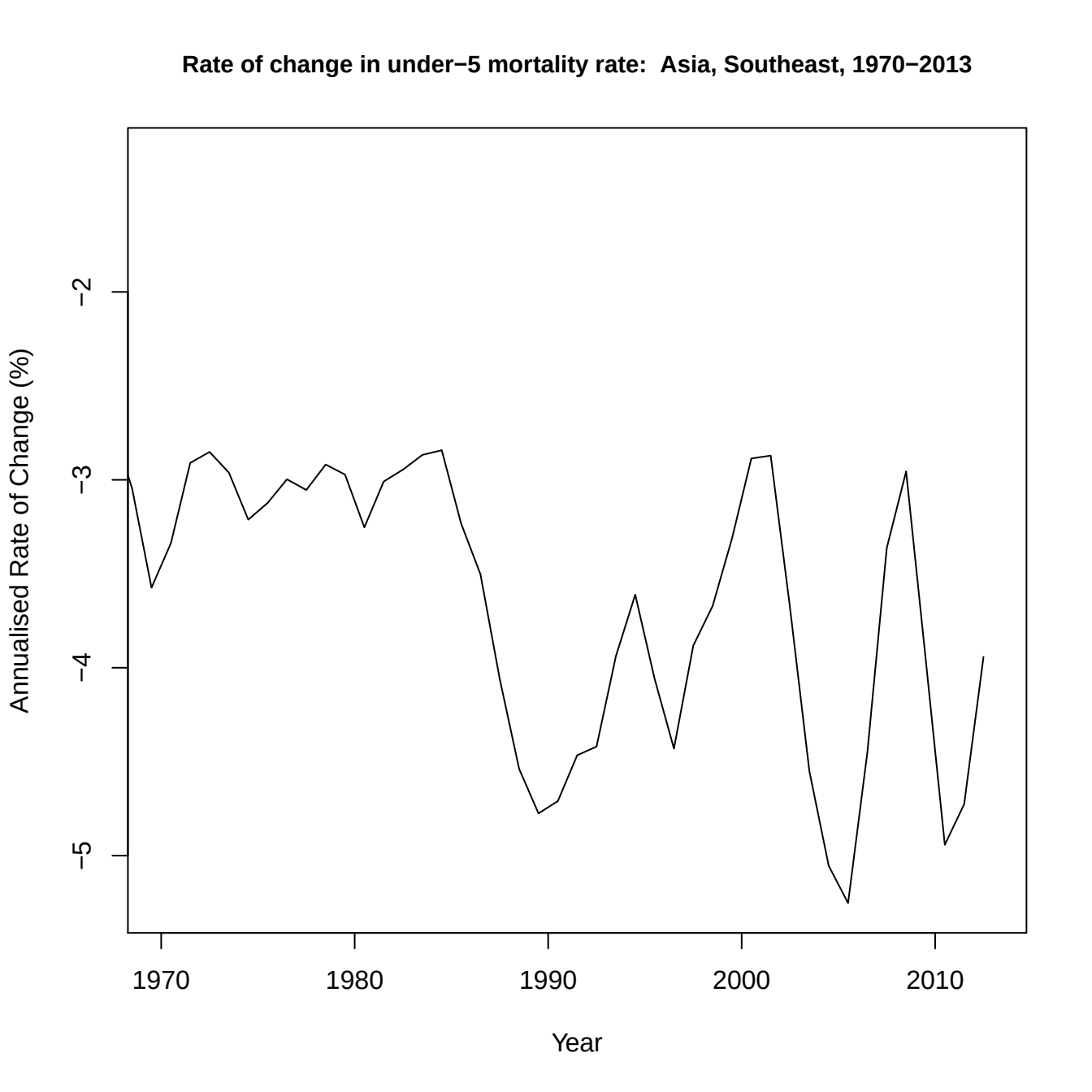
Web figure 2. Regional rate of change in under-5 mortality rate, 1970-2013.

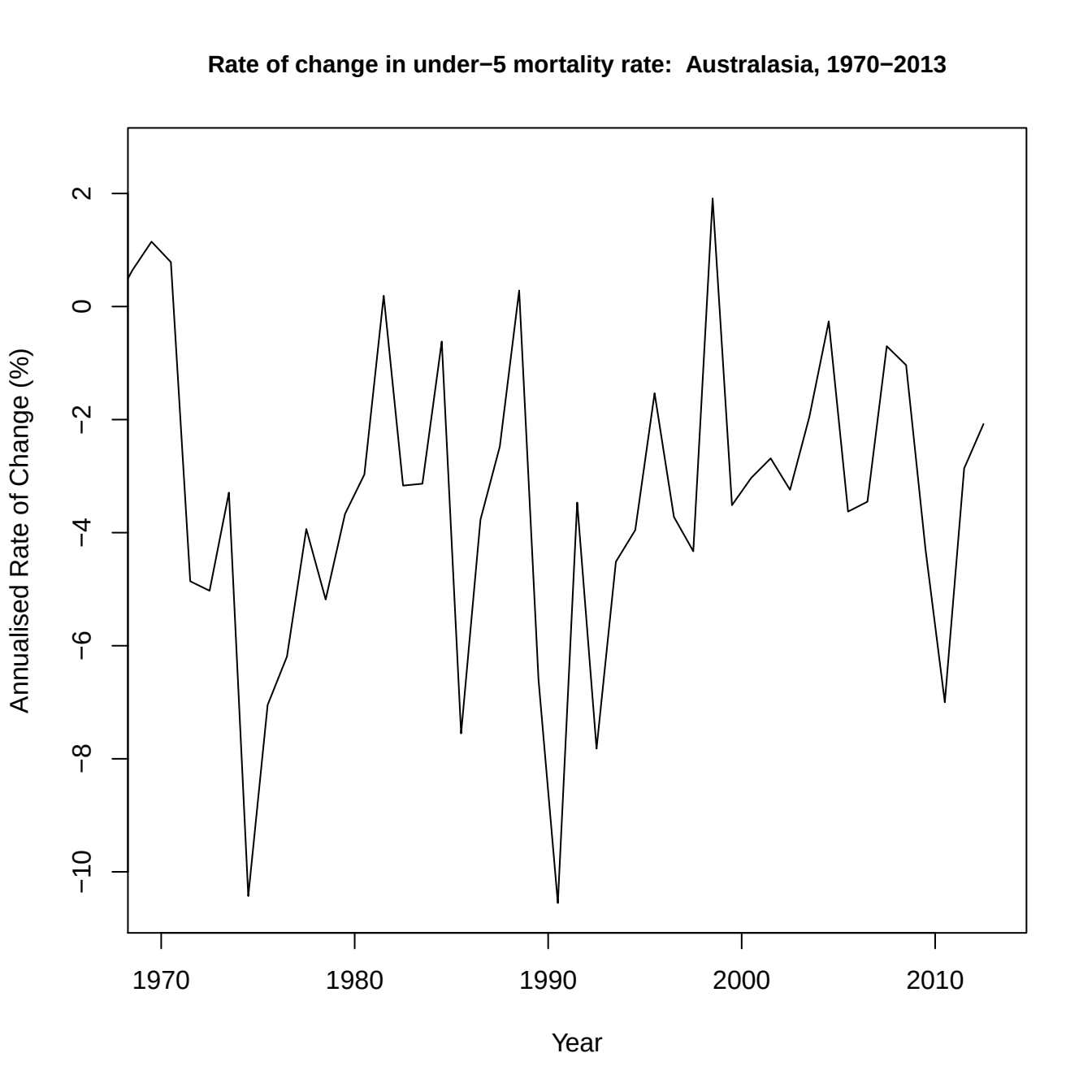

Rate of change in under−5 mortality rate: Asia Pacific, High−income, 1970−2013
Annualised Rate of Change (%)
0
−2
−4
−6
−8
−10
−12
−14
1970
1980
1990
2000
2010
Year

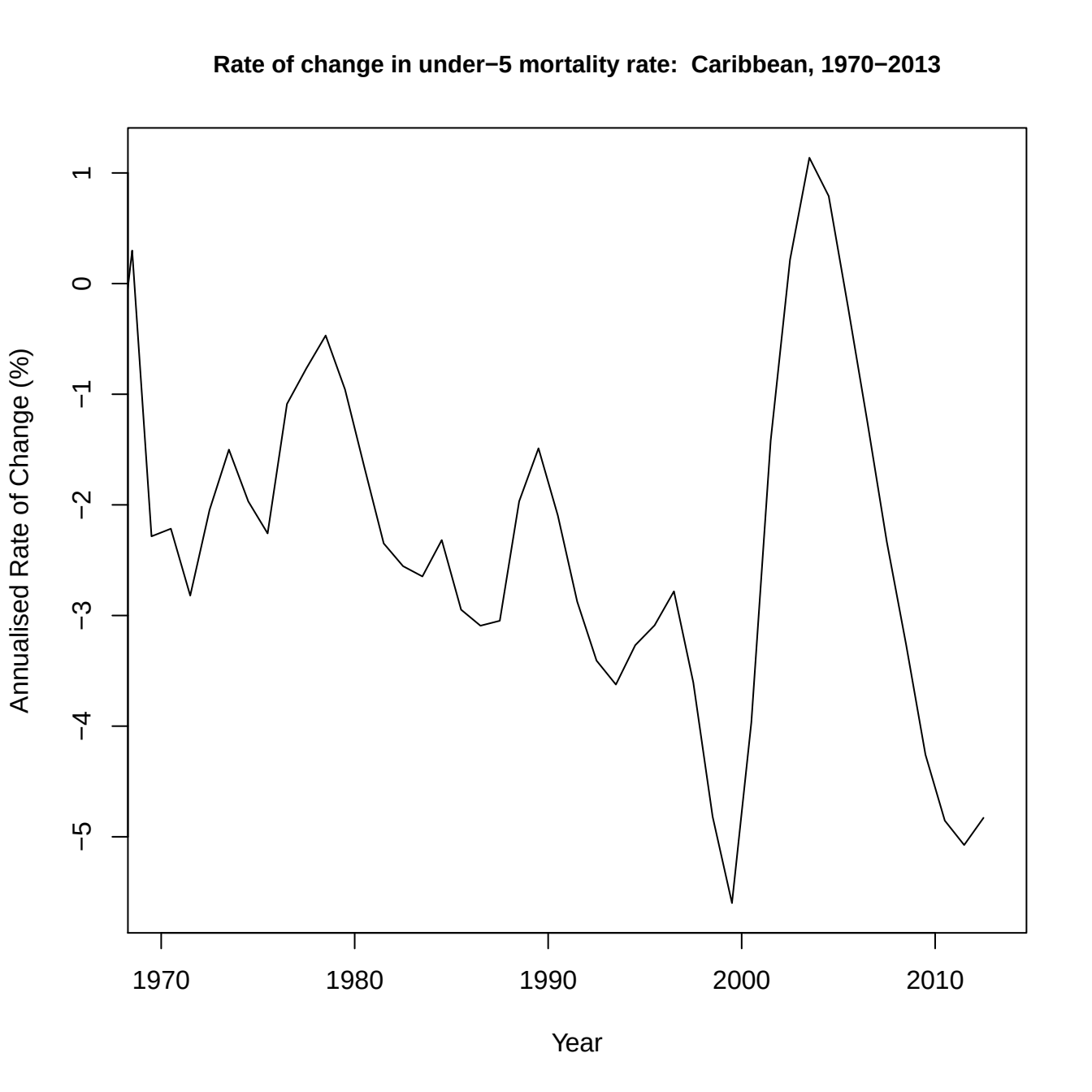

Rate of change in under−5 mortality rate: Asia, Central, 1970−2013
Annualised Rate of Change (%)
0
−1
−2
−3
−4
1970
1980
1990
2000
2010
Year

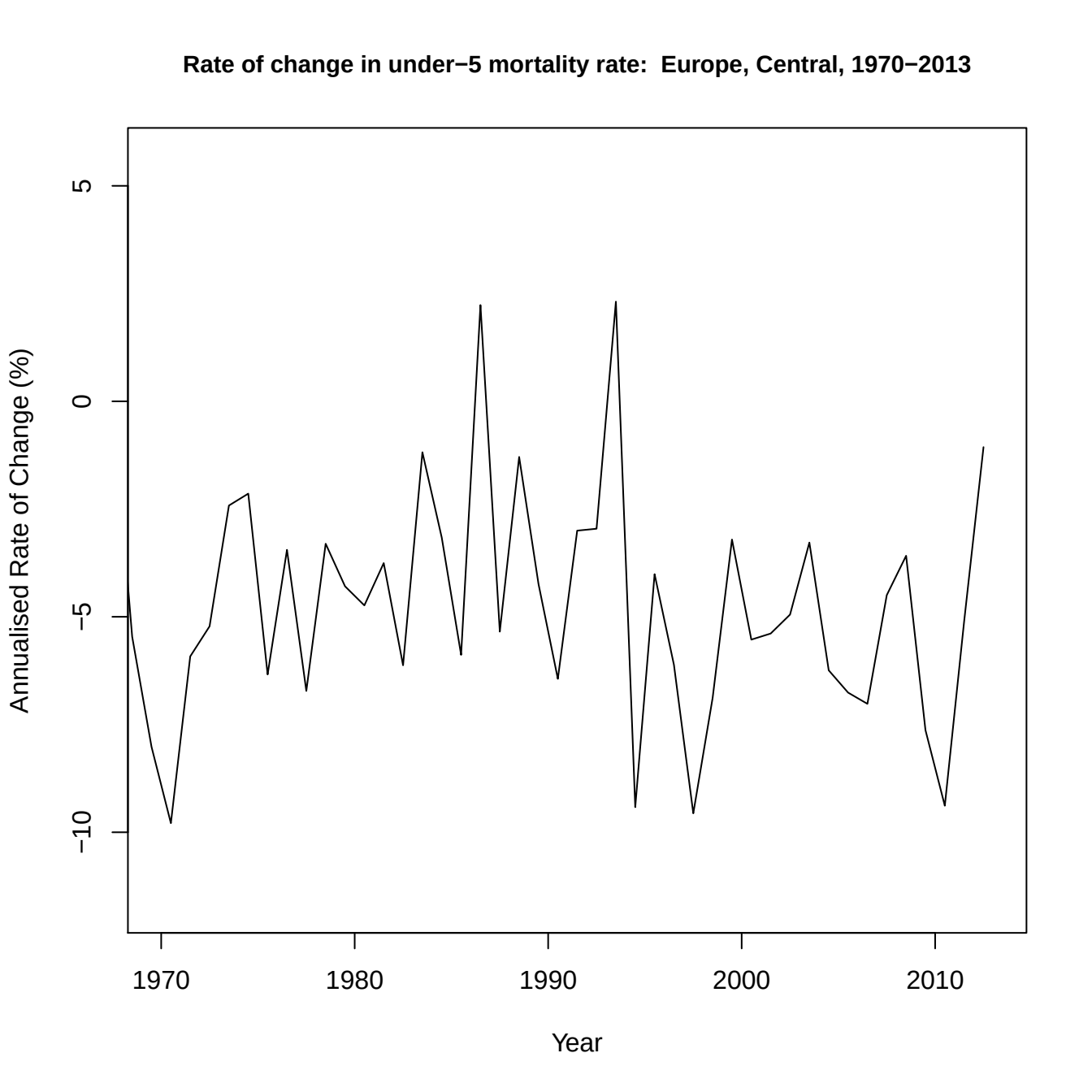

Rate of change in under−5 mortality rate: Asia, East, 1970−2013
Annualised Rate of Change (%)
−2
−3
−4
−5
−6
1970
1980
1990
2000
2010
Year

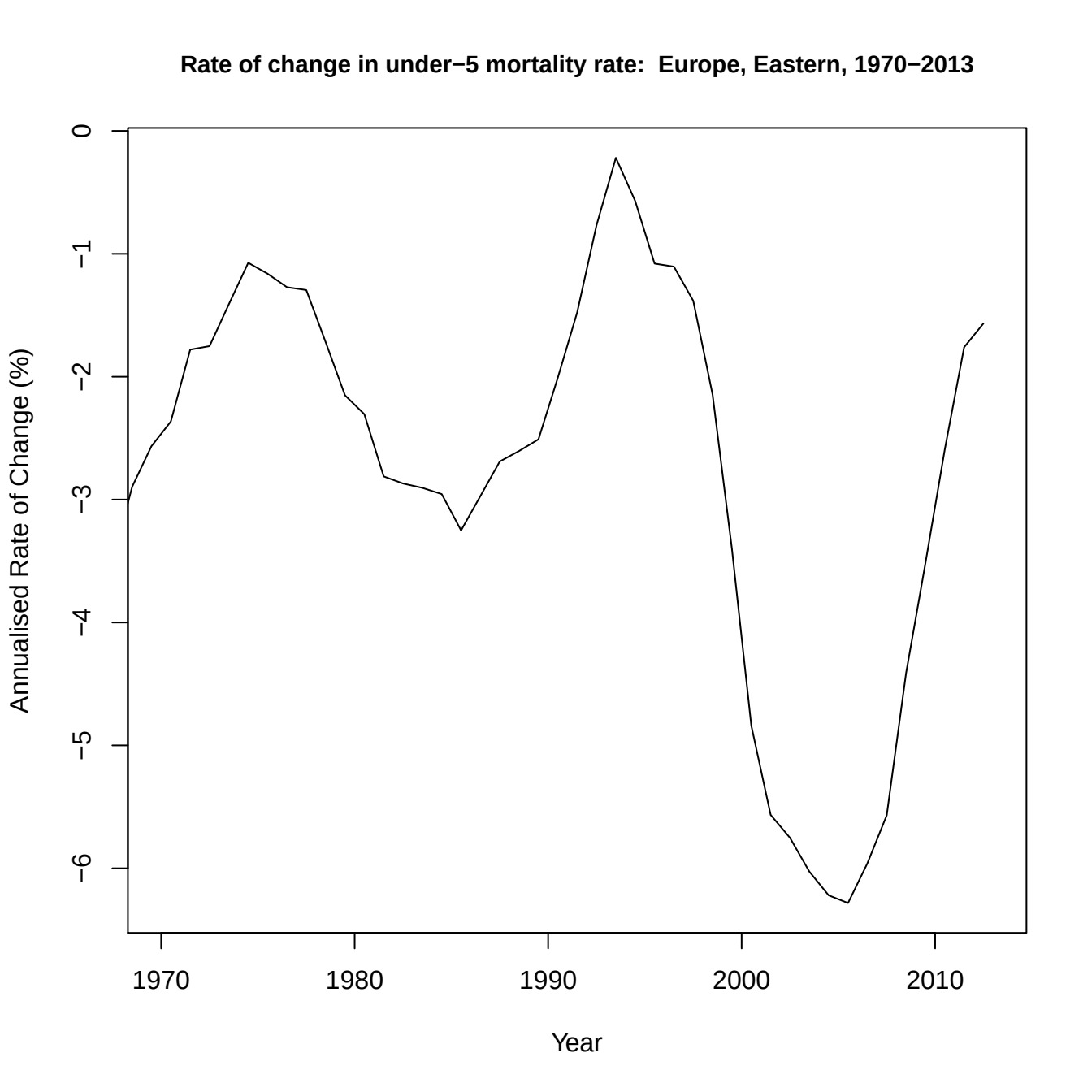

Rate of change in under−5 mortality rate: Asia, South, 1970−2013
Annualised Rate of Change (%)
−1.5
−2.0
−2.5
−3.0
−3.5
−4.0
−4.5
1970
1980
1990
2000
2010
Year

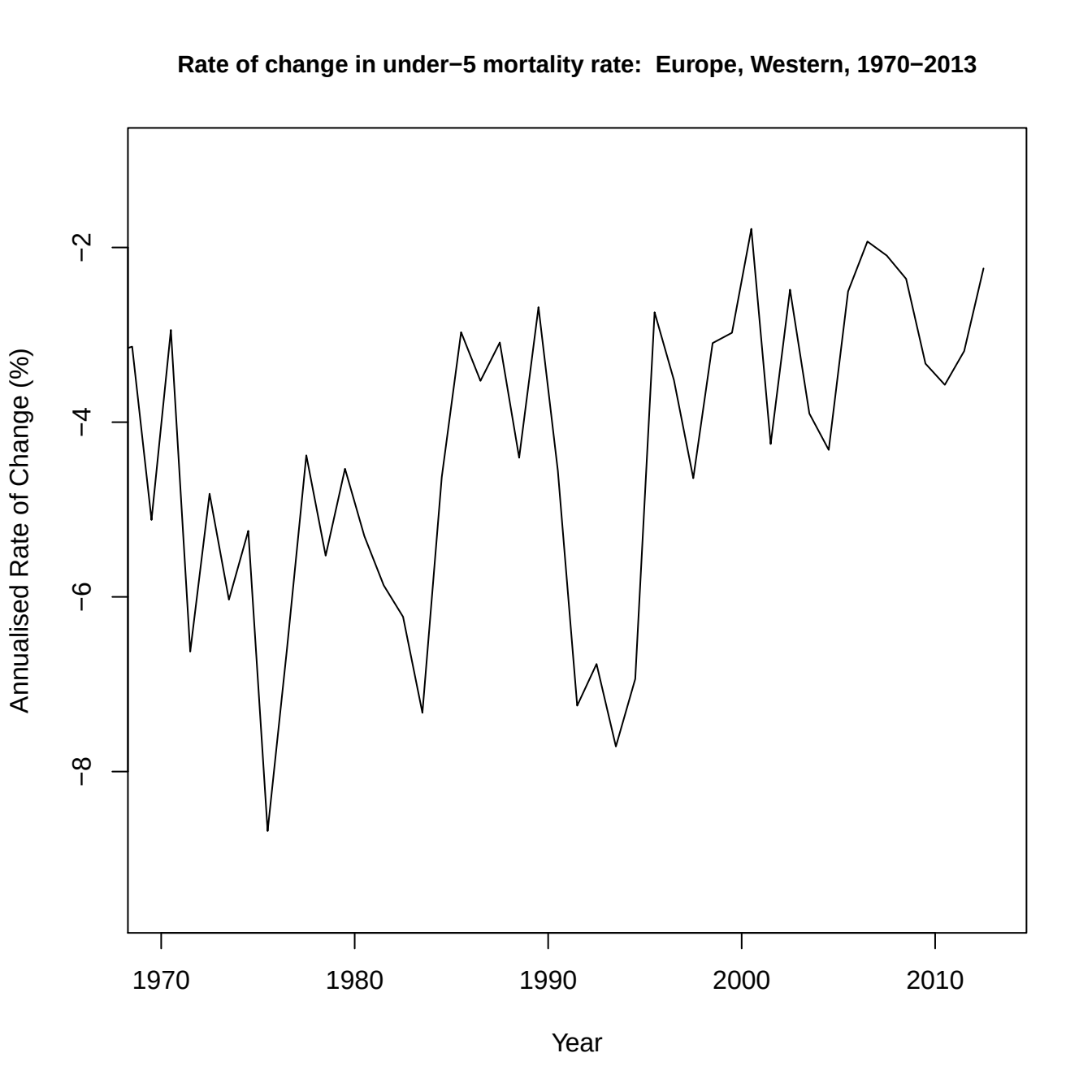

Rate of change in under−5 mortality rate: Asia, Southeast, 1970−2013
Annualised Rate of Change (%)
−2
−3
−4
−5
1970
1980
1990
2000
2010
Year

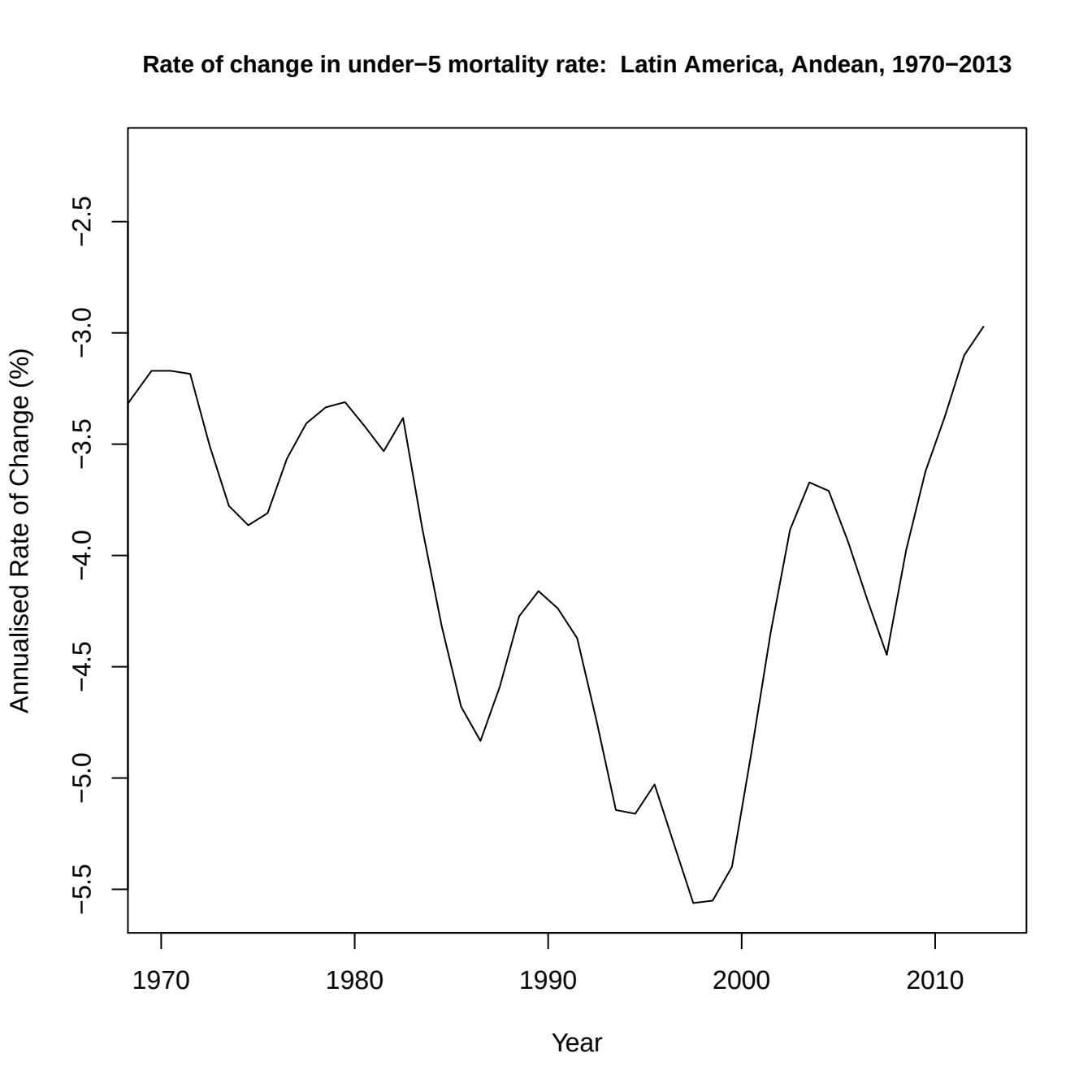

Rate of change in under−5 mortality rate: Australasia, 1970−2013
Annualised Rate of Change (%)
2
0
−2
−4
−6
−8
−10
1970
1980
1990
2000
2010
Year

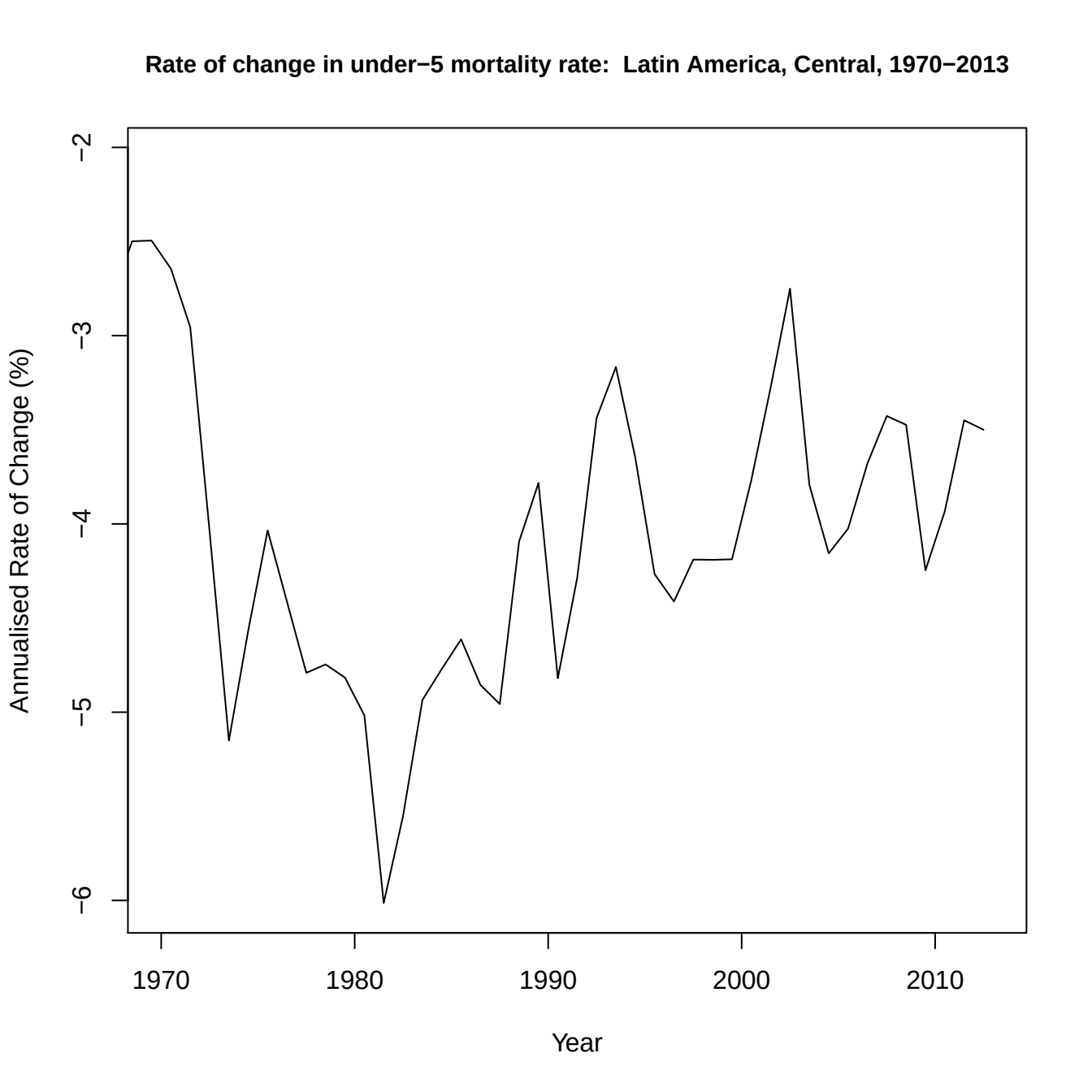

Rate of change in under−5 mortality rate: Caribbean, 1970−2013
Annualised Rate of Change (%)
1
0
−1
−2
−3
−4
−5
1970
1980
1990
2000
2010
Year

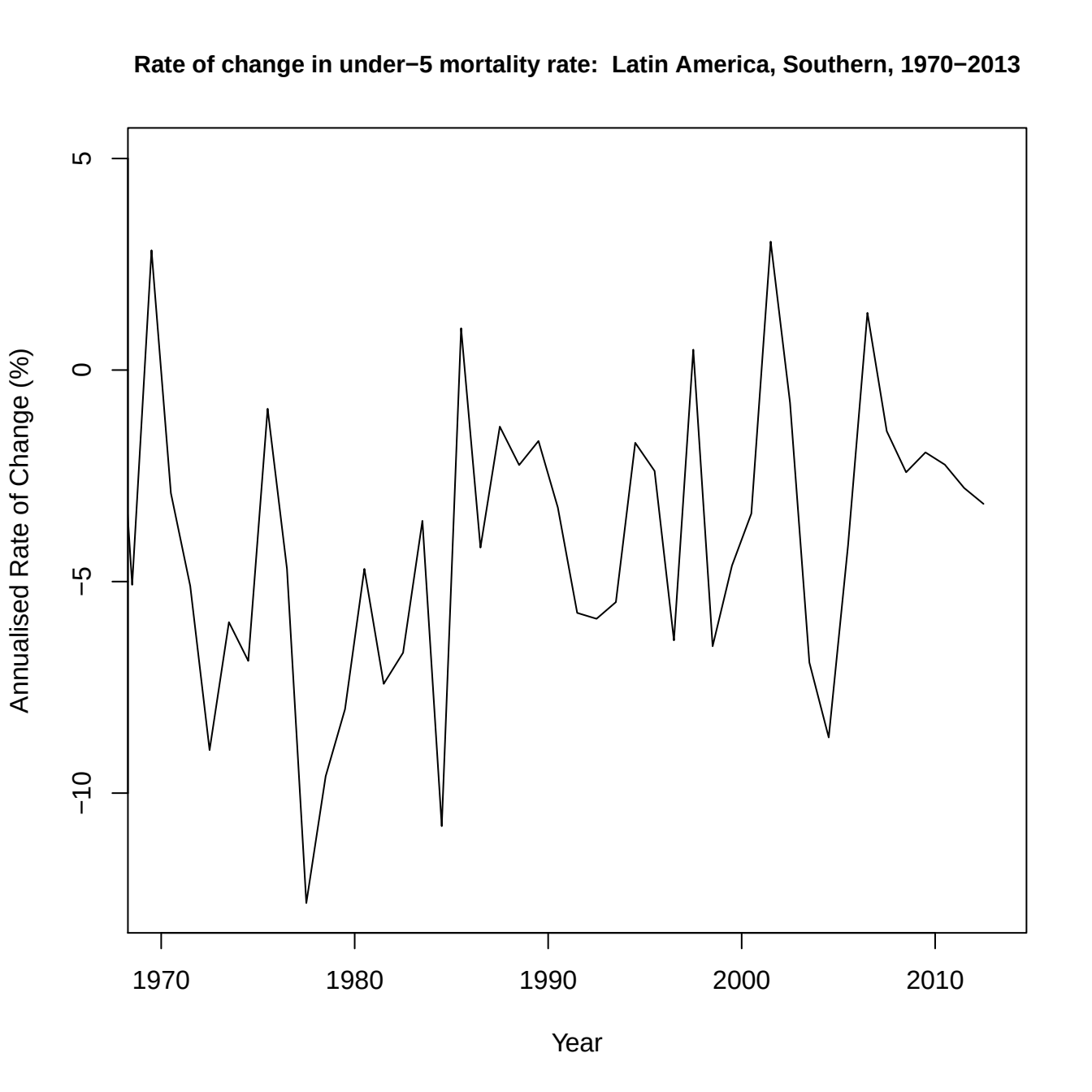

Rate of change in under−5 mortality rate: Europe, Central, 1970−2013
Annualised Rate of Change (%)
5
0
−5
−10
1970
1980
1990
2000
2010
Year

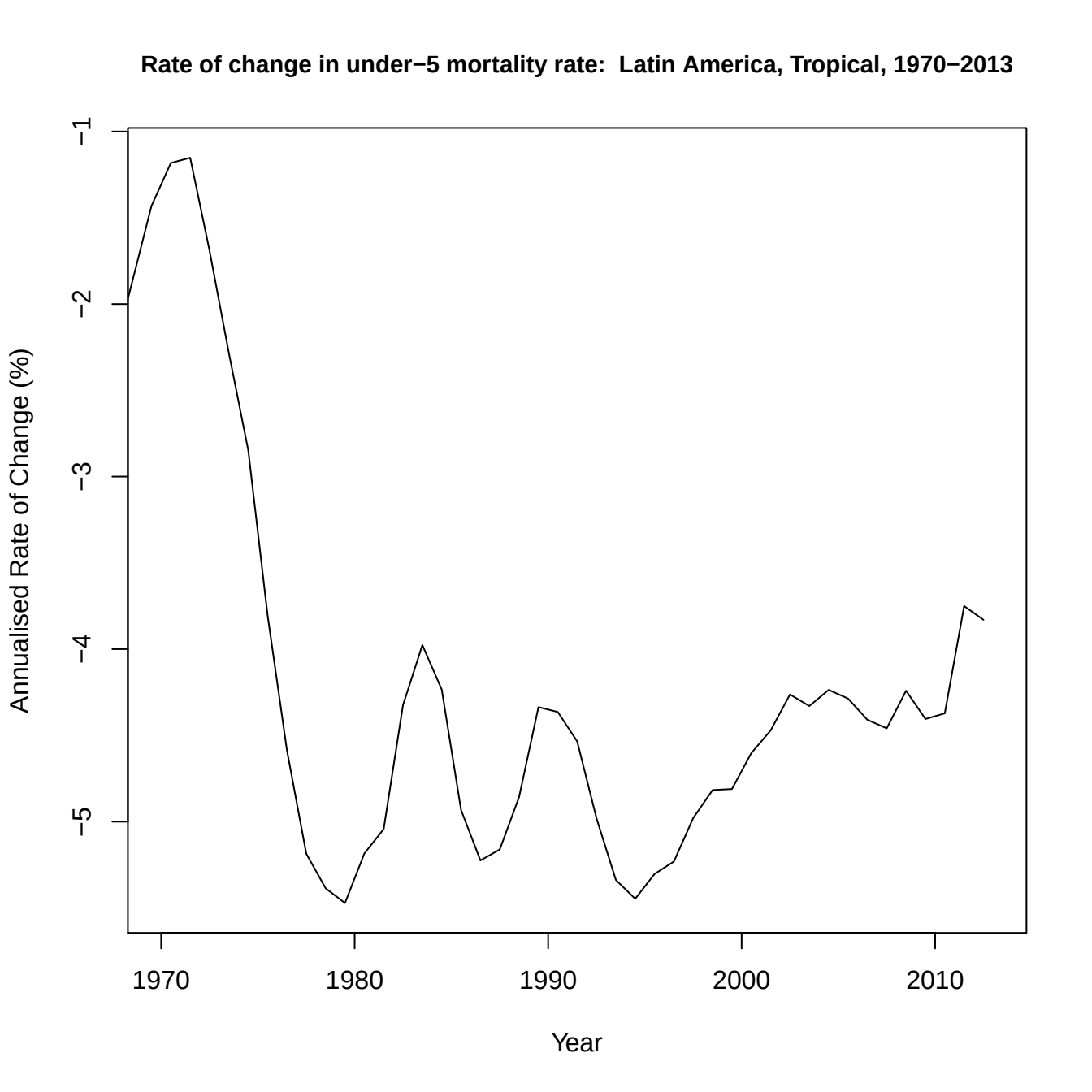

Rate of change in under−5 mortality rate: Europe, Eastern, 1970−2013
Annualised Rate of Change (%)
0
−1
−2
−3
−4
−5
−6
1970
1980
1990
2000
2010
Year

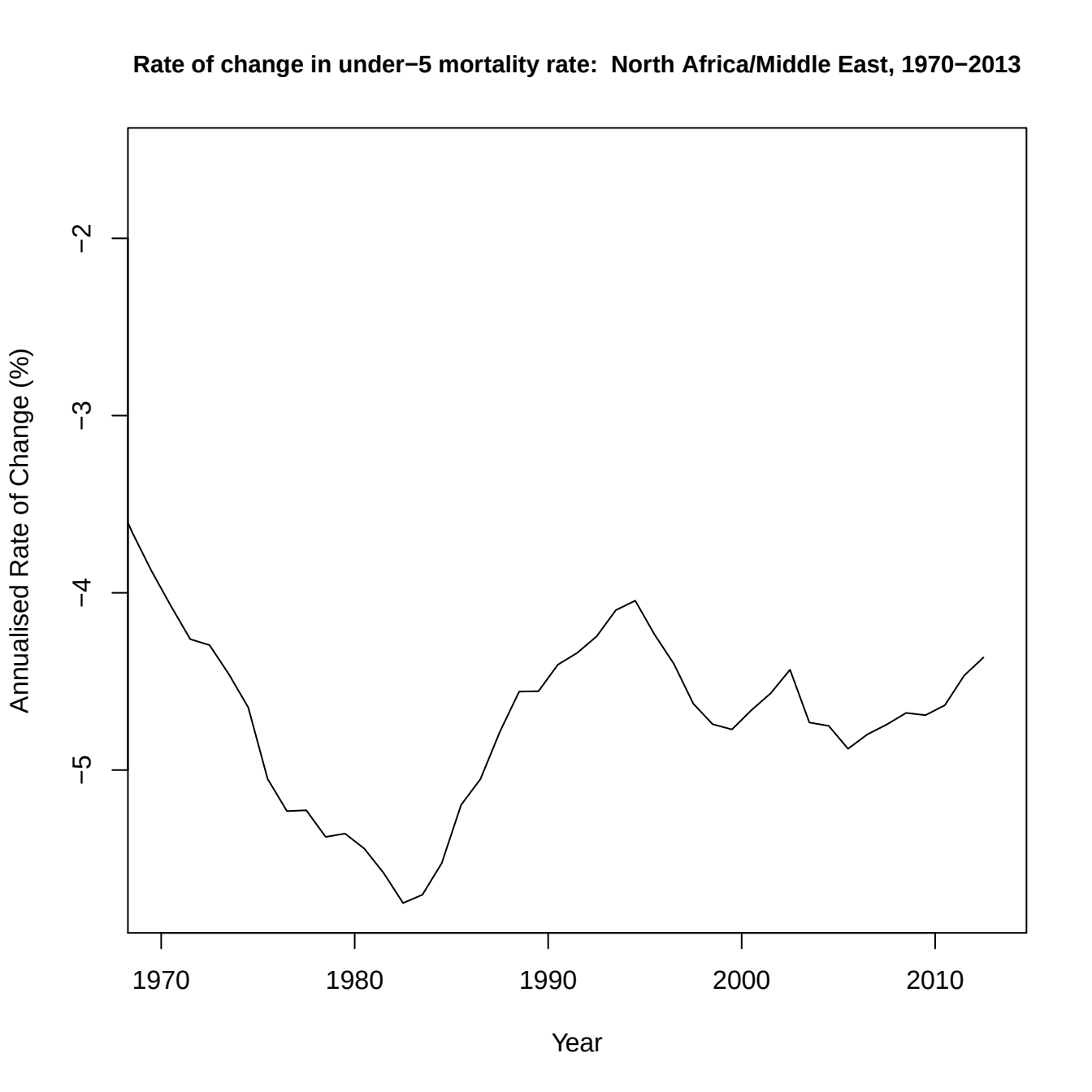

Rate of change in under−5 mortality rate: Europe, Western, 1970−2013
Annualised Rate of Change (%)
−2
−4
−6
−8
1970
1980
1990
2000
2010
Year

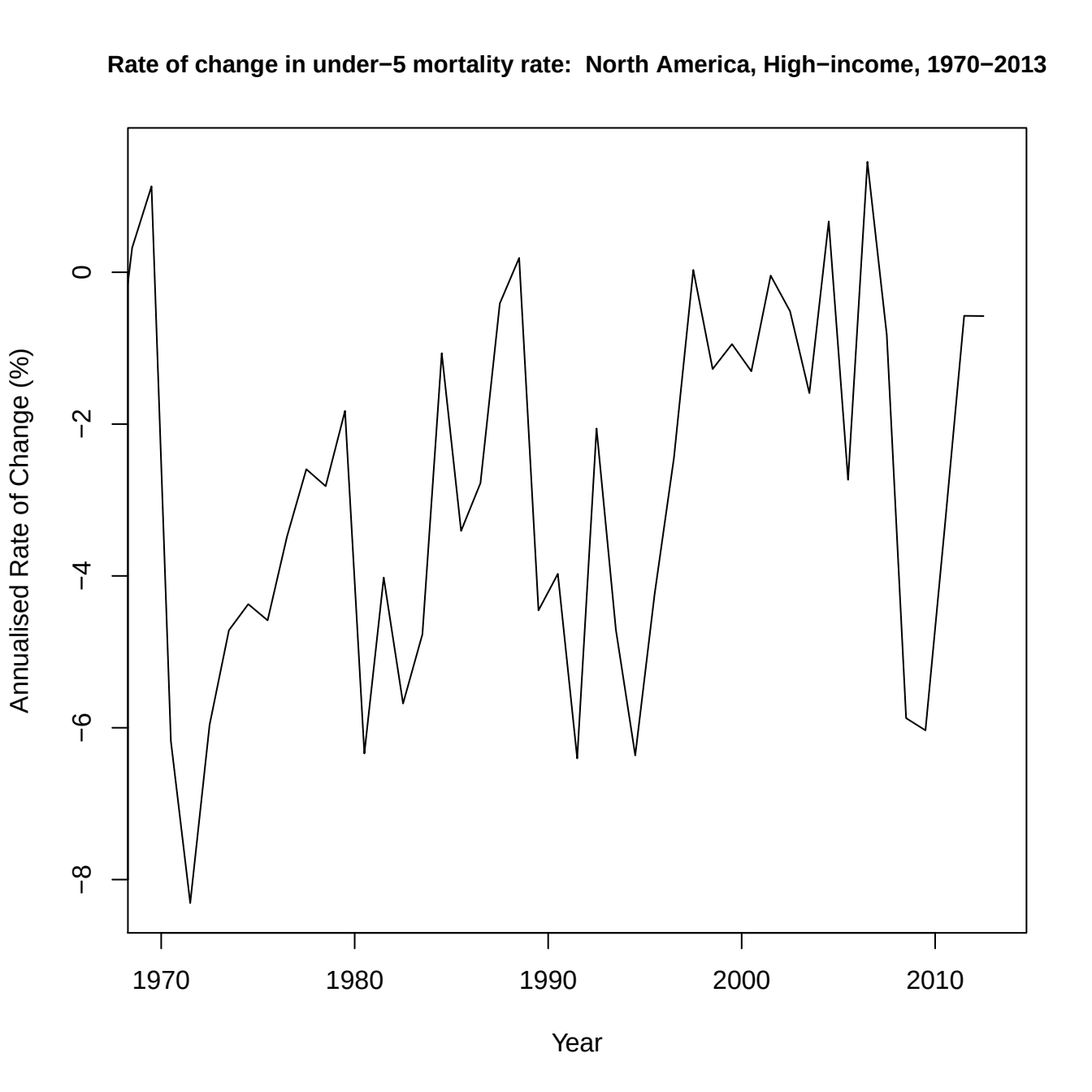

Rate of change in under−5 mortality rate: Latin America, Andean, 1970−2013
Annualised Rate of Change (%)
−2.5
−3.0
−3.5
−4.0
−4.5
−5.0
−5.5
1970
1980
1990
2000
2010
Year

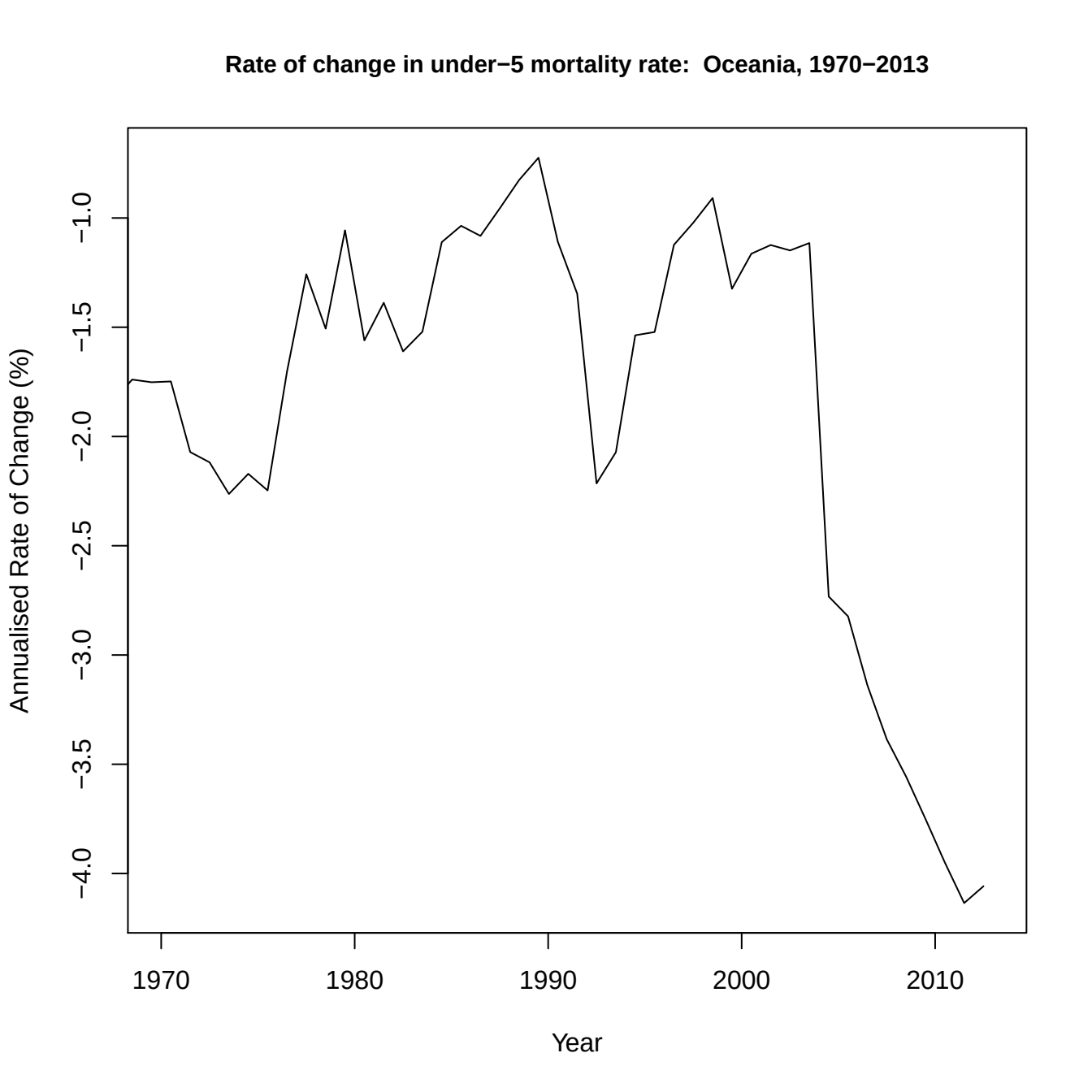

Rate of change in under−5 mortality rate: Latin America, Central, 1970−2013
Annualised Rate of Change (%)
−2
−3
−4
−5
−6
1970
1980
1990
2000
2010
Year

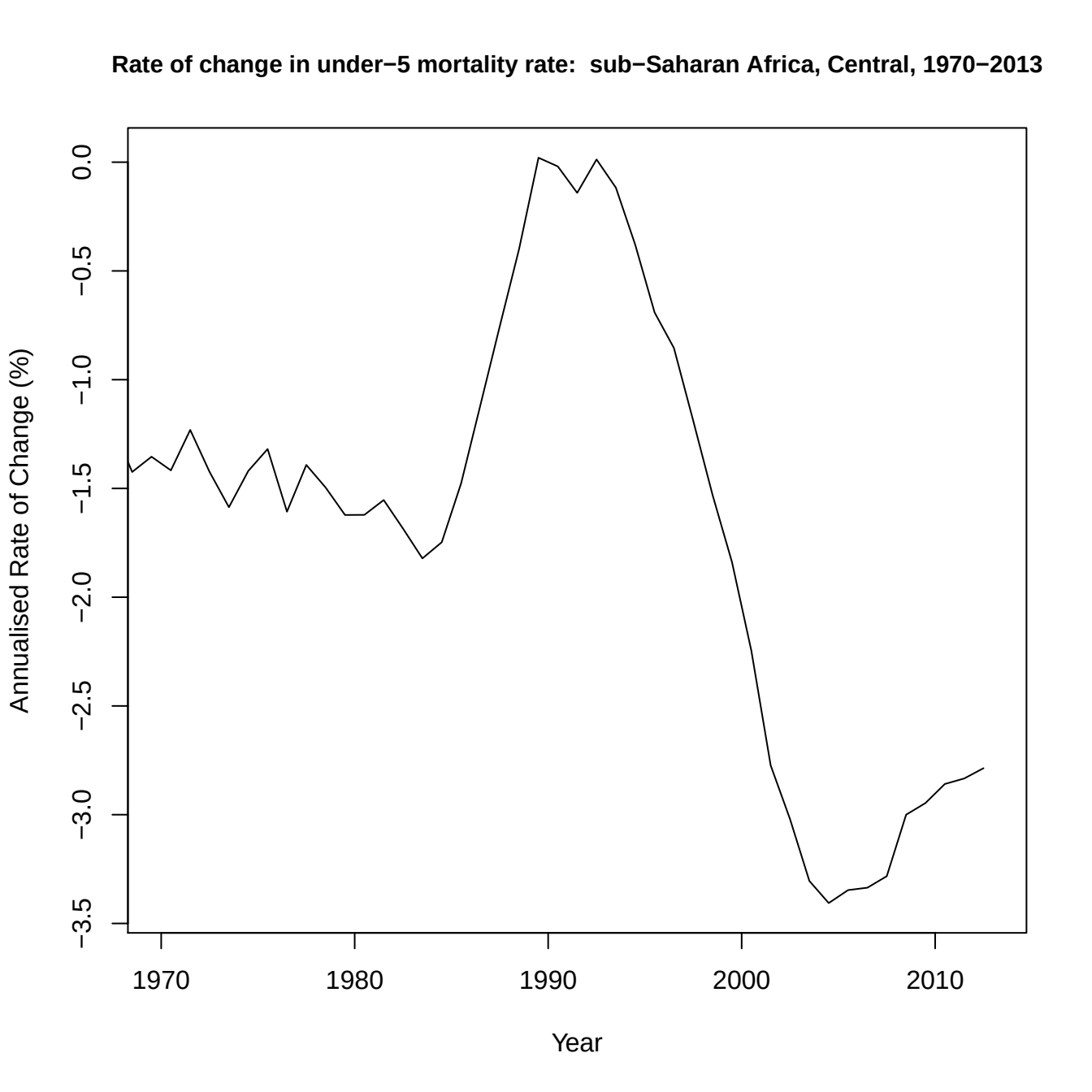

Rate of change in under−5 mortality rate: Latin America, Southern, 1970−2013
Annualised Rate of Change (%)
5
0
−5
−10
1970
1980
1990
2000
2010
Year

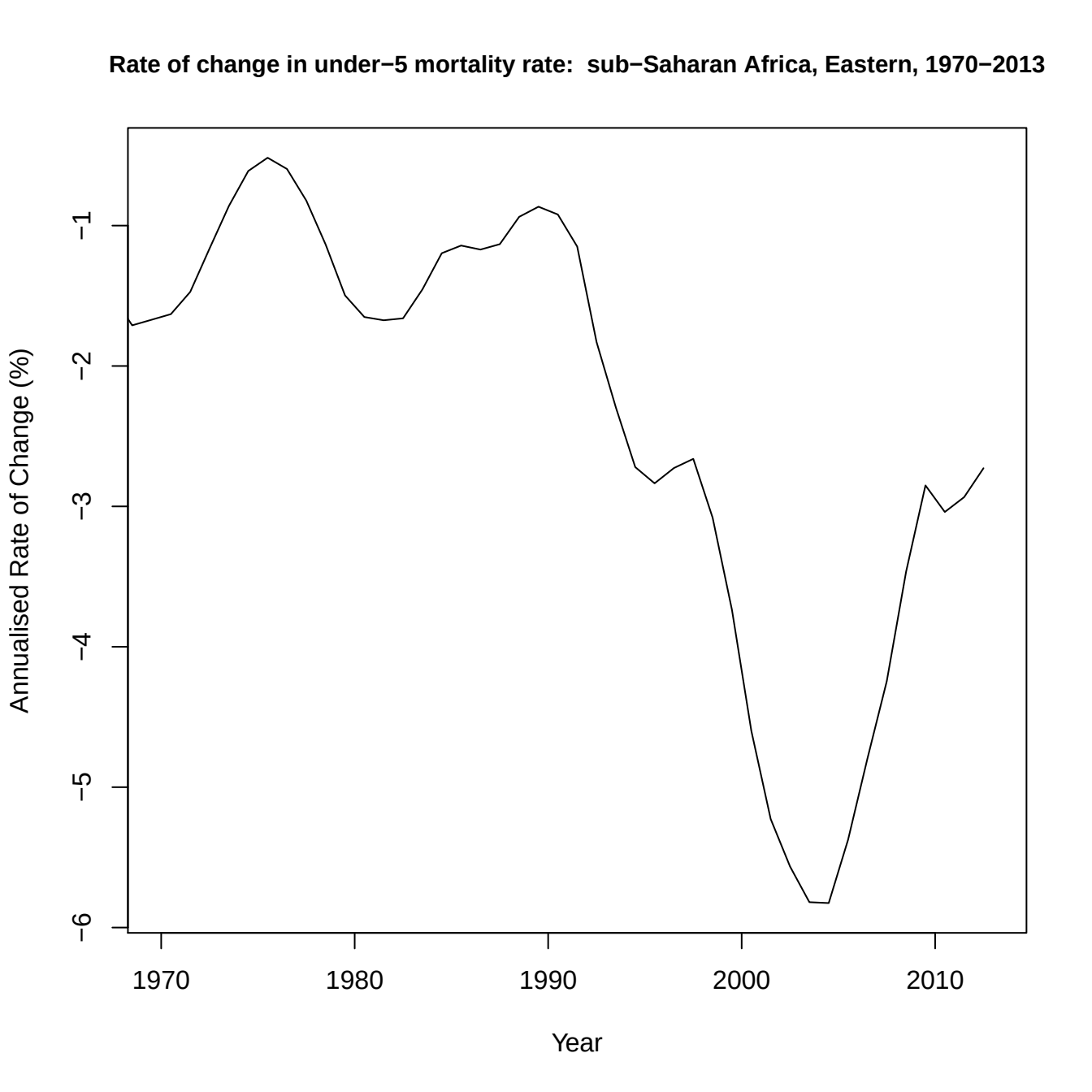

Rate of change in under−5 mortality rate: Latin America, Tropical, 1970−2013
Annualised Rate of Change (%)
−1
−2
−3
−4
−5
1970
1980
1990
2000
2010
Year

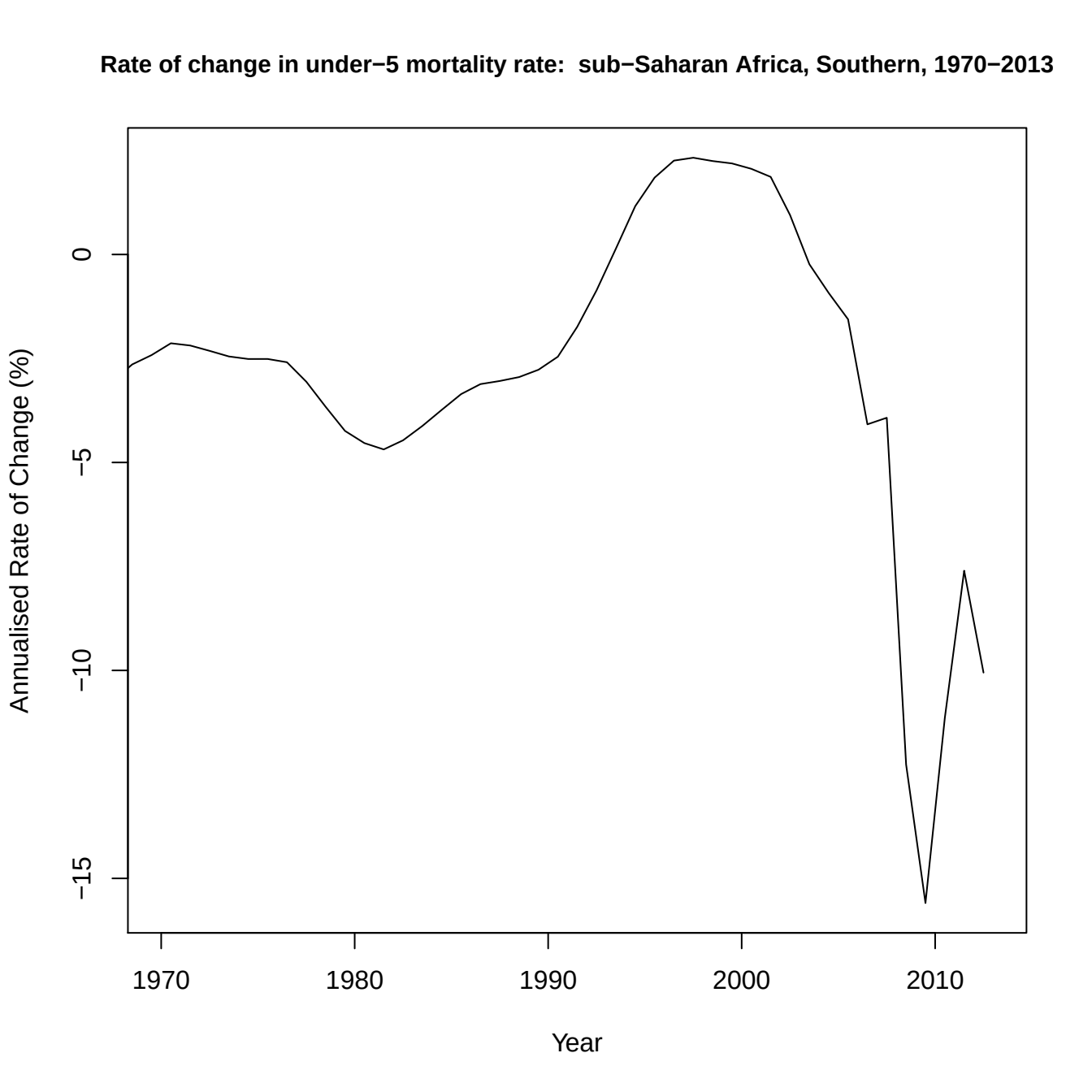

Rate of change in under−5 mortality rate: North Africa/Middle East, 1970−2013
Annualised Rate of Change (%)
−2
−3
−4
−5
1970
1980
1990
2000
2010
Year

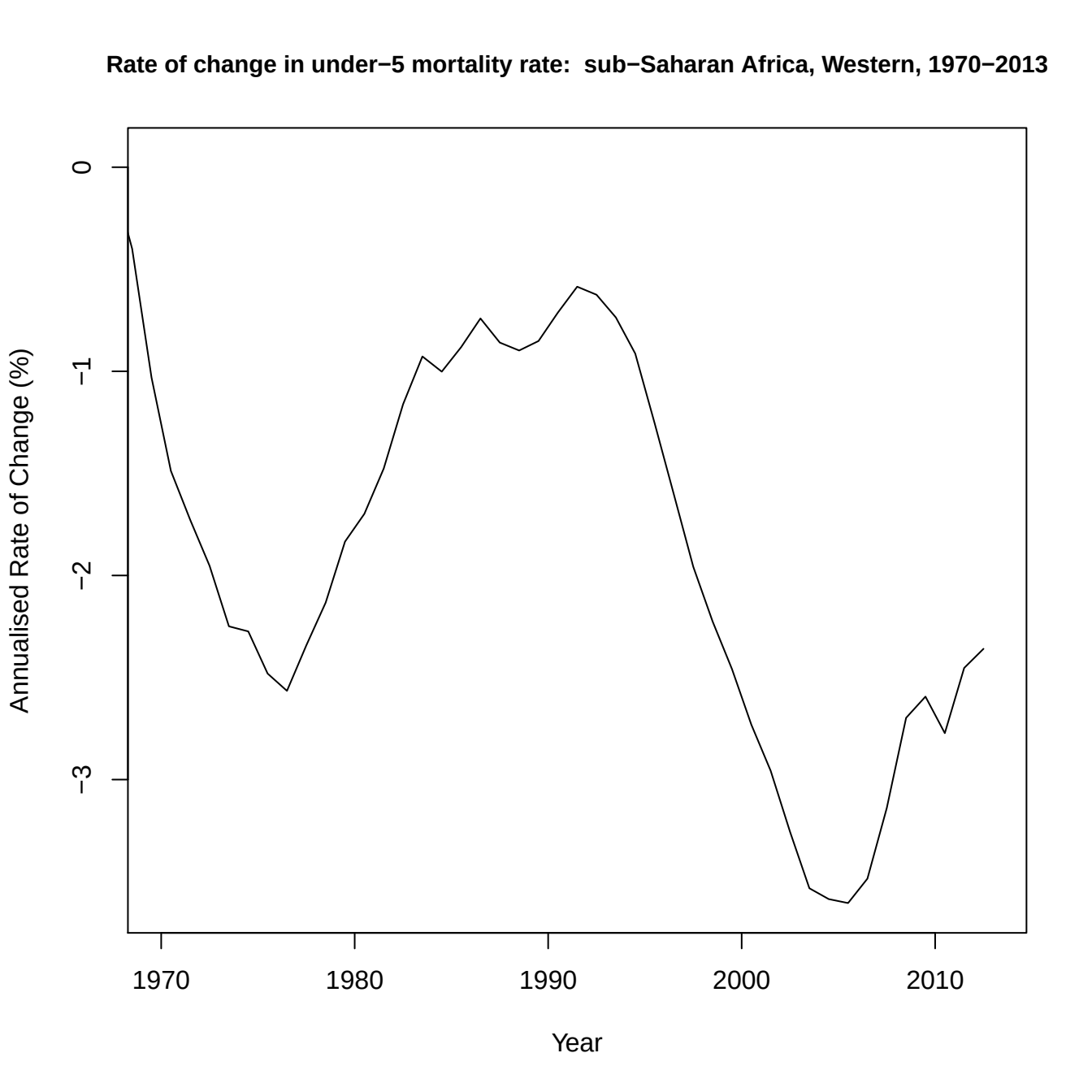

Rate of change in under−5 mortality rate: North America, High−income, 1970−2013
Annualised Rate of Change (%)
0
−2
−4
−6
−8
1970
1980
1990
2000
2010
Year


Rate of change in under−5 mortality rate: Oceania, 1970−2013
Annualised Rate of Change (%)
−1.0
−1.5
−2.0
−2.5
−3.0
−3.5
−4.0
1970
1980
1990
2000
2010
Year


Rate of change in under−5 mortality rate: sub−Saharan Africa, Central, 1970−2013
Annualised Rate of Change (%)
0.0
−0.5
−1.0
−1.5
−2.0
−2.5
−3.0
−3.5
1970
1980
1990
2000
2010
Year


Rate of change in under−5 mortality rate: sub−Saharan Africa, Eastern, 1970−2013
Annualised Rate of Change (%)
−1
−2
−3
−4
−5
−6
1970
1980
1990
2000
2010
Year


Rate of change in under−5 mortality rate: sub−Saharan Africa, Southern, 1970−2013
Annualised Rate of Change (%)
0
−5
−10
−15
1970
1980
1990
2000
2010
Year


Rate of change in under−5 mortality rate: sub−Saharan Africa, Western, 1970−2013
Annualised Rate of Change (%)
0
−1
−2
−3
1970
1980
1990
2000
2010
Year