

Country Summary: Nepal

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1 Intro

These estimates are created using the BB8 model with Admin 2 estimates using a RW1xICAR interaction model with area-specific random slopes.

Nepal has 7 Admin 1 areas and 77 Admin 2 areas.

All uncertainty intervals displayed in subsequent figures are 95% intervals.

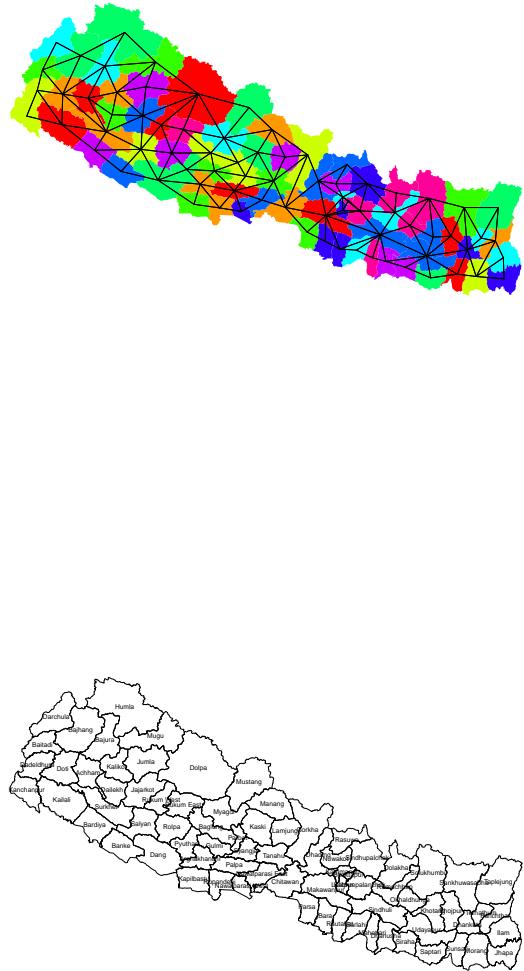


Figure 1: Top: The neighborhood structure of Admin 2 areas. Bottom: The names of Admin 2 areas.

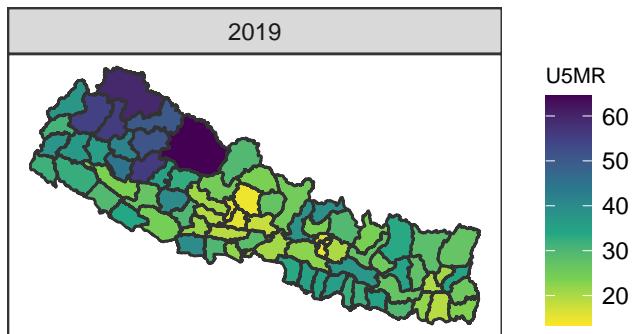
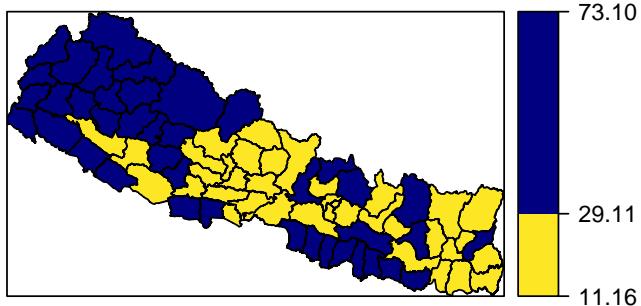


Figure 2: Median estimates of U5MR (deaths per 1000 children) in 2019.

ATCP = 0.80



ATCP = 0.66

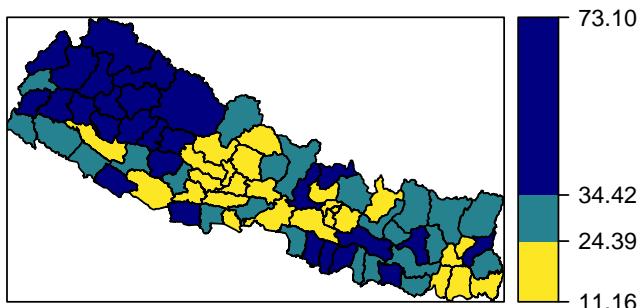


Figure 3: Expression of uncertainty of U5MR (deaths per 1000 children) based on the average true classification probability (ATCP) in 2019.

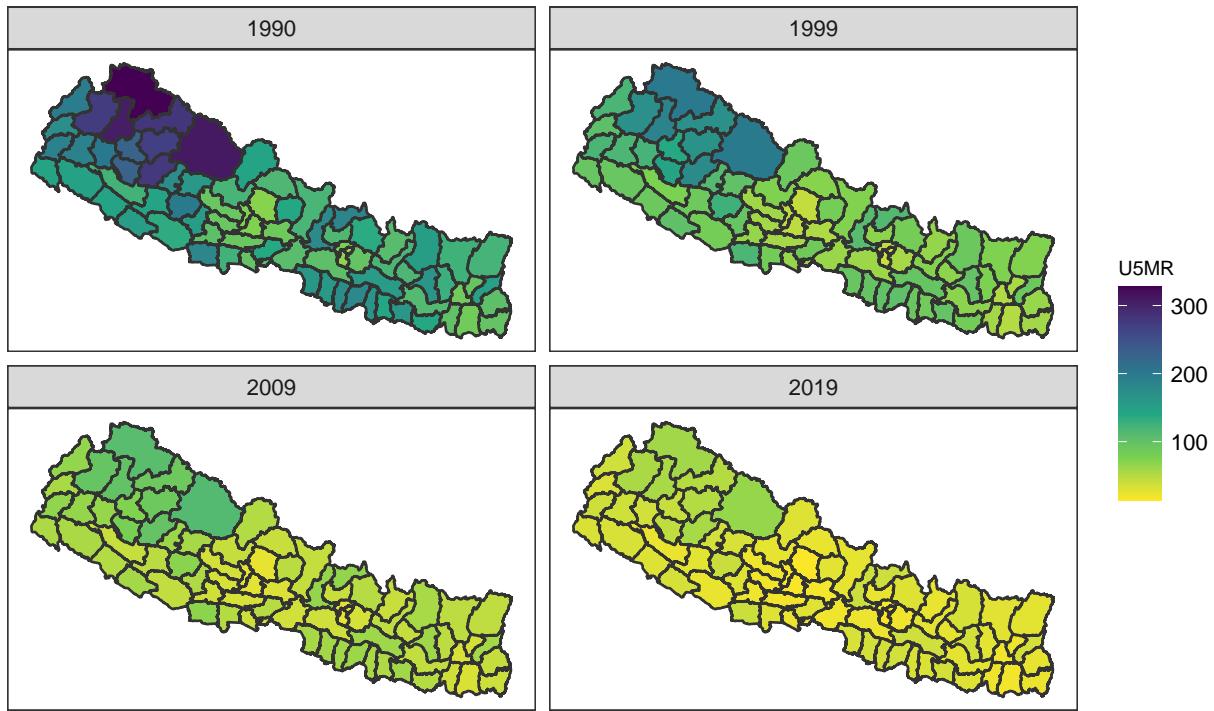


Figure 4: Median estimates for selected years.

Nepal

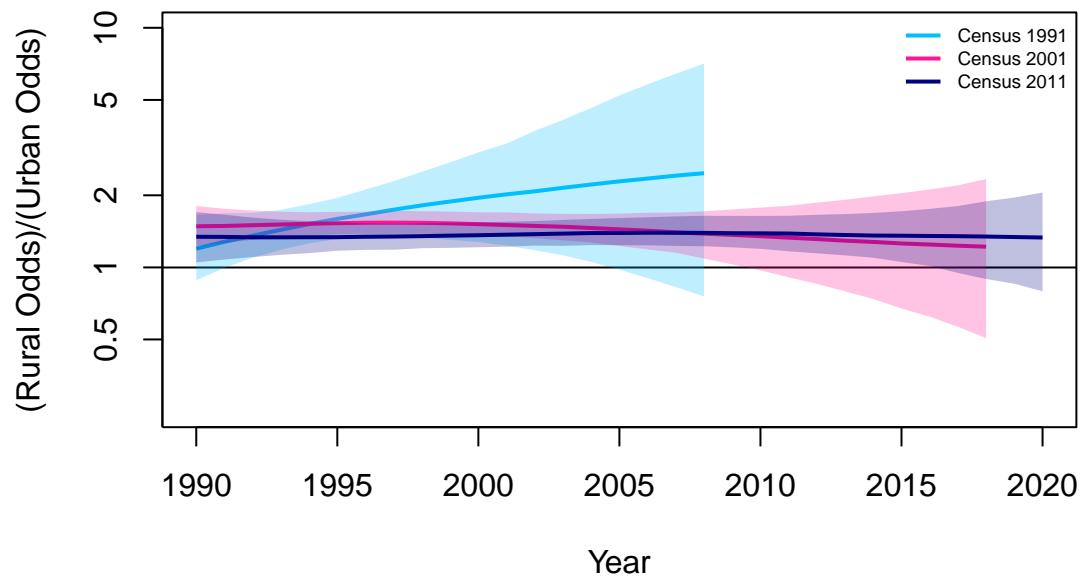
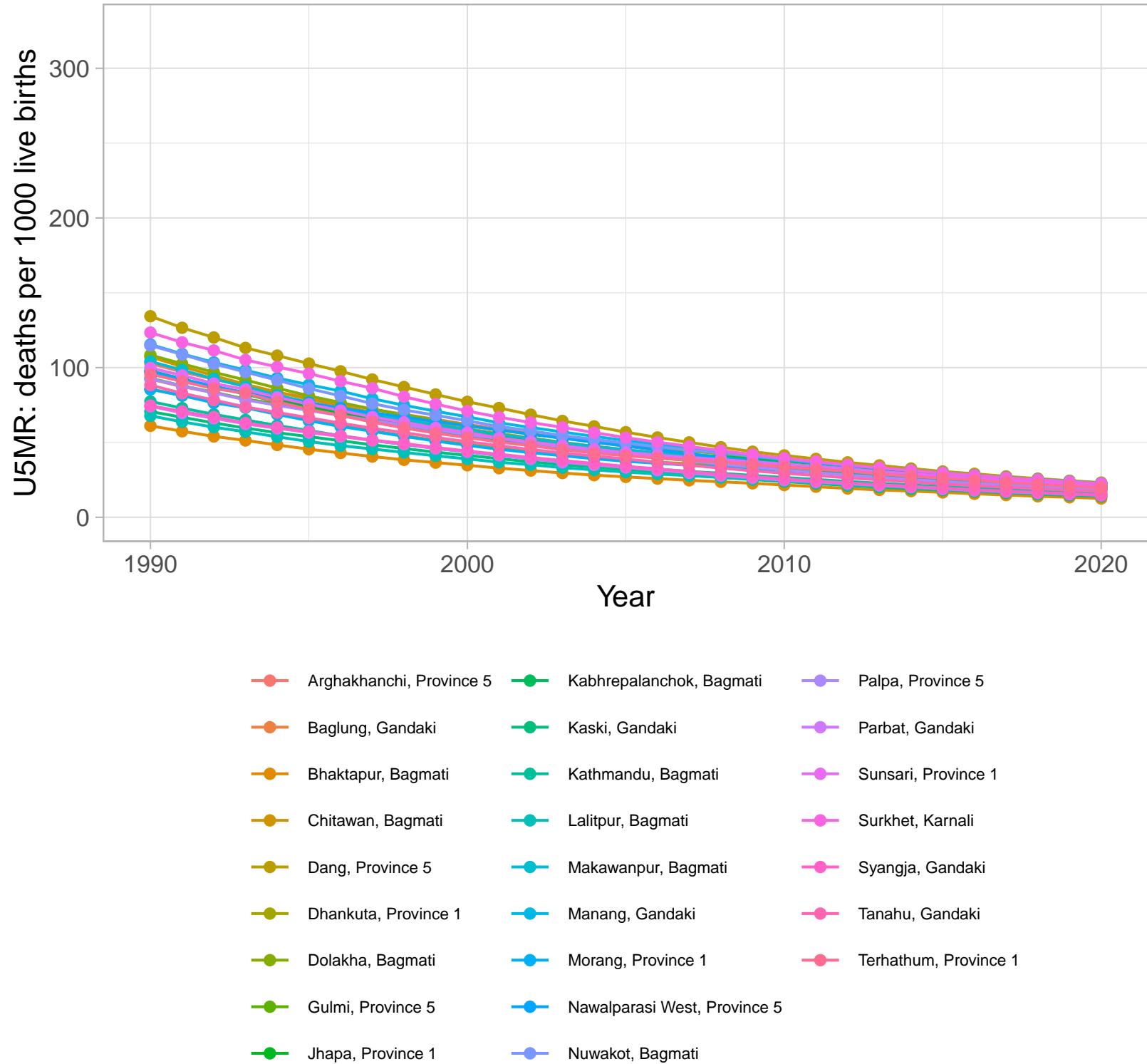
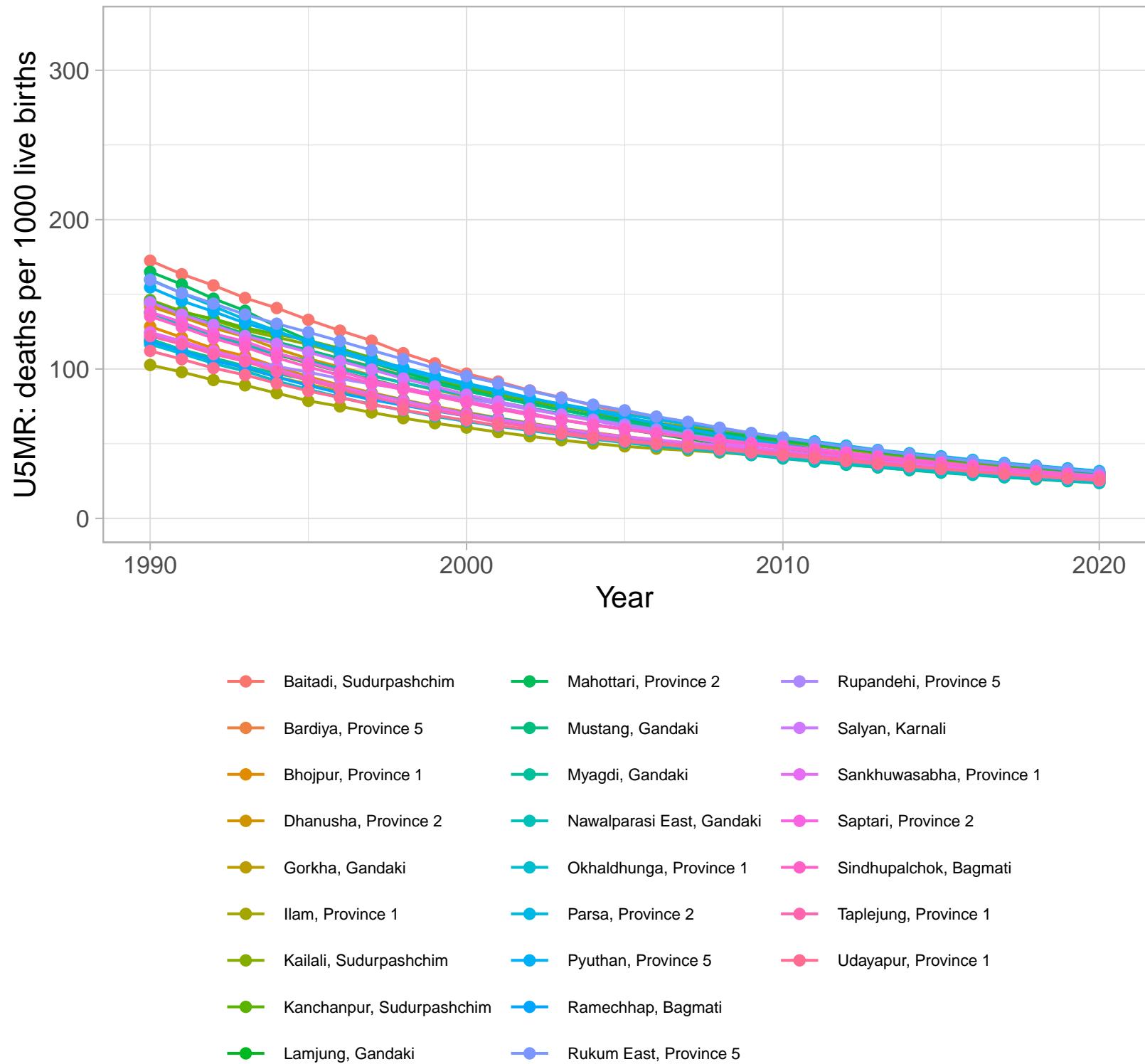


Figure 5: Ratio of odds of Rural U5MR to odds of Urban U5MR, by sampling frame.

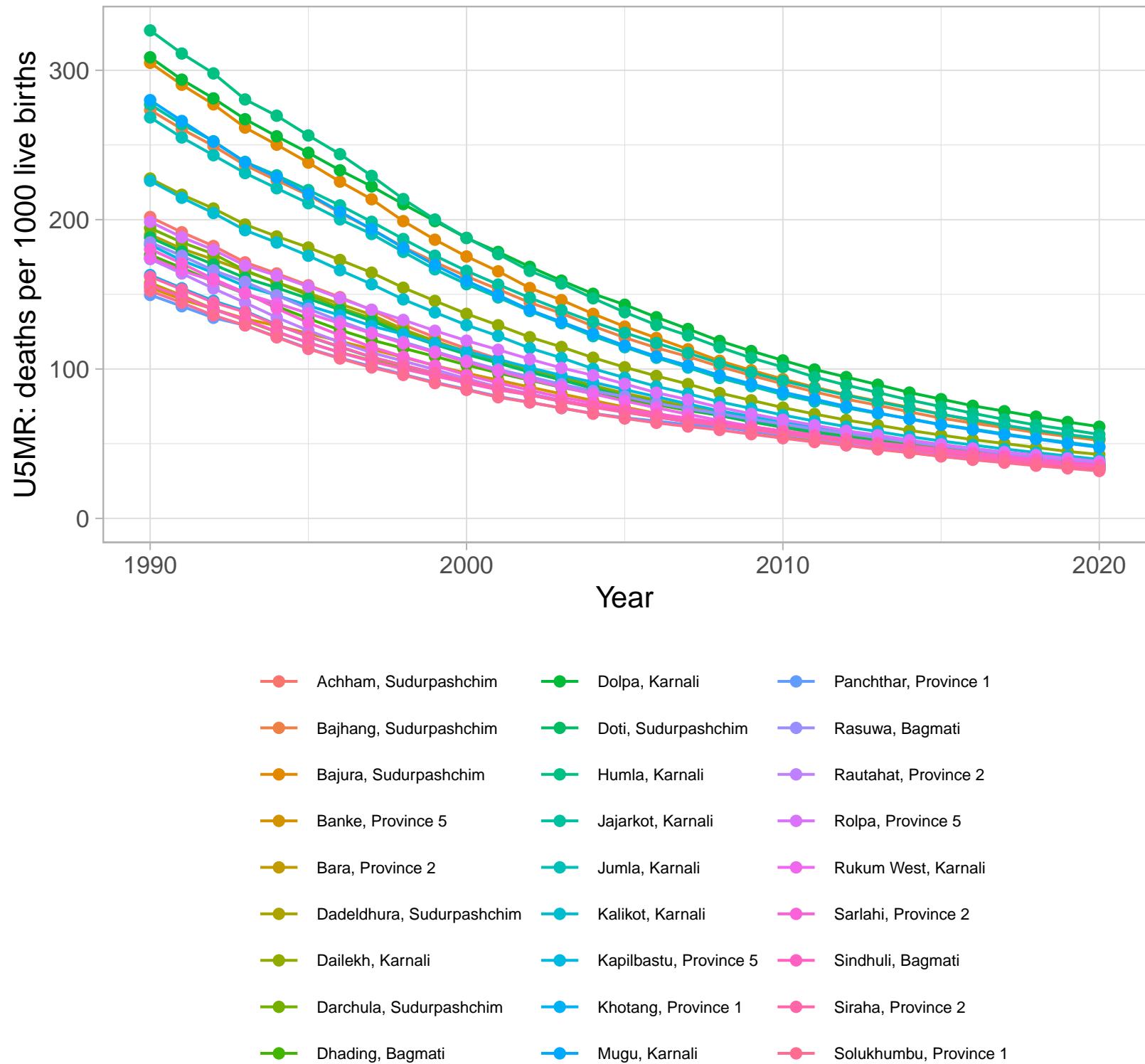
Nepal



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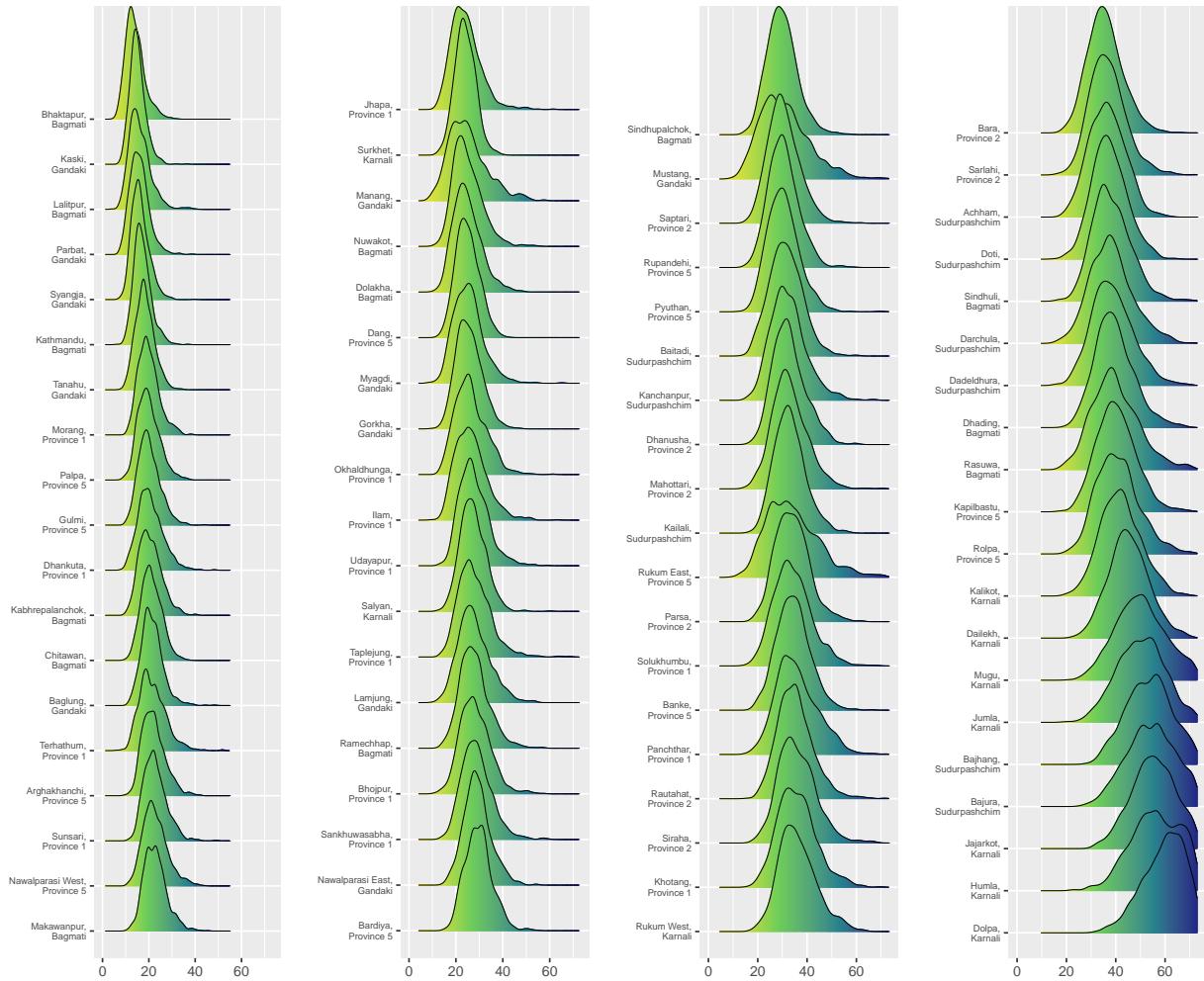


Figure 6: Posterior distributions of U5MR (deaths per 1000 children) in 2019. Areas are ordered by median estimated U5MR in 2019.

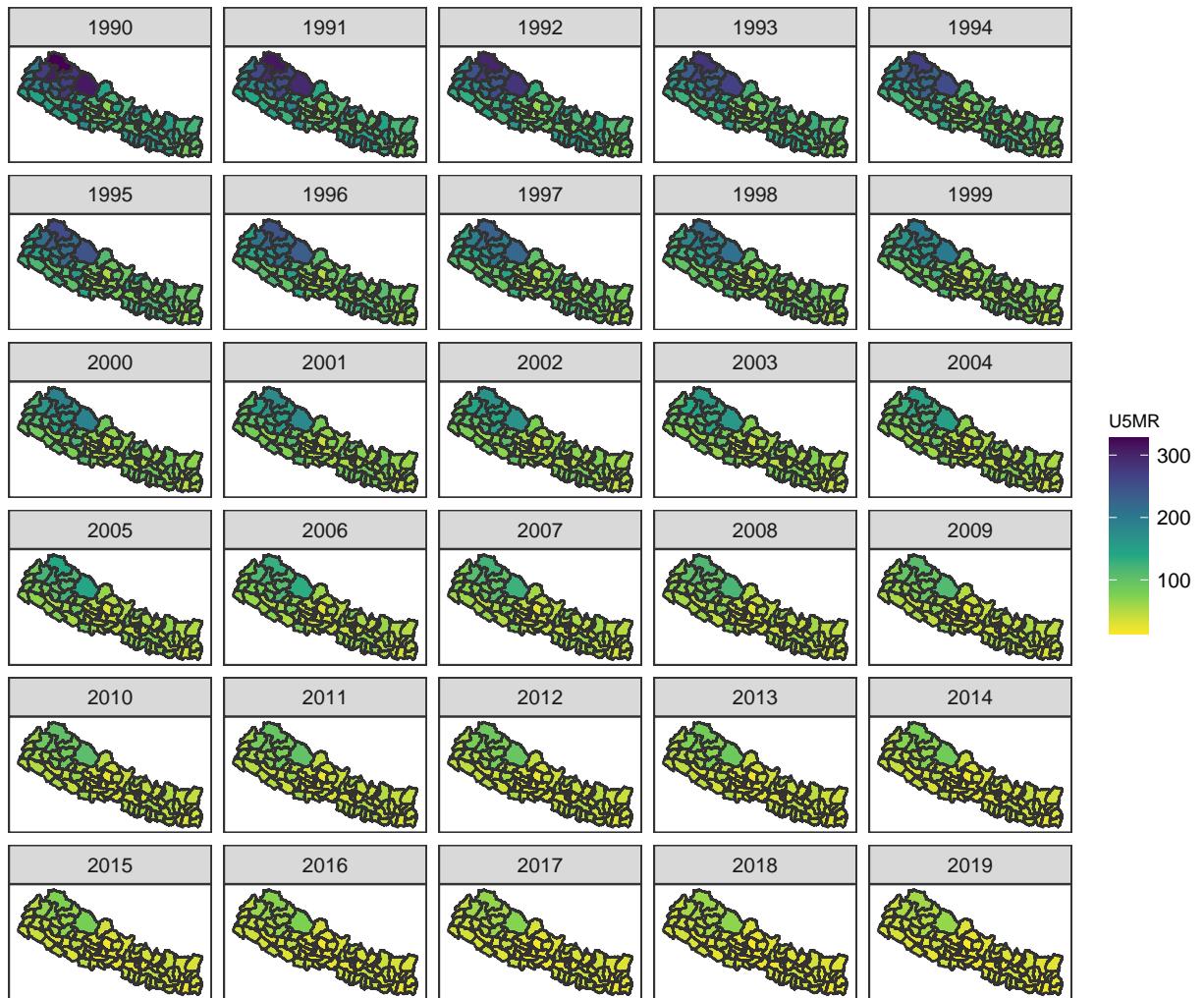


Figure 7: Posterior medians of U5MR (deaths per 1000 births) by Admin 2 area and year.

2 National Survey Data

Survey	Urban	Rural	Total
2001	42	209	251
2006	82	178	260
2011	95	194	289
2016	243	140	383

Table 1: Number of clusters by urban/rural designation by survey for Nepal.

Age	No. Deaths	No. Agemonths
0	1105	25013
1-11	395	256550
12-23	206	268700
24-35	46	257483
36-47	27	246501
48-59	22	235697

Table 2: Numbers of agemonths and deaths by age for DHS 2016.

Age	No. Deaths	No. Agemonths
0	1070	23015
1-11	508	235445
12-23	200	248759
24-35	80	241170
36-47	47	232500
48-59	45	223686

Table 3: Numbers of agemonths and deaths by age for DHS 2011.

Age	No. Deaths	No. Agemonths
0	934	18938
1-11	496	193905
12-23	183	204970
24-35	105	199035
36-47	68	192353
48-59	95	185709

Table 4: Numbers of agemonths and deaths by age for DHS 2006.

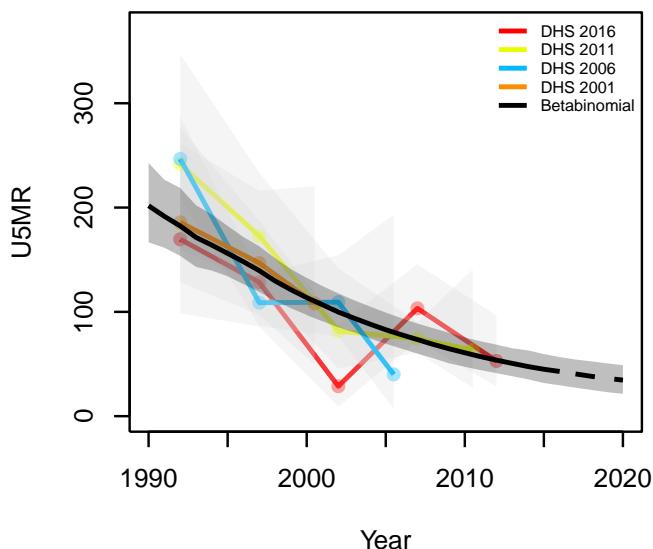
Age	No. Deaths	No. Agemonths
0	883	15693
1-11	439	158988
12-23	255	167927
24-35	110	162759
36-47	61	156687
48-59	53	151326

Table 5: Numbers of agemonths and deaths by age for DHS 2001.

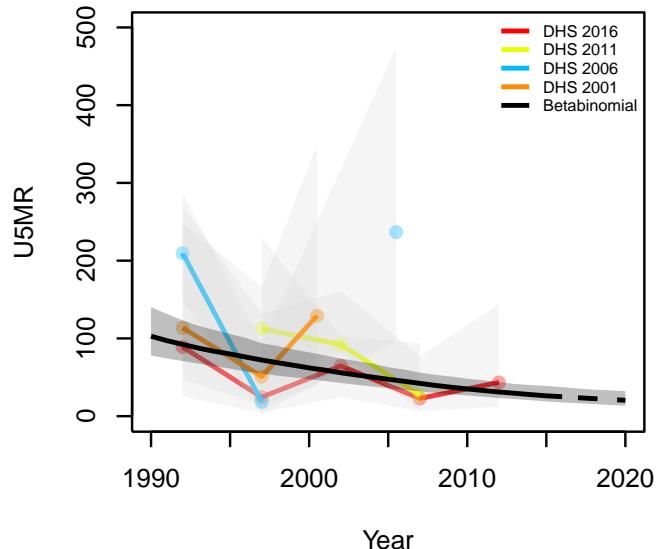
3 Admin 2 Figures

The following few pages have estimates by area across time with underlying data included. There are six admin areas per page, they are ordered by increasing median U5MR in the year 2019. Colored lines with circular points and light grey uncertainty bands are 5-year survey-weighted estimates of U5MR for years 1990–1994 up to 2015–2019 depending on survey timing. For a survey that ends in the middle of a 5-year period, we plot the estimates at the mid-point of the years in that interval for which the survey provides data. Black lines and corresponding intervals represent posterior medians and 95% uncertainty intervals respectively for the betabinomial model. IHME’s estimates and corresponding intervals, where we can compare, are in aquamarine.

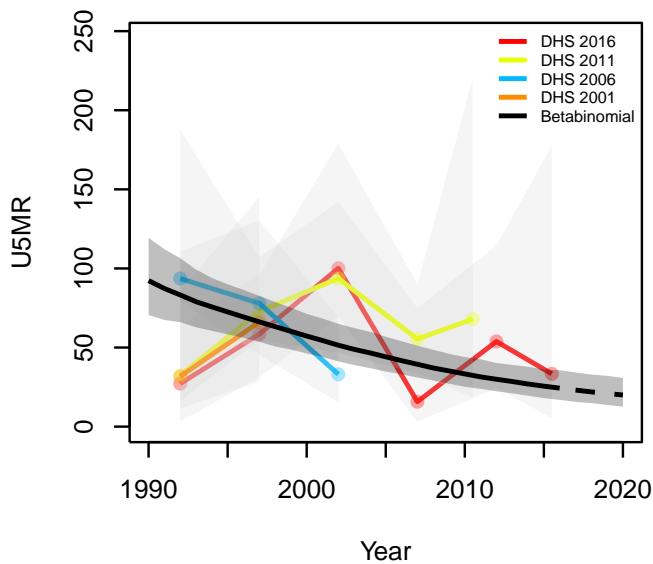
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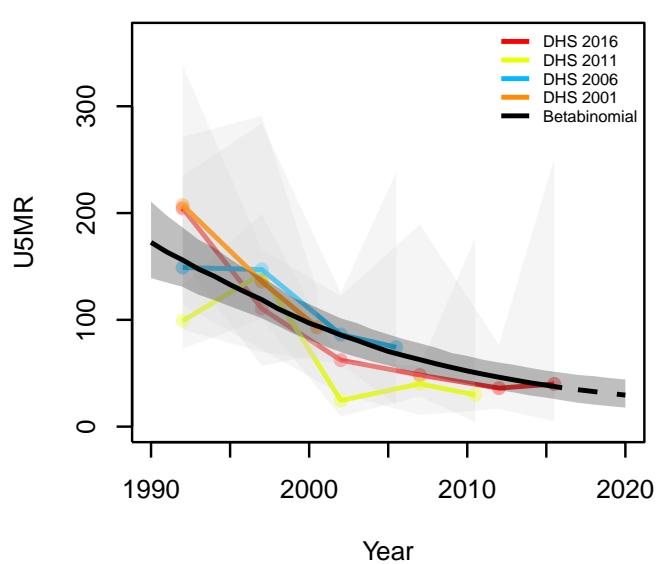
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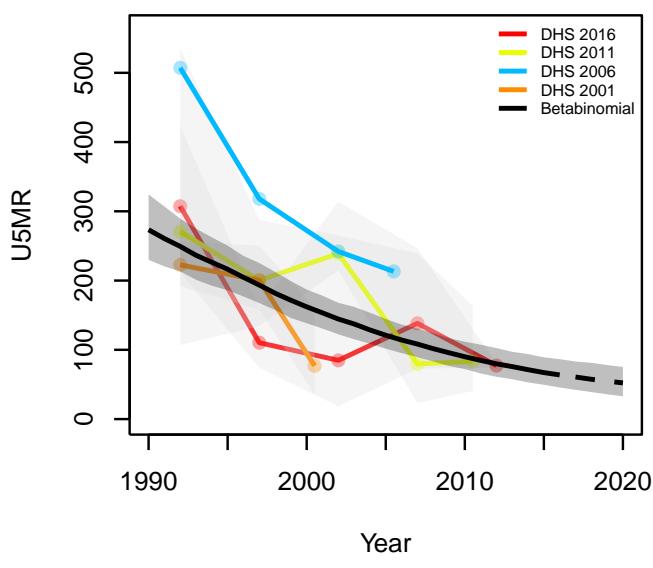
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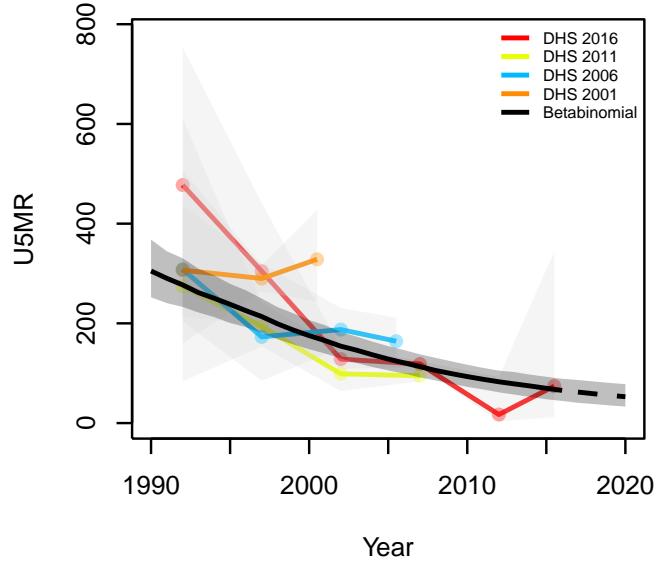
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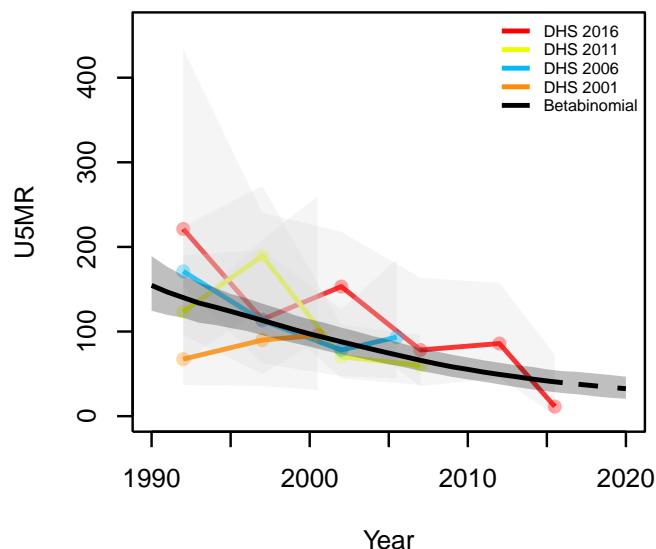
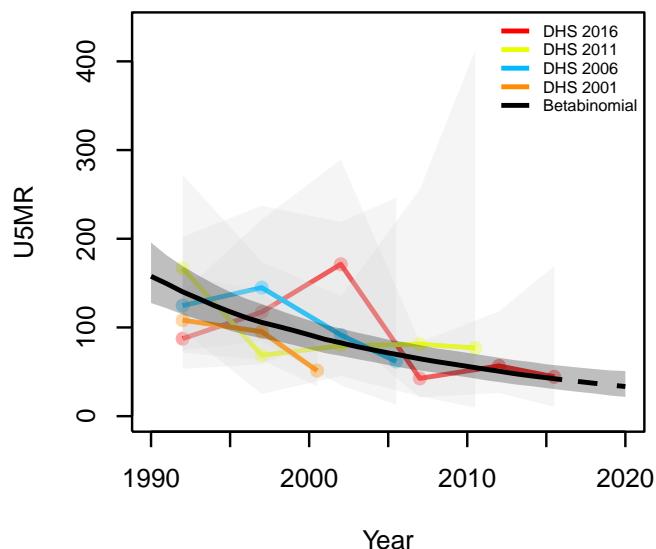
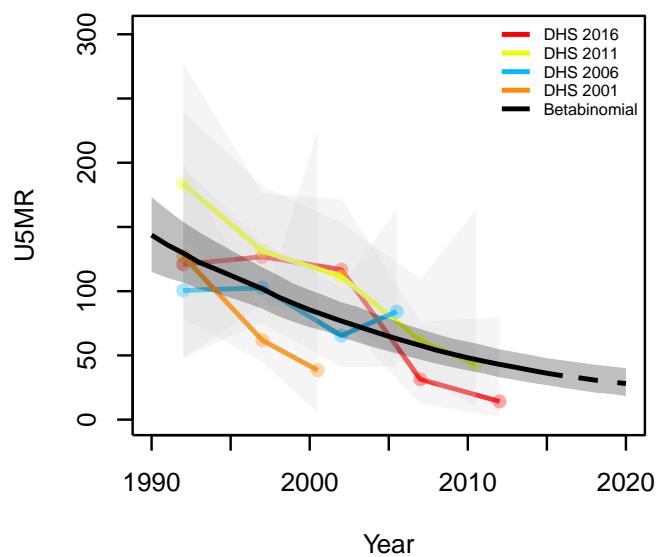
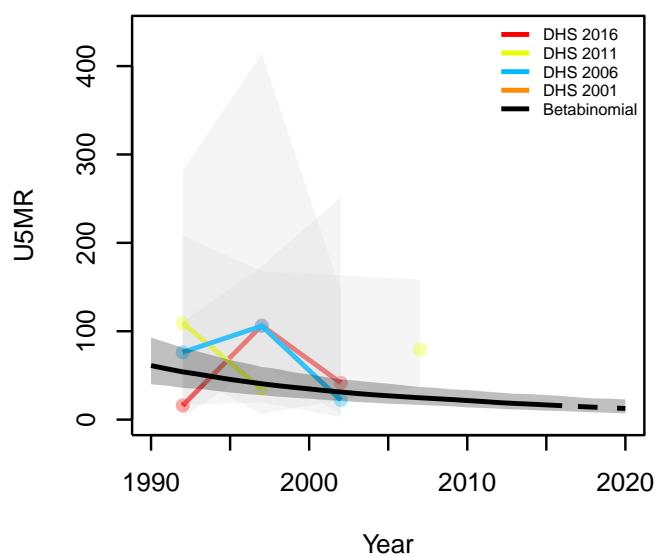
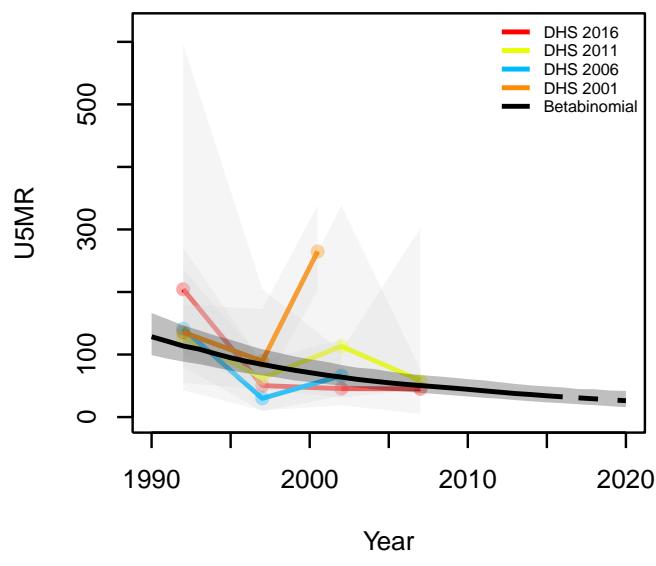
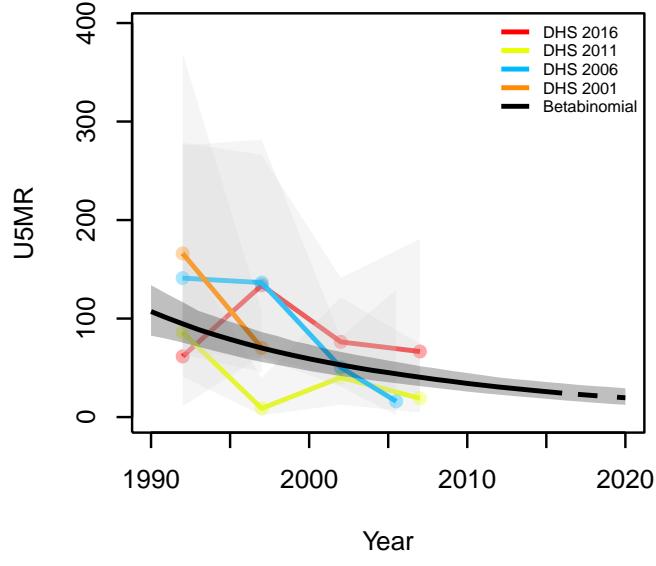


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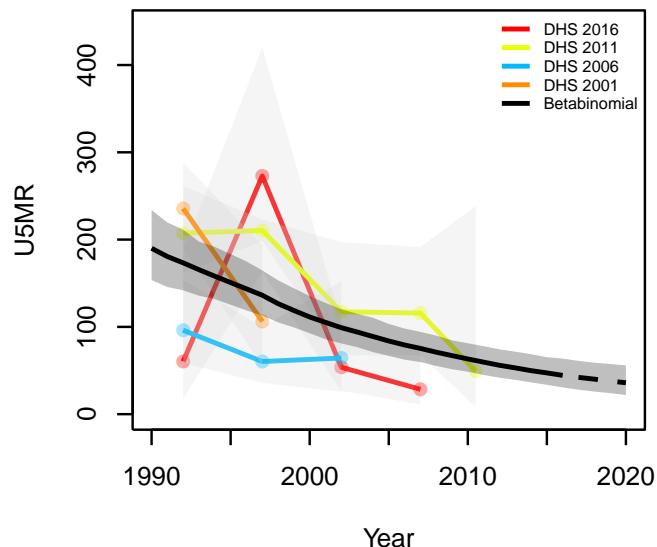


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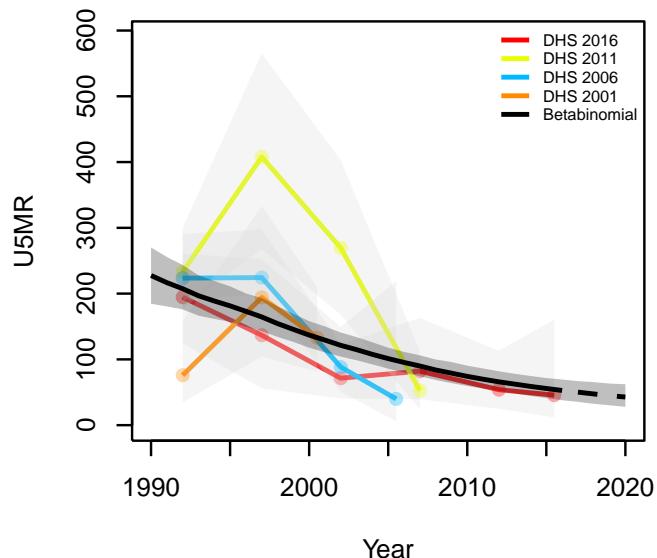


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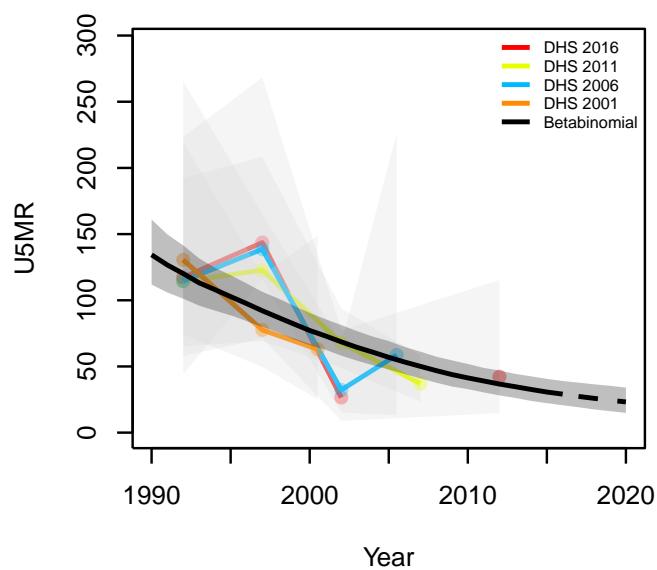
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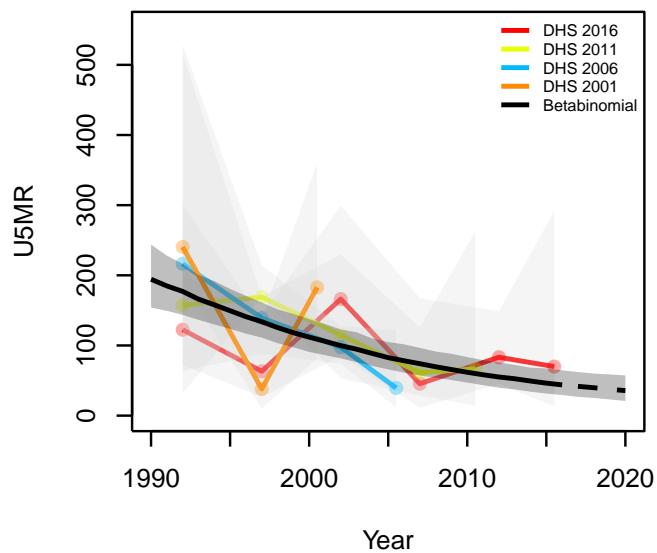
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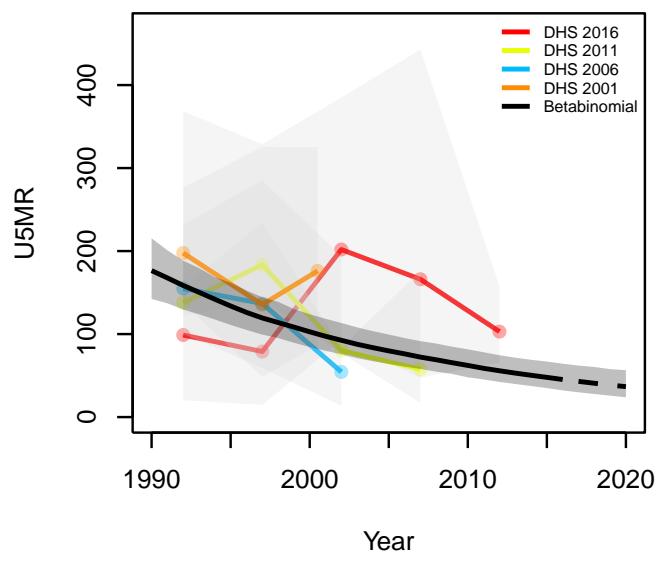
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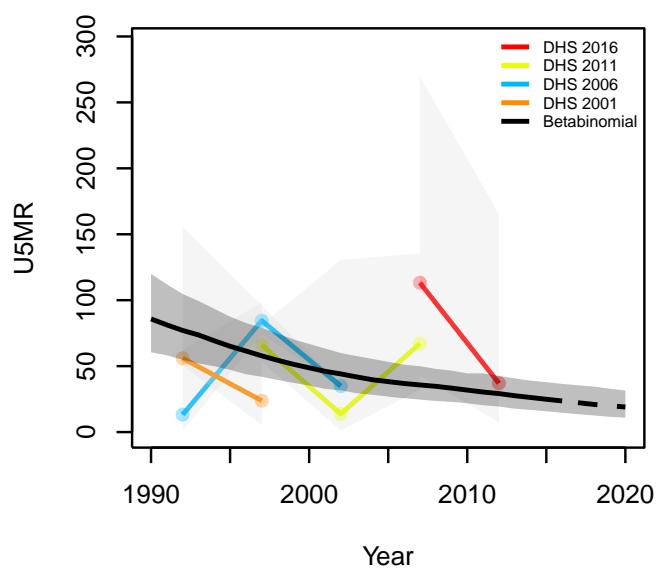
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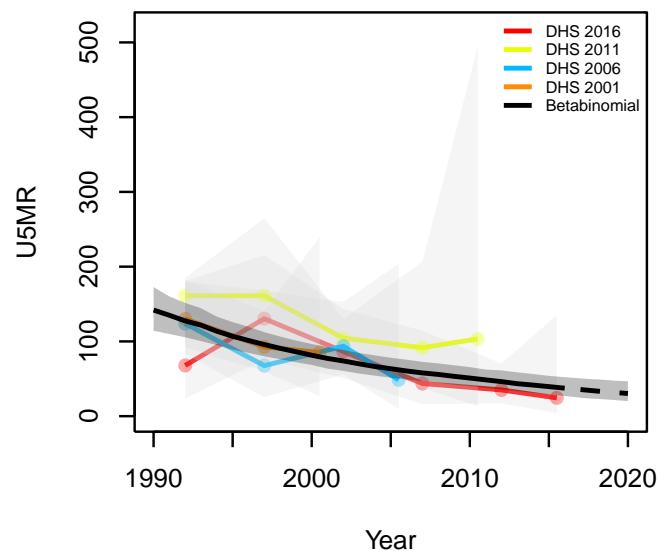
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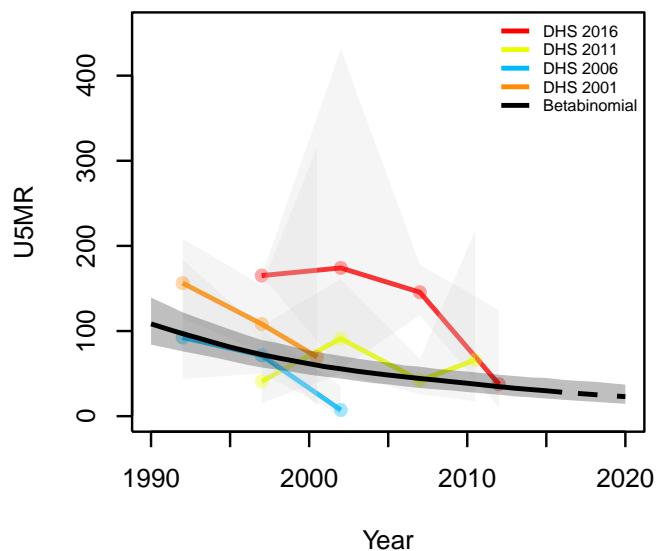
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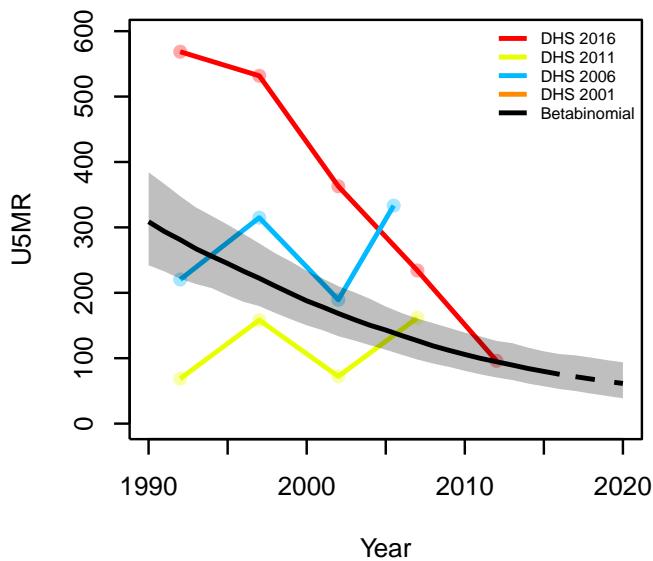
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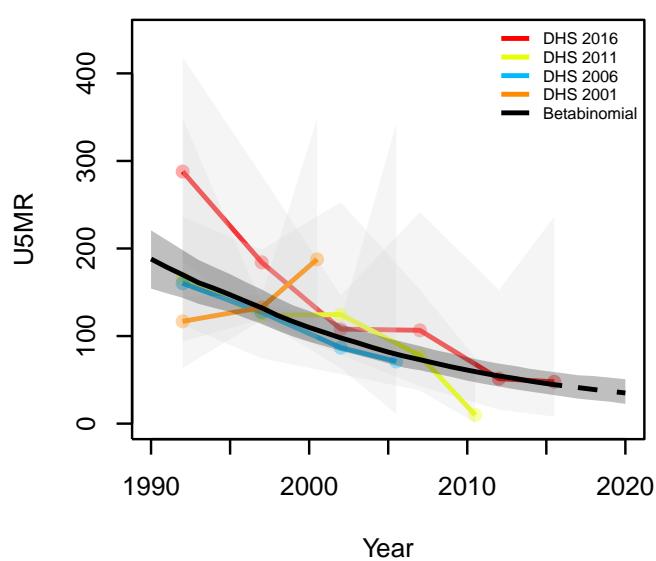
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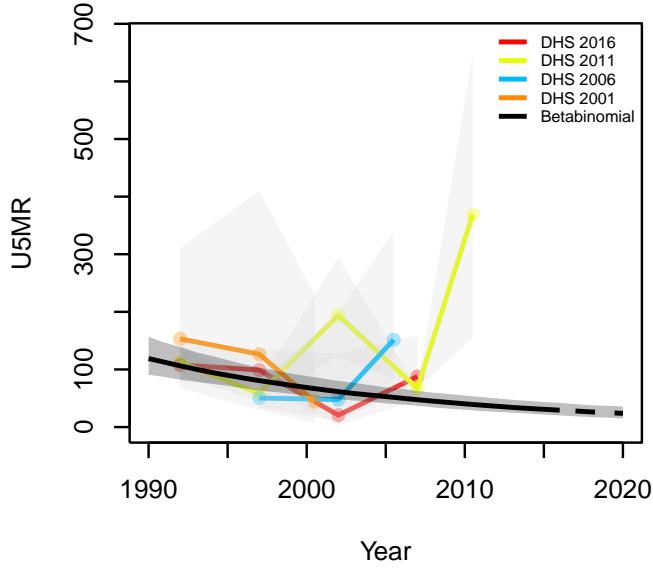
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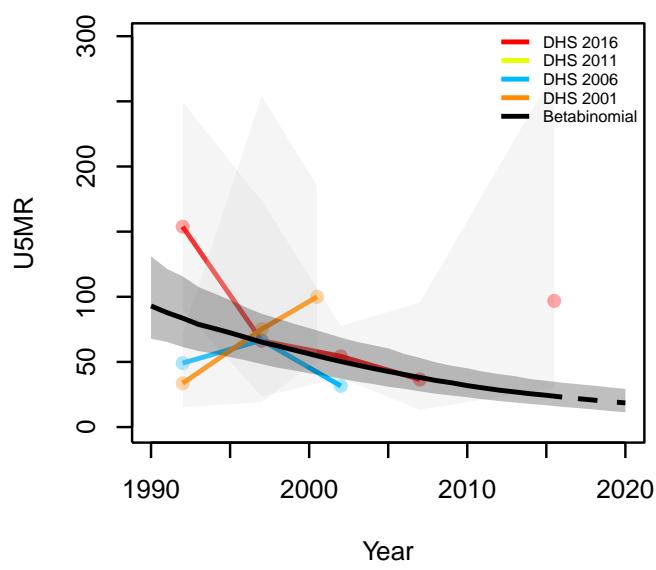
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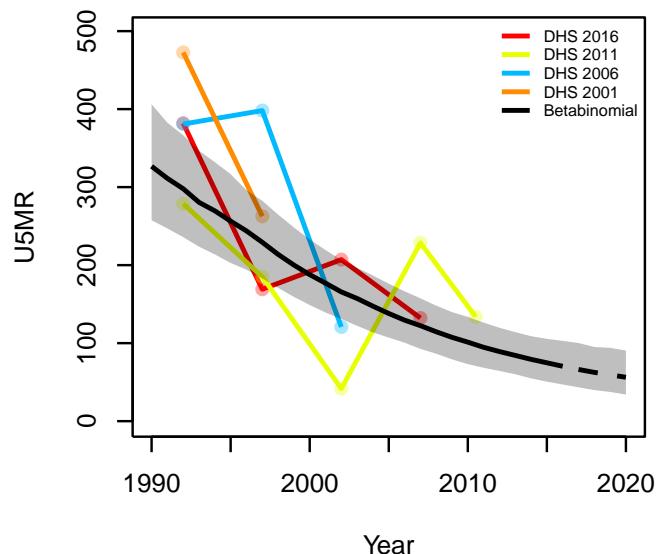
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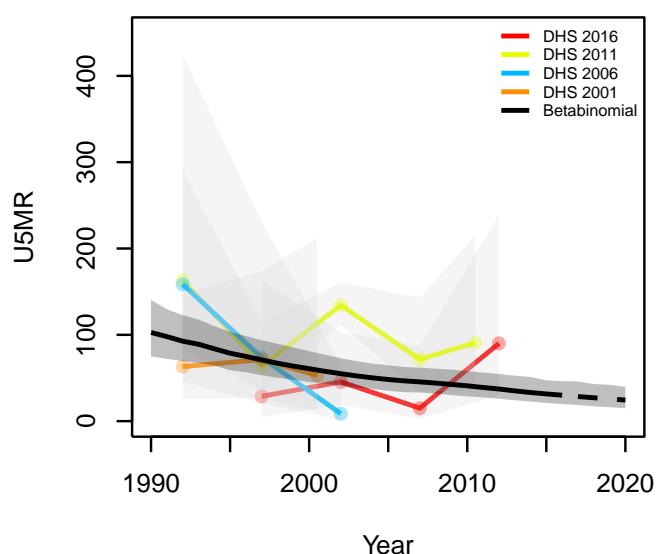
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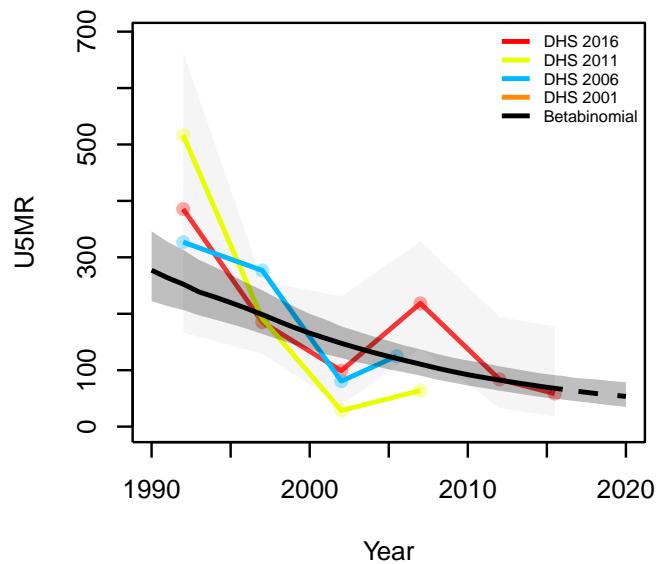
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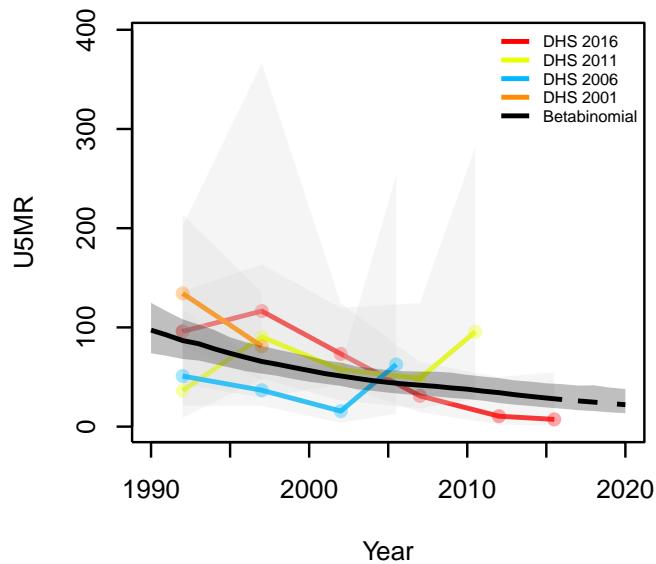
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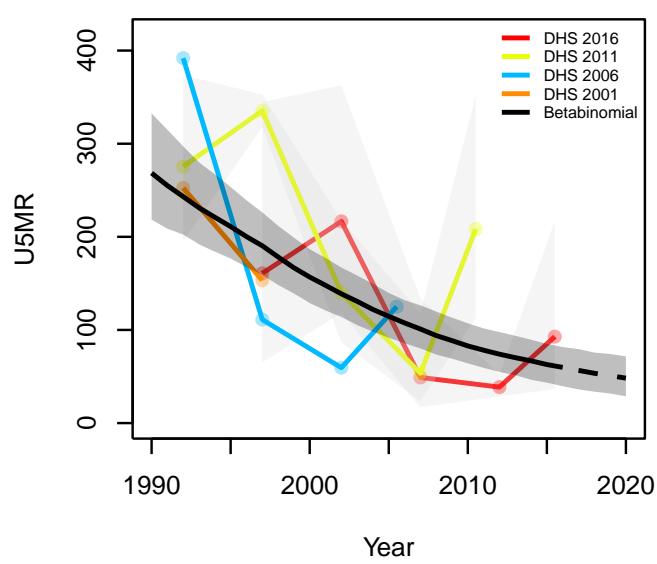
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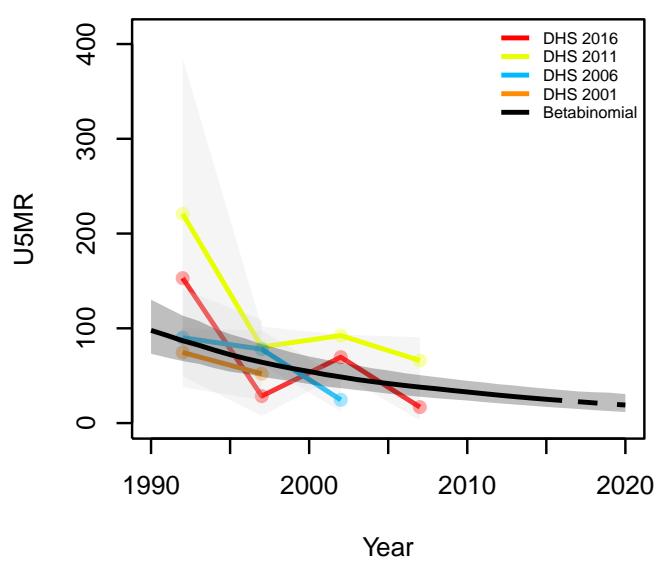
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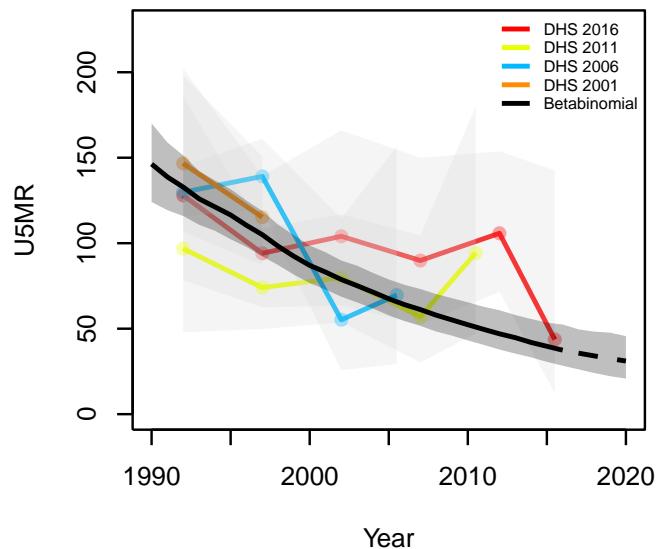
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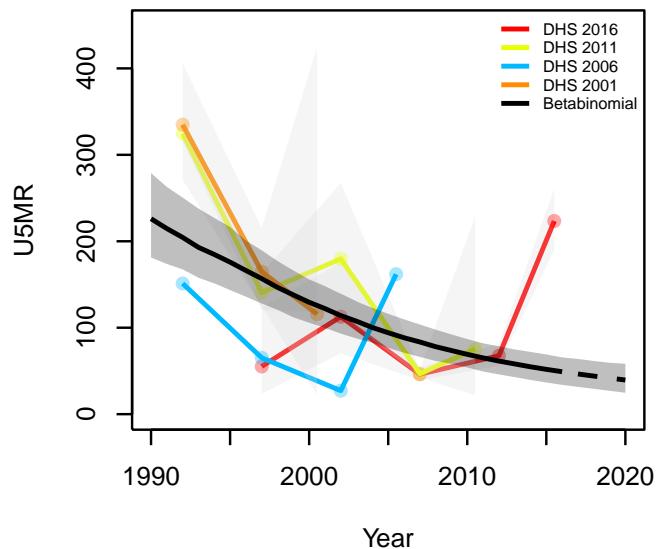
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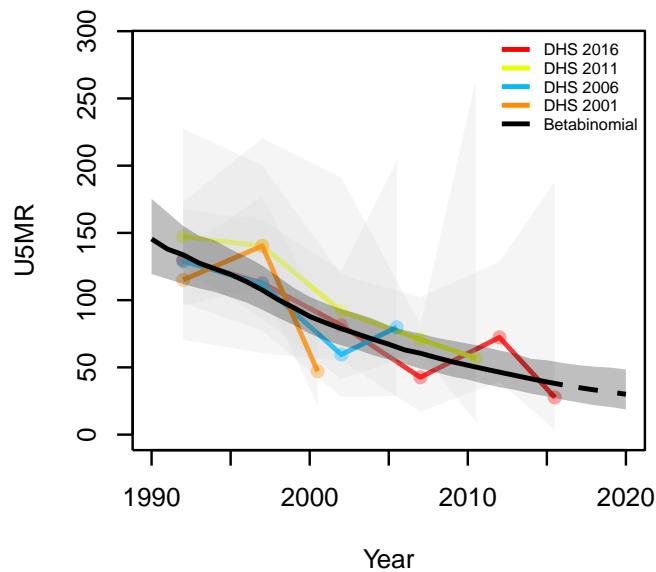
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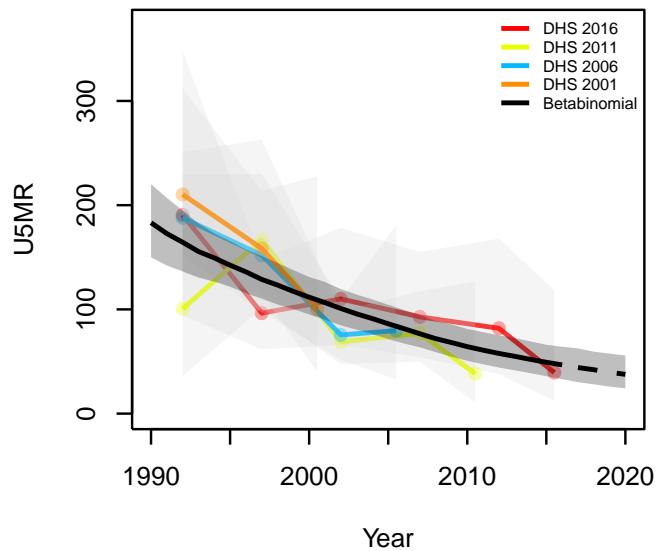
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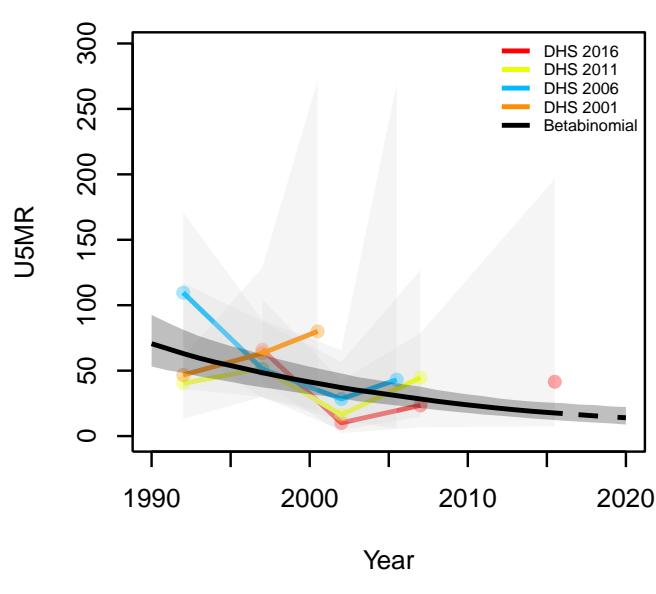
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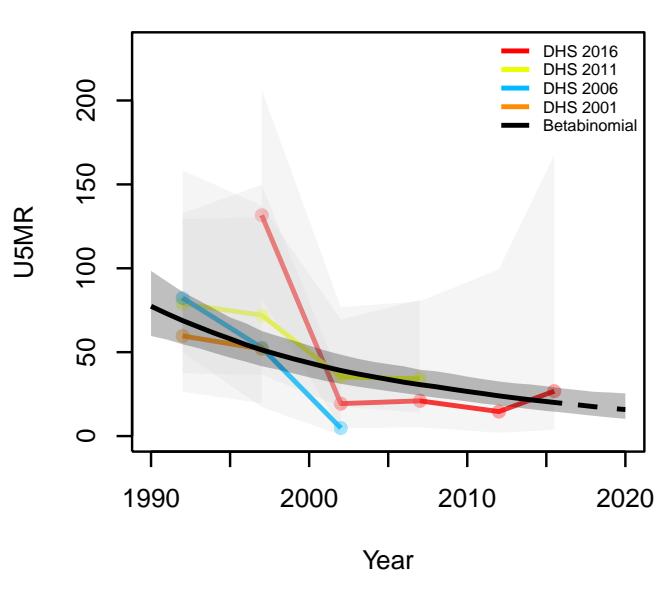
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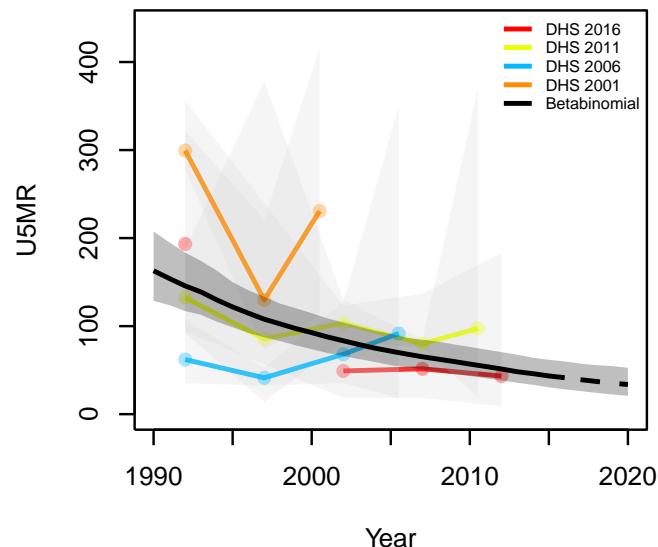
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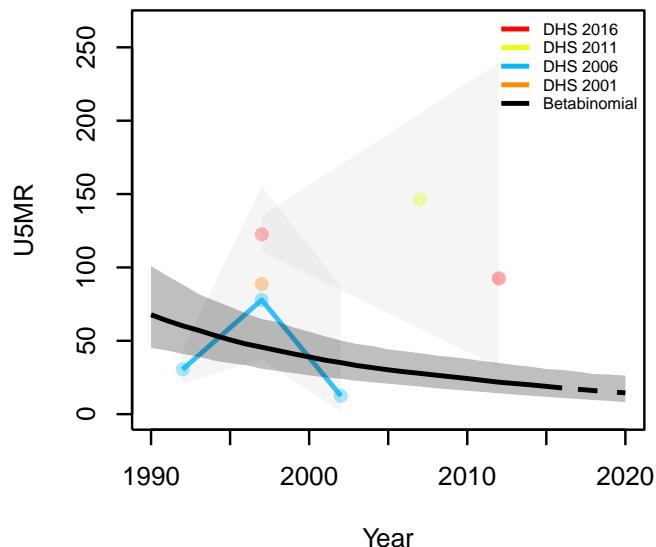
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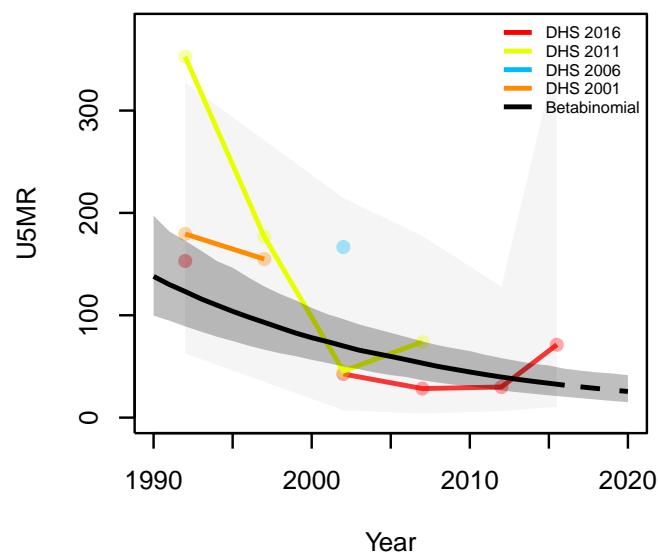
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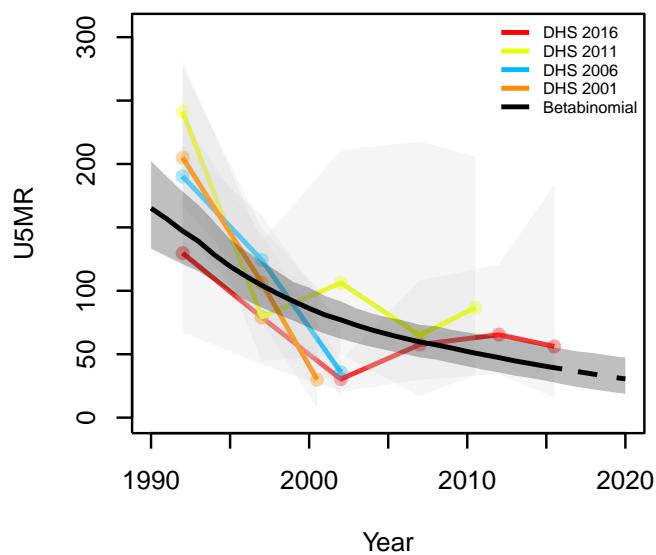
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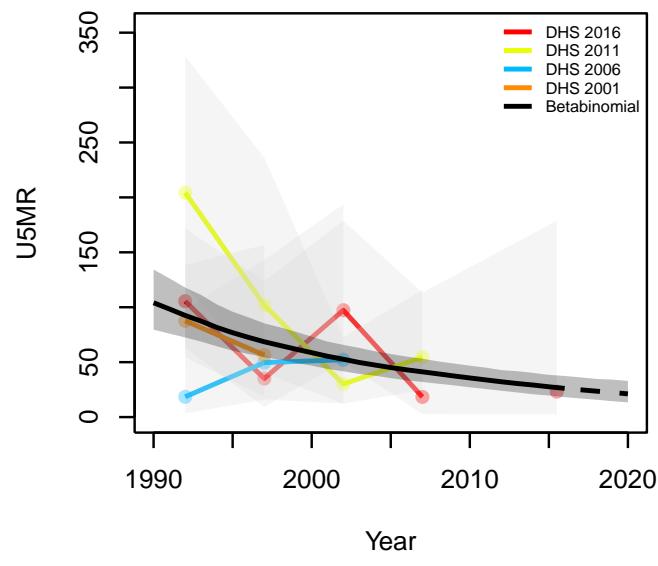
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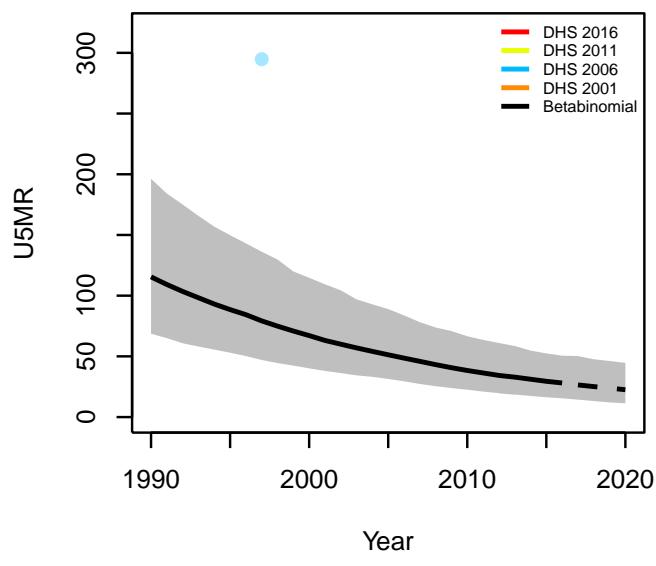
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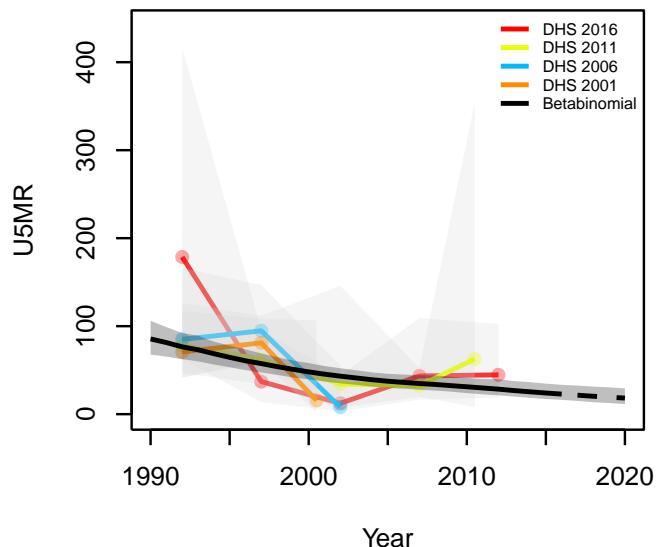
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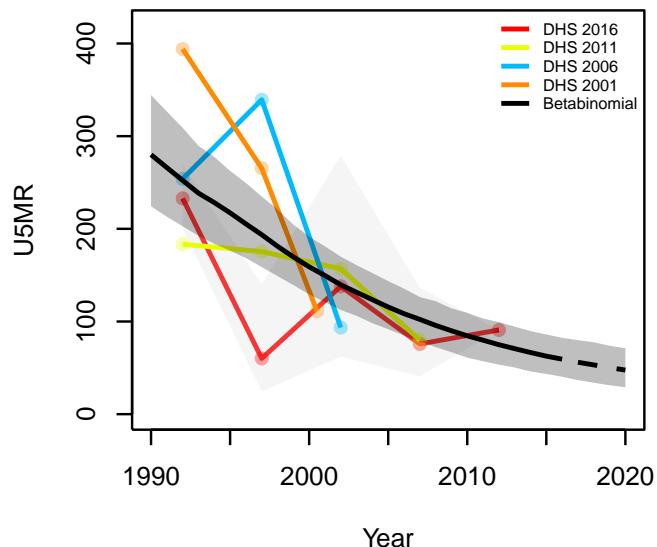
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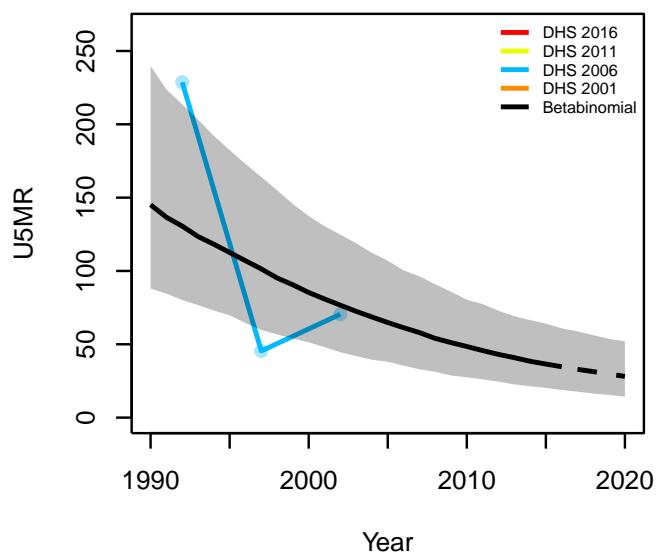
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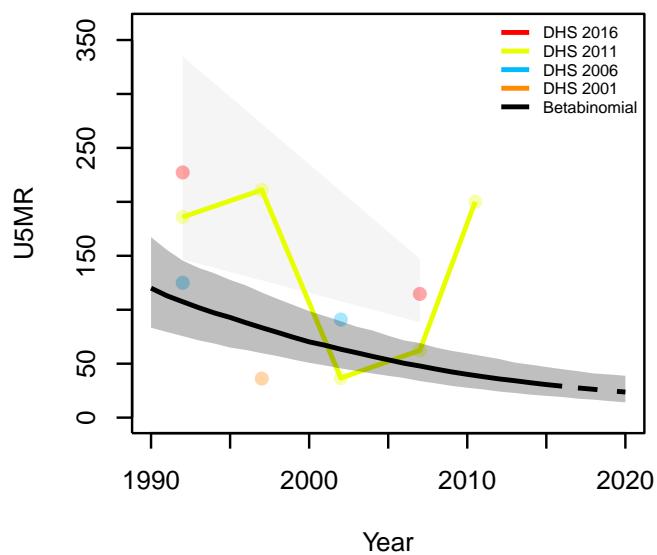
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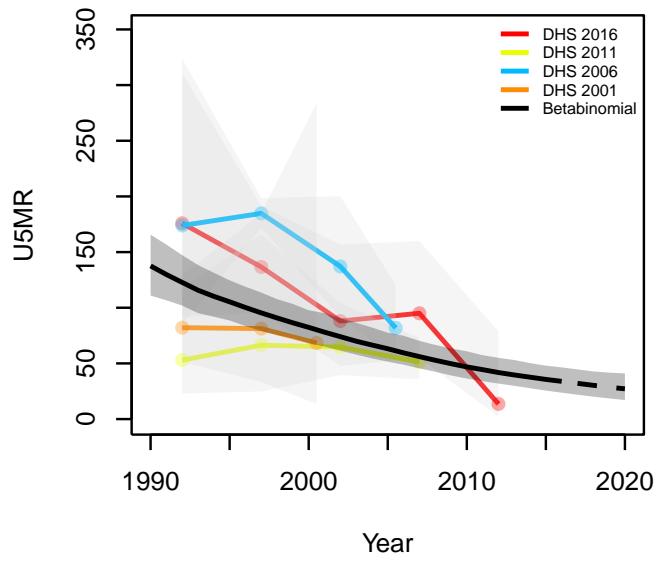
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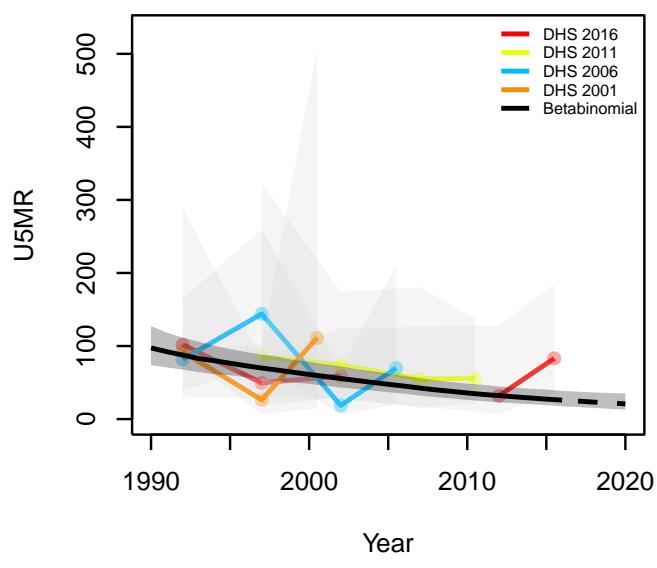
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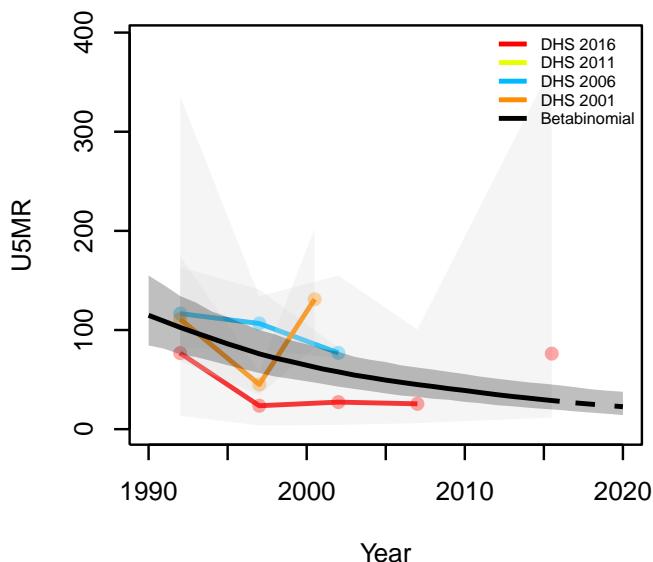
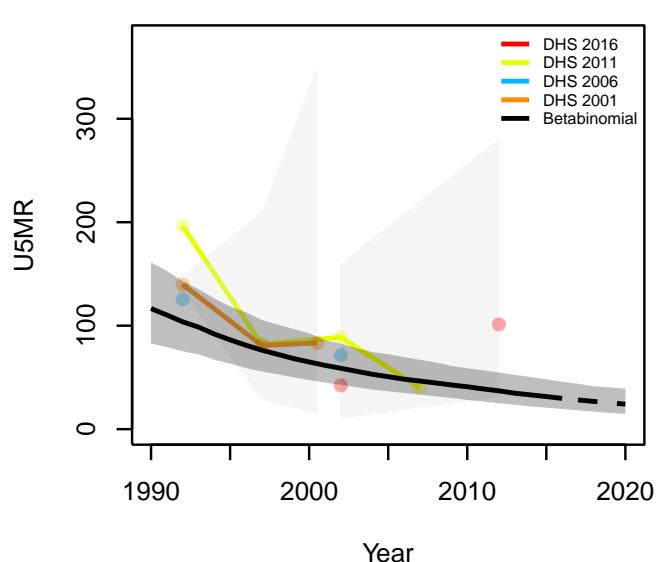
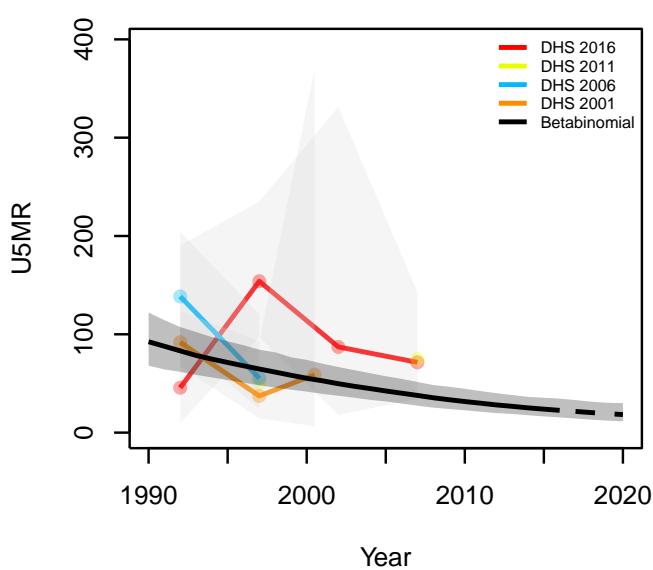
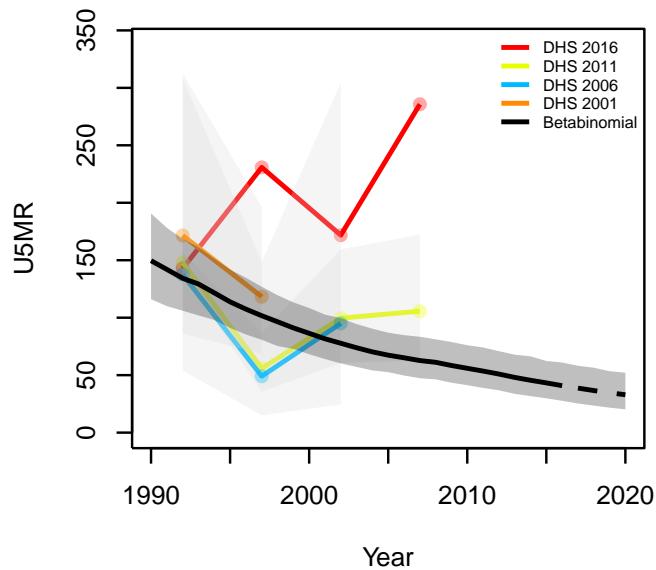
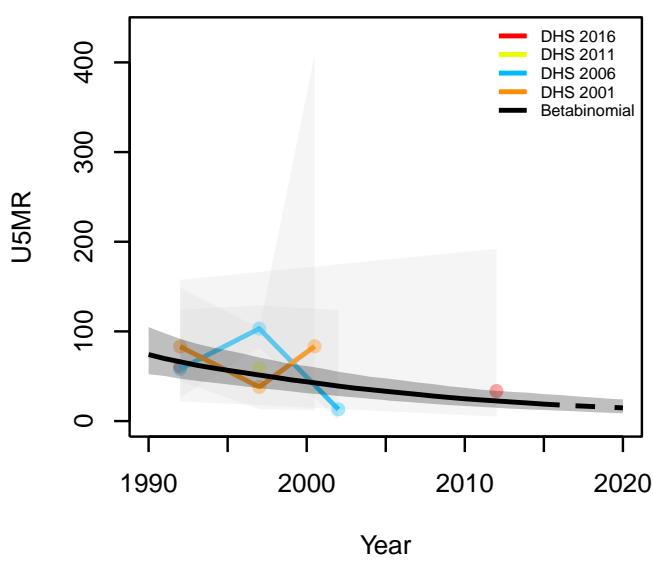
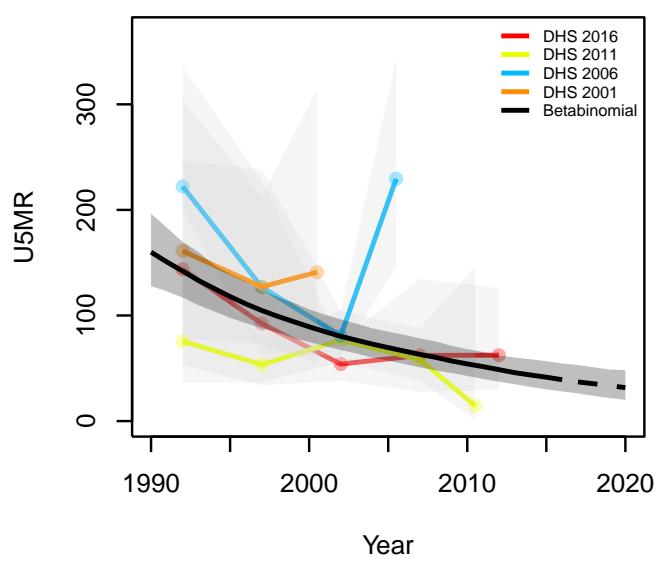


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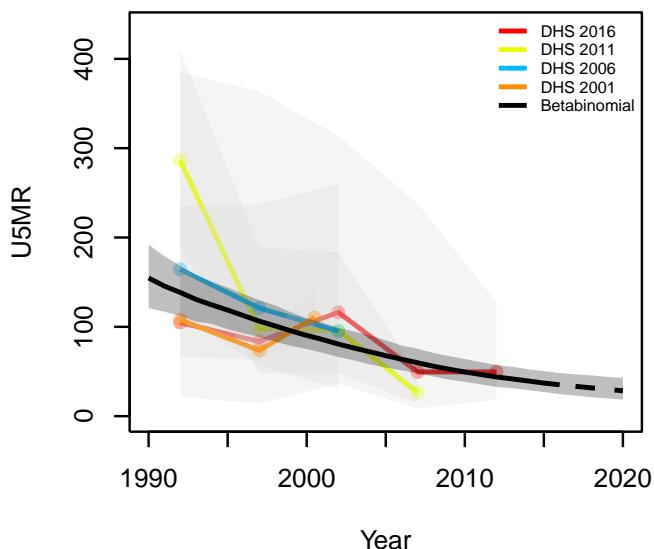


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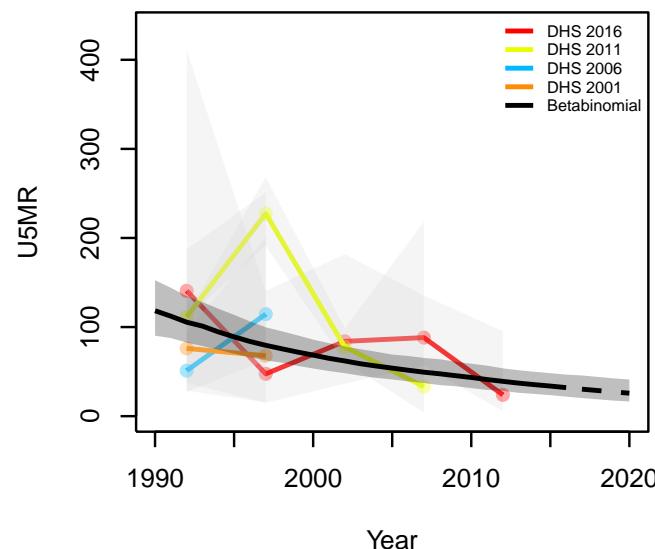


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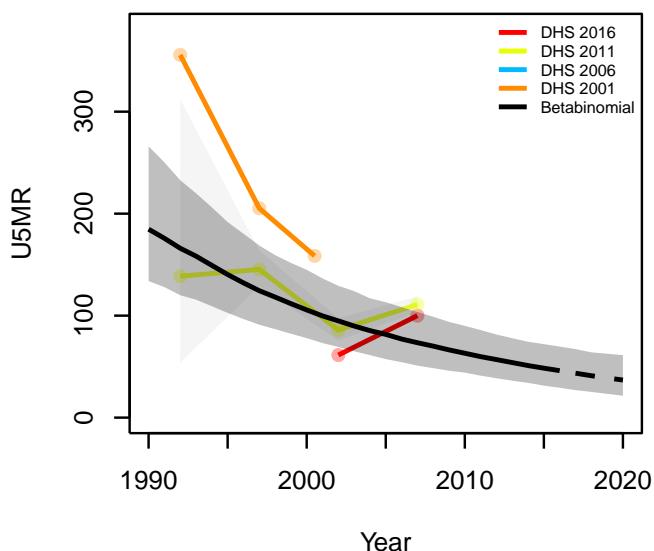
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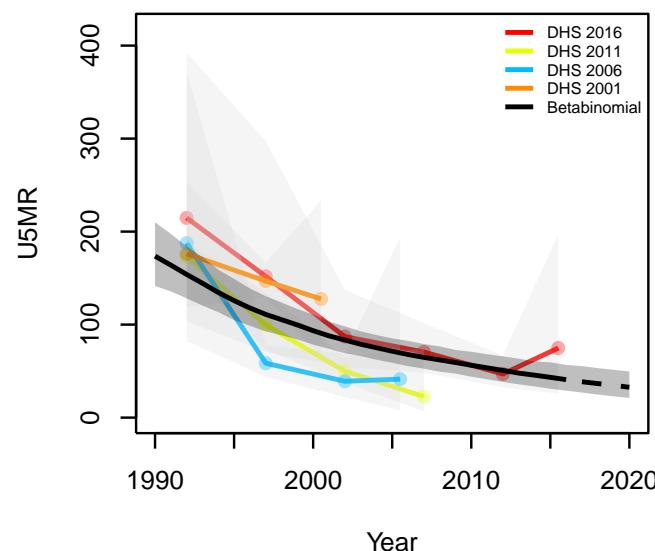
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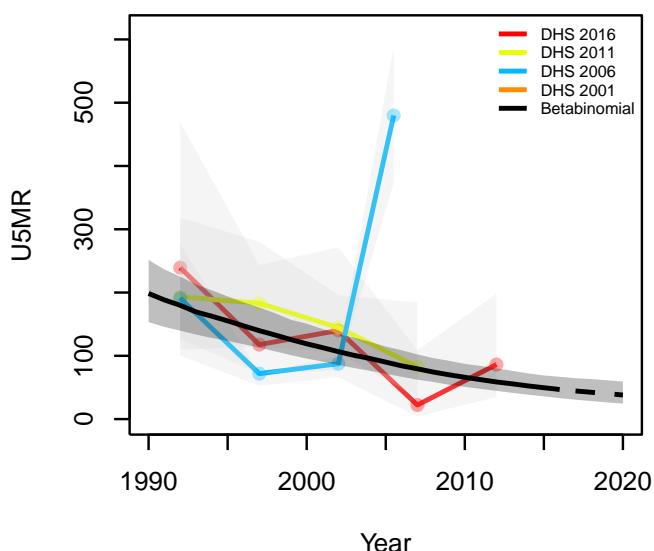
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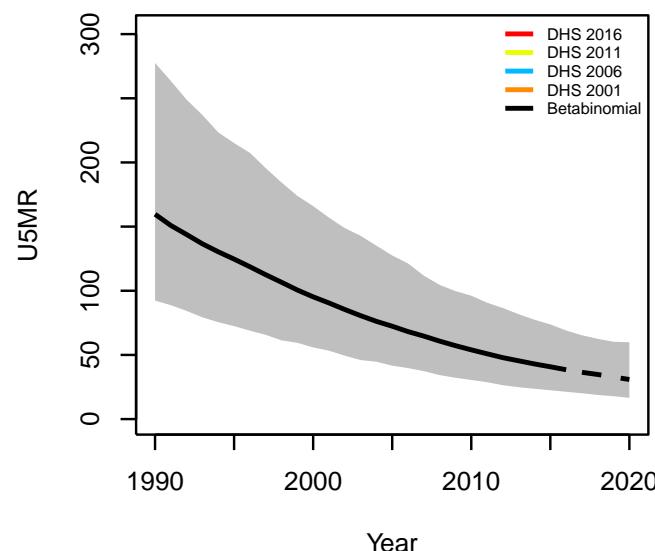
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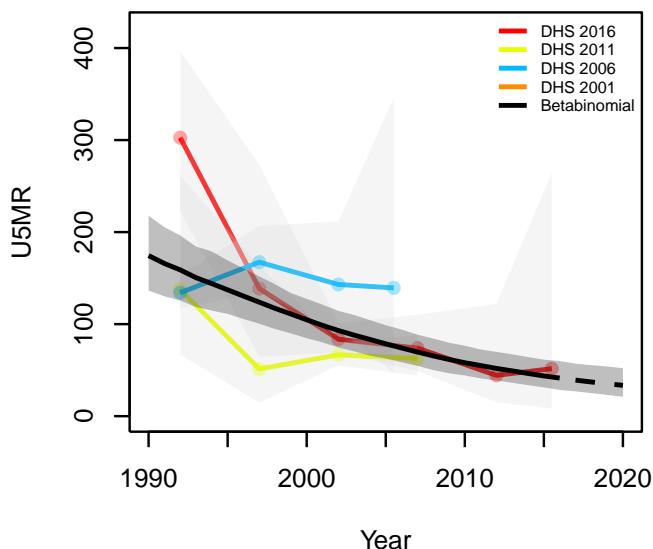
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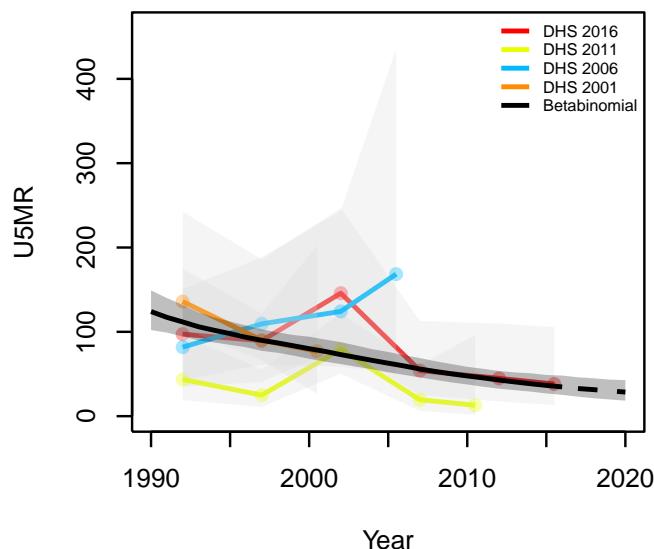
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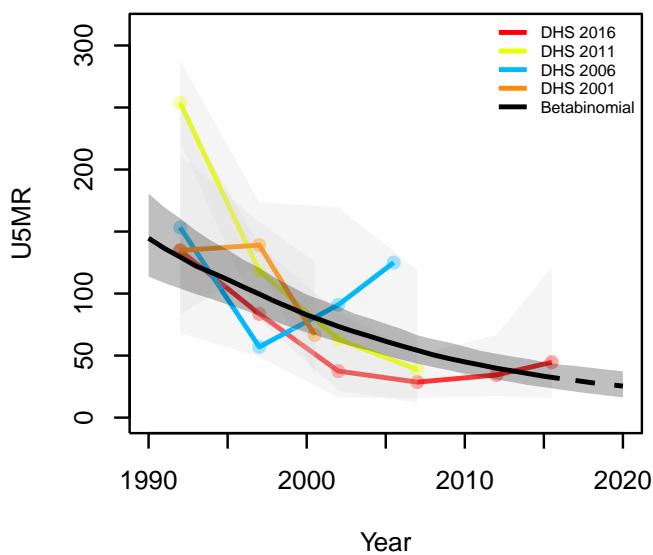
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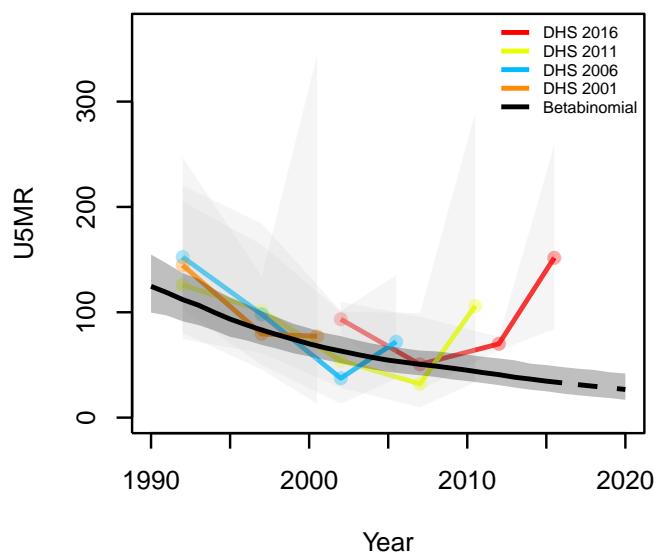
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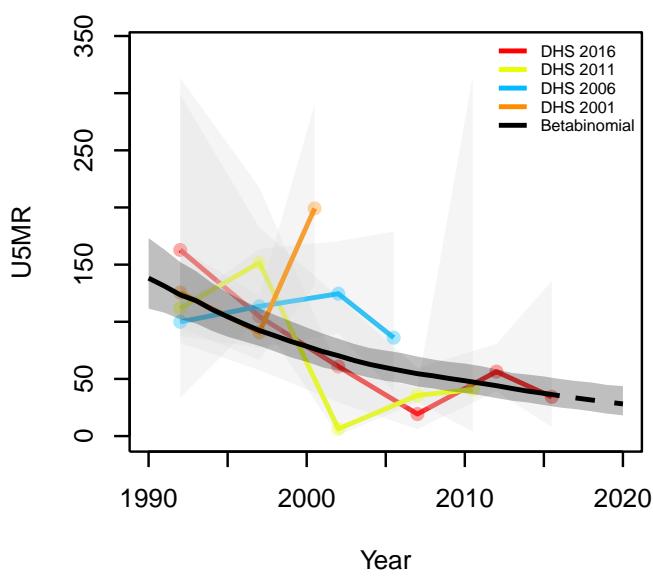
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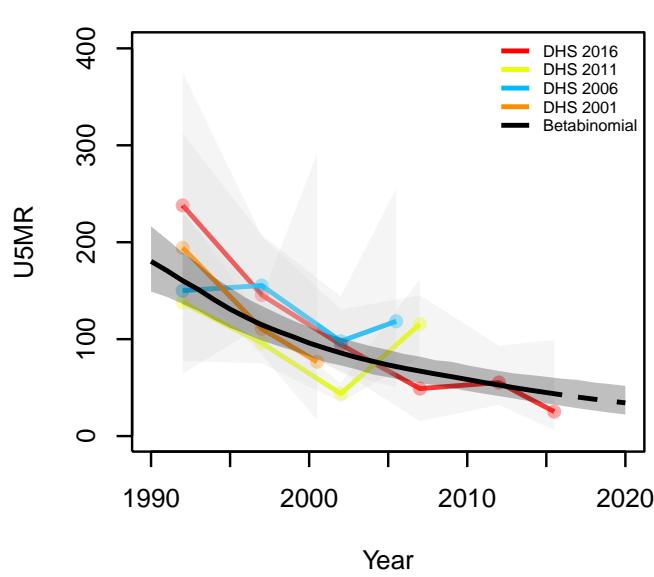
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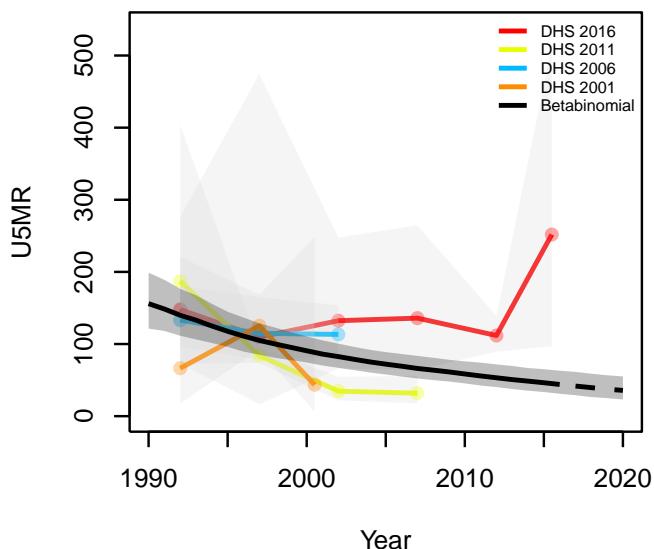
Saptari, Province 2



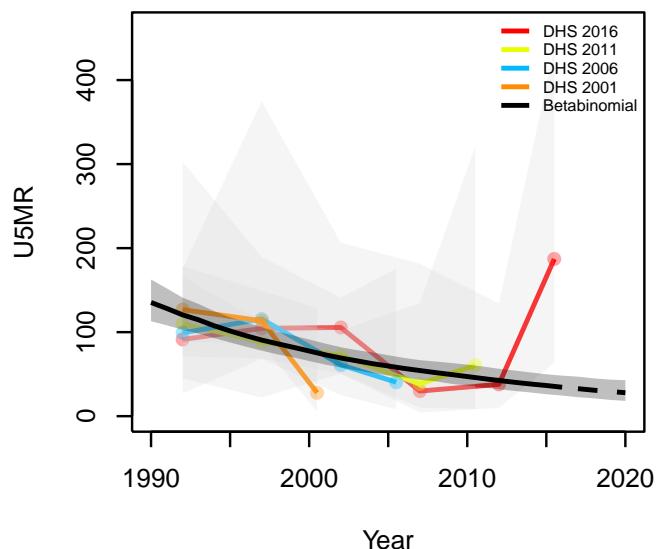
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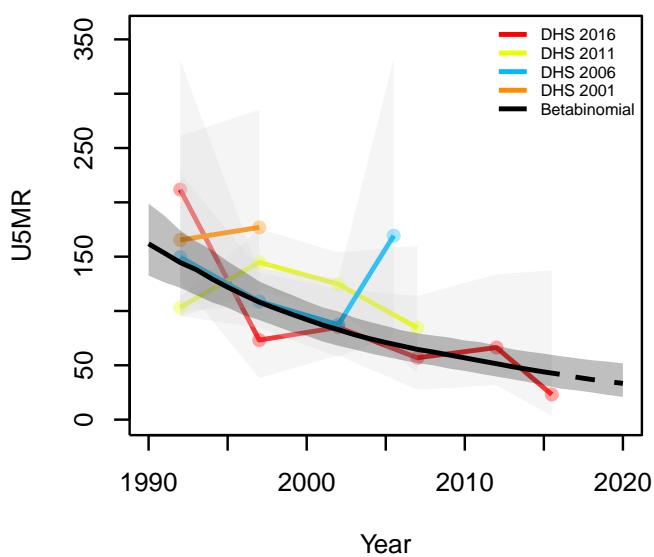
Sindhuli, Bagmati



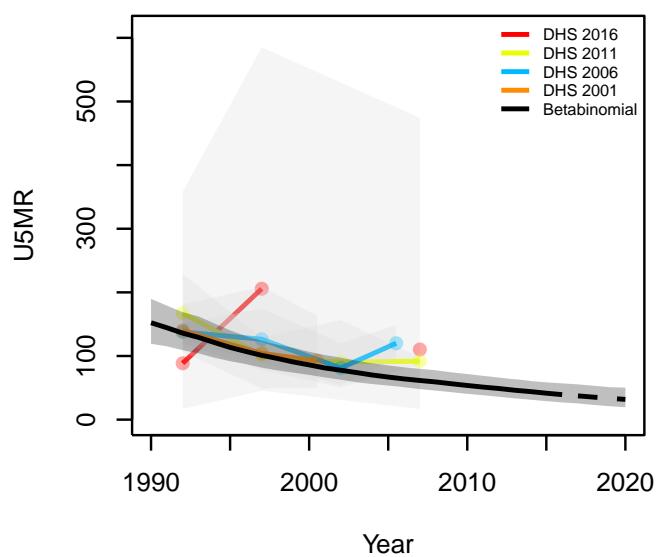
Sindhupalchok, Bagmati



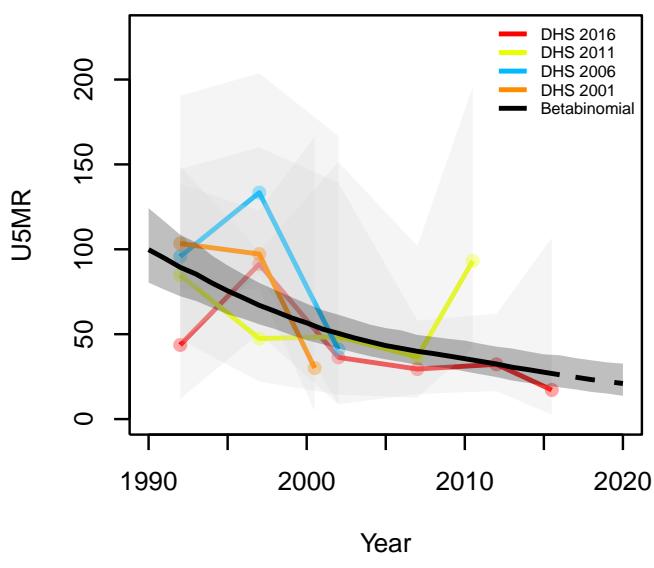
Siraha, Province 2



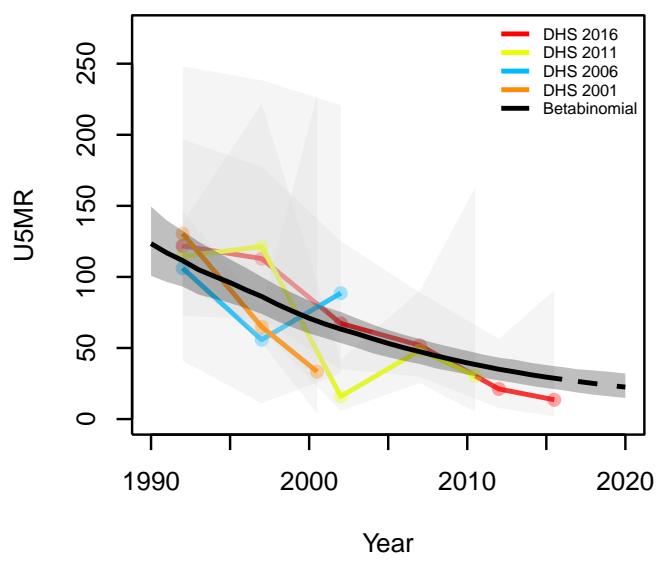
Solukhumbu, Province 1



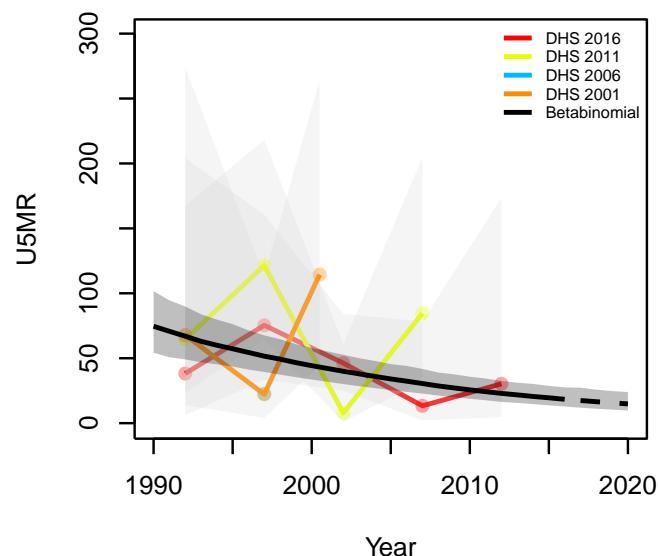
Sunsari, Province 1



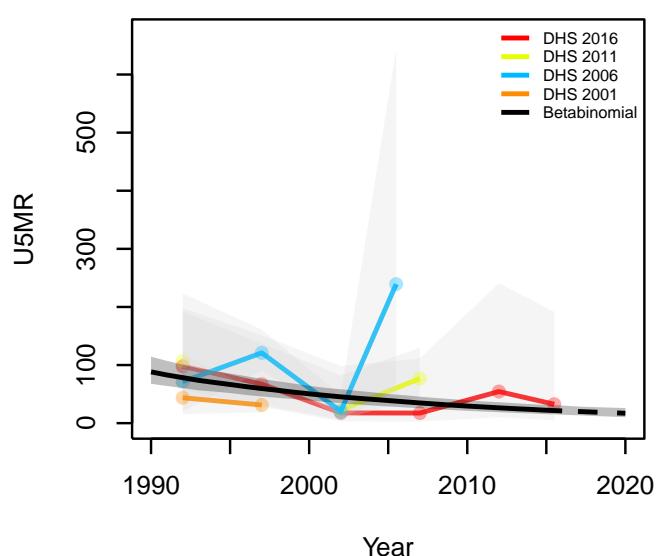
Surkhet, Karnali



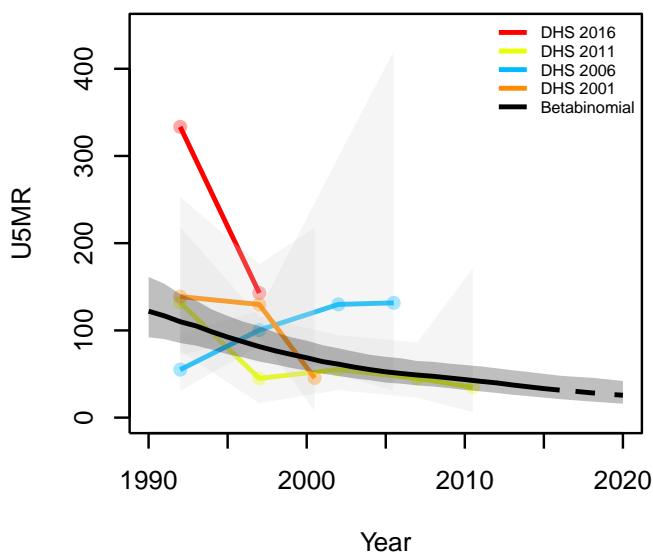
Syangja, Gandaki



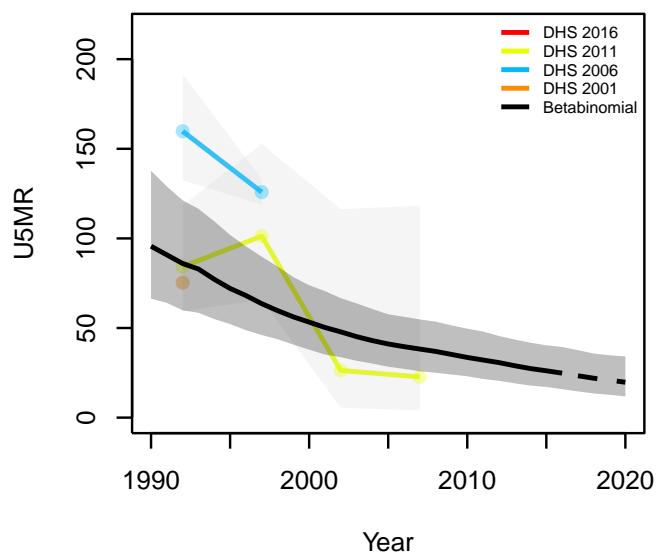
Tanahu, Gandaki



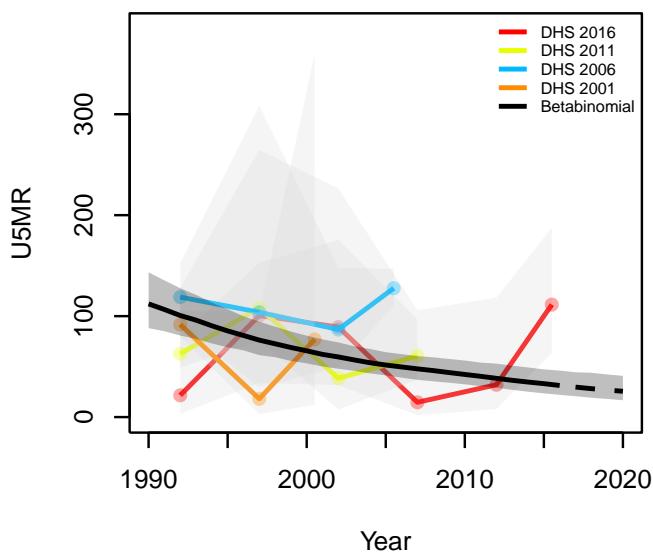
Taplejung, Province 1



Terhathum, Province 1



Udayapur, Province 1



4 National Figures and Results

	Median	Interval	Median-	Bench	Interval
0	37.90	(34.9,40.6)	36.00	(33.3,38.5)	
1-11	1.40	(1.2,1.5)	1.30	(1.2,1.5)	
12-23	0.50	(0.4,0.6)	0.50	(0.4,0.5)	
24-35	0.20	(0.2,0.3)	0.20	(0.2,0.2)	
36-47	0.10	(0.1,0.2)	0.10	(0.1,0.2)	
48-59	0.20	(0.1,0.2)	0.10	(0.1,0.2)	

Table 6: Monthly hazards in terms of 1000 children by age band for national, unstratified model for Nepal.

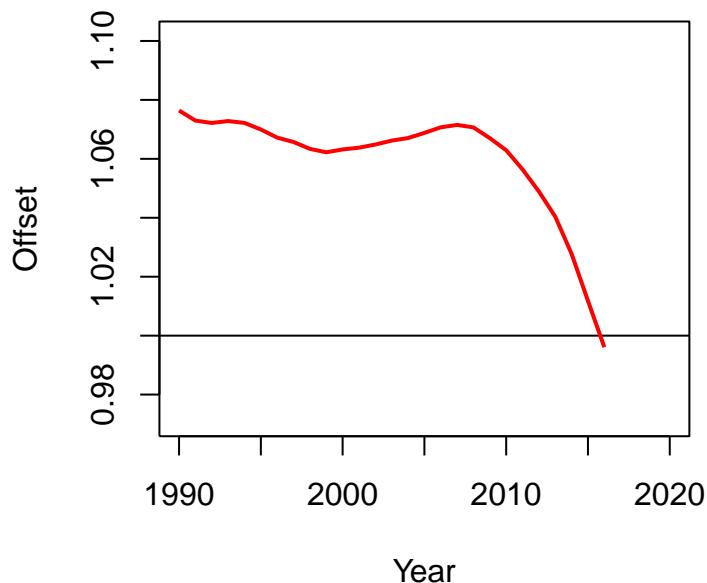


Figure 8: Benchmark offsets: $\text{BENCH}(t) = \text{U5MR}^*(t)/\text{U5MR}(t)$ where $\text{U5MR}^*(t)$ is modeled estimate and $\text{U5MR}(t)$ is UN-IGME estimate.

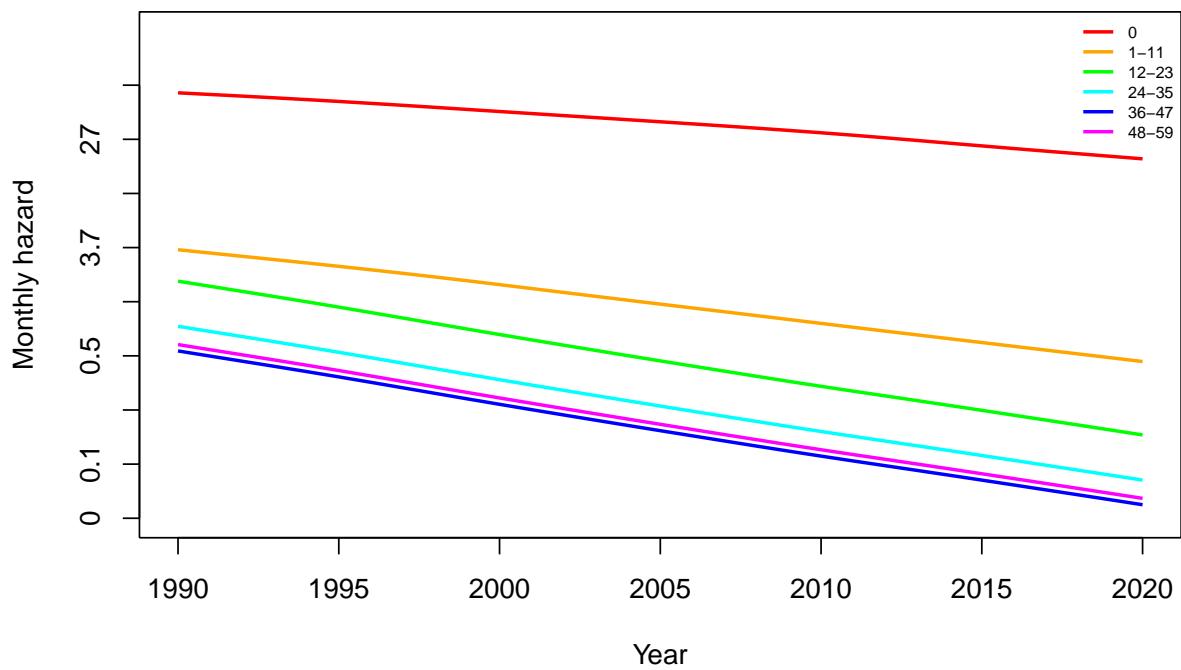


Figure 9: Monthly hazards of death in terms of U5MR (number deaths per 1000 children) by agebands.

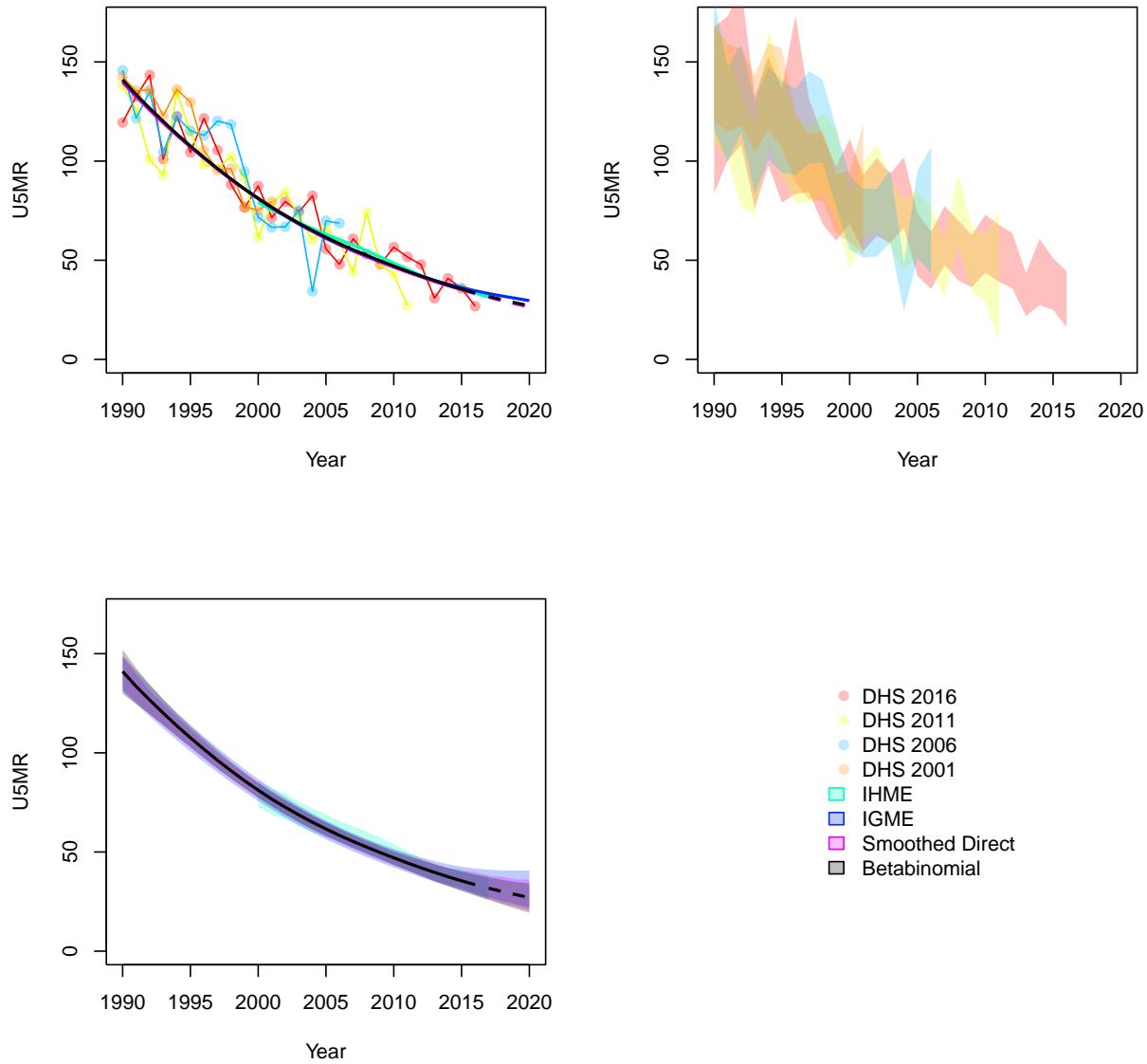


Figure 10: Benchmarked U5MR rates per 1000 live births. Top: DHS direct estimates with national trends from IHME GBD, UN-IGME, Smoothed Direct and Betabinomial estimates. Middle: 95% uncertainty intervals for DHS data. Bottom: IHME GBD, UN-IGME, Smoothed Direct and Betabinomial estimates with for the unstratified model. 95% uncertainty intervals