

# Country Summary: Burundi

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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.

Burundi has 18 Admin 1 areas and 119 Admin 2 areas.

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

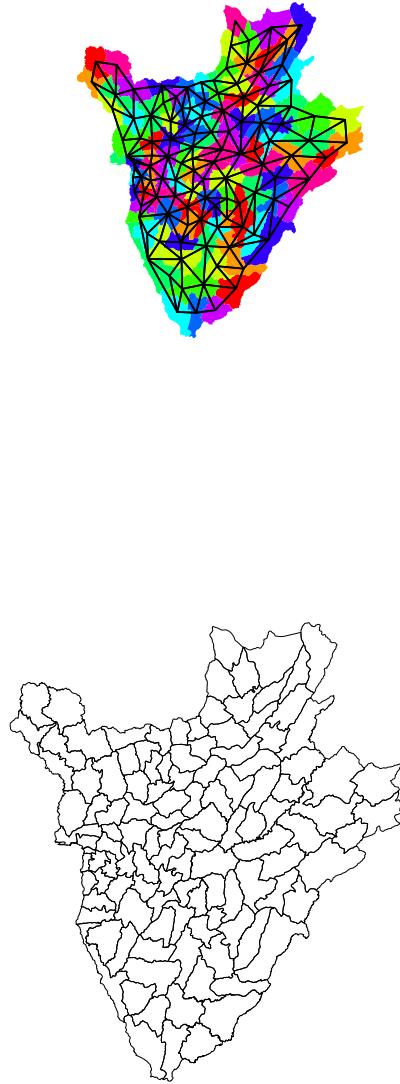


Figure 1: Top: The neighborhood structure of Admin 2 areas. Bottom: The names of Admin 2 areas.

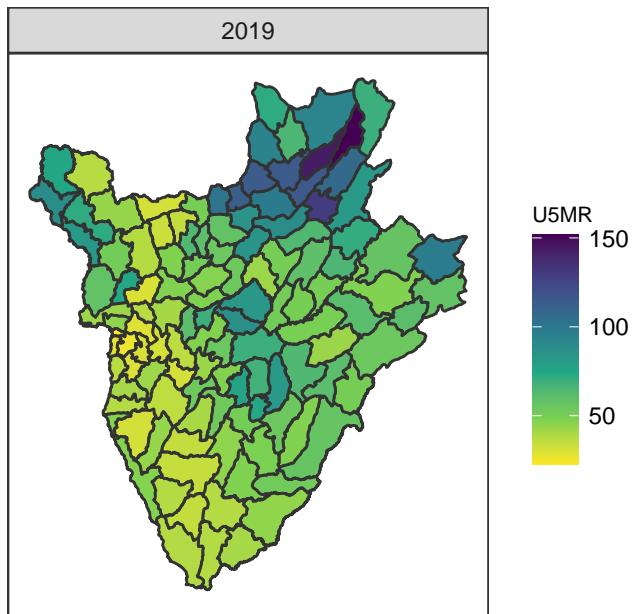


Figure 2: Median estimates of U5MR (deaths per 1000 children) in 2019.

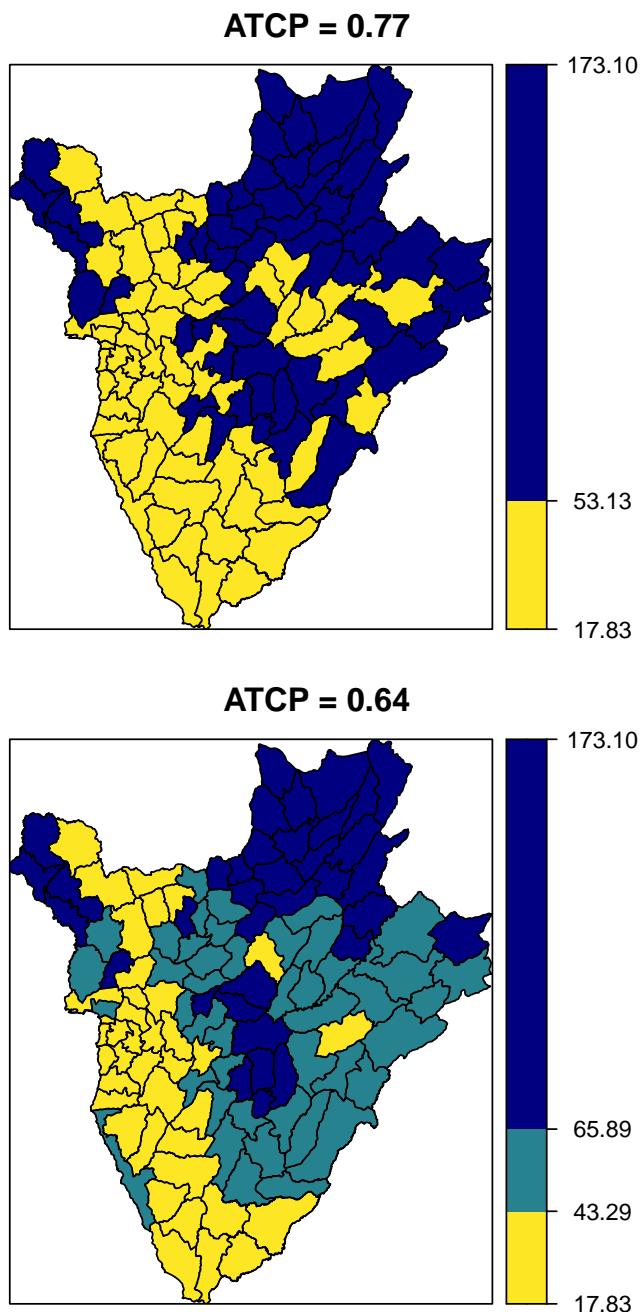


Figure 3: Expression of uncertainty of U5MR (deaths per 1000 children) based on the average true classification probability (ATCP) in 2019.

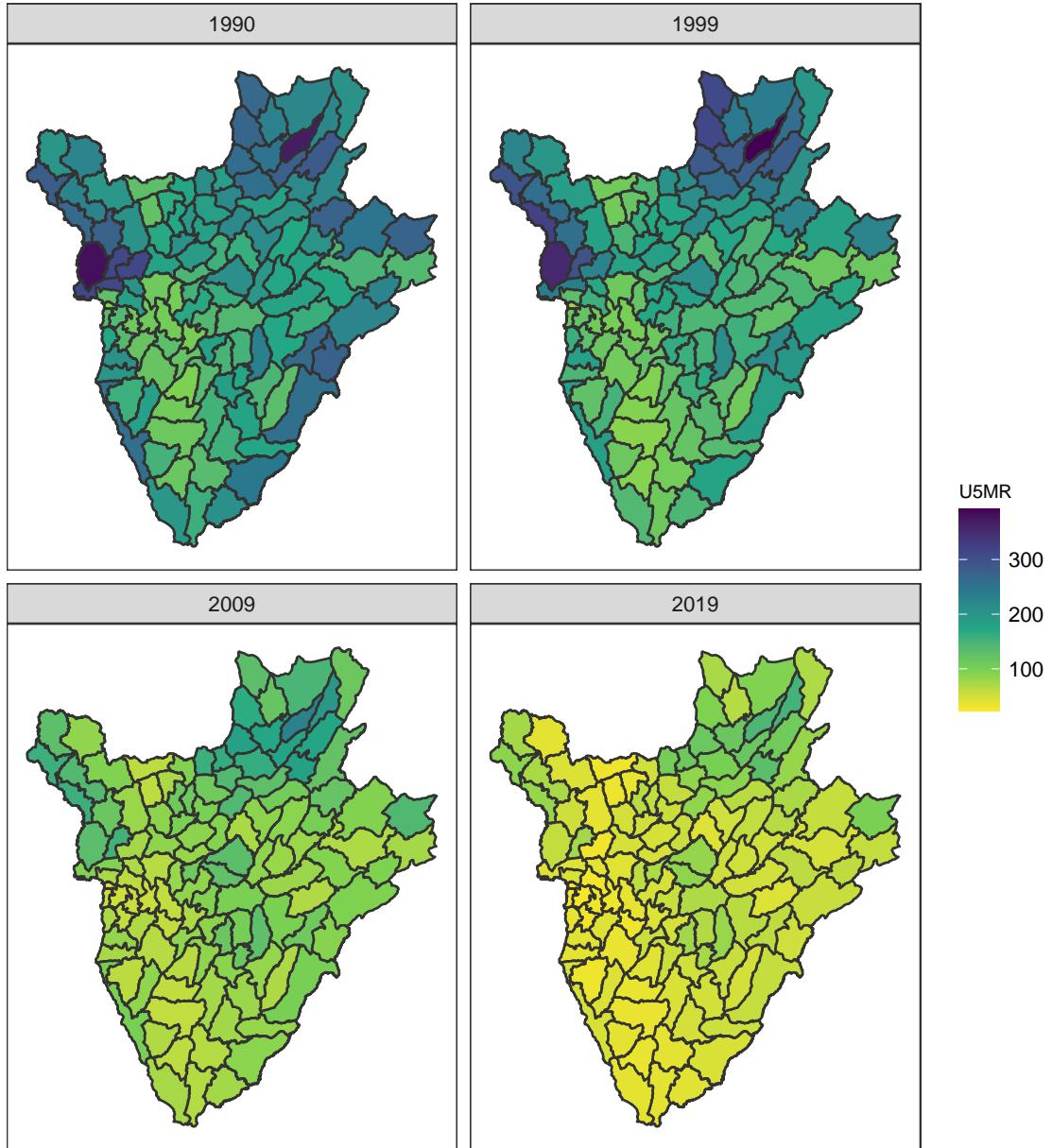
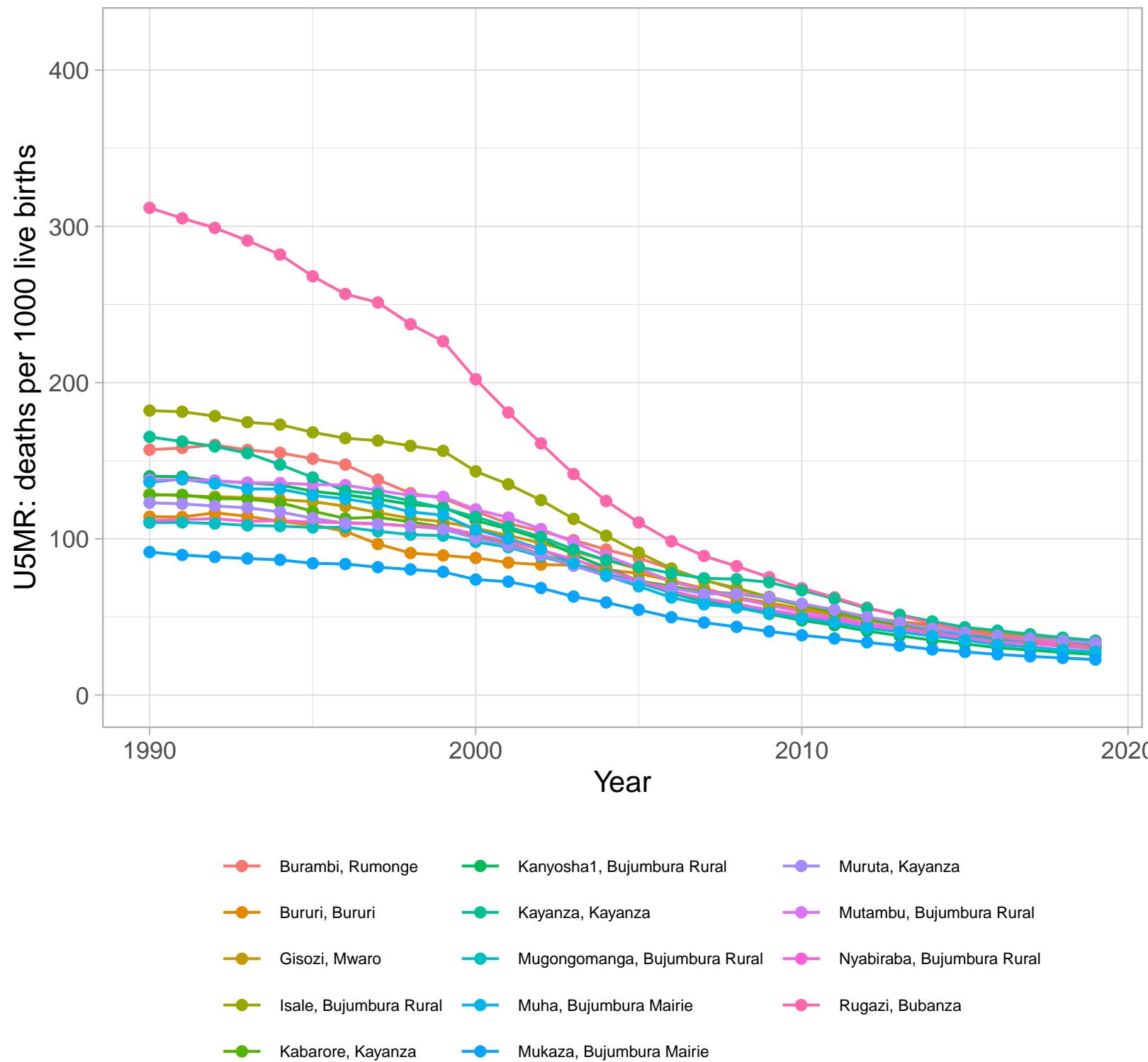
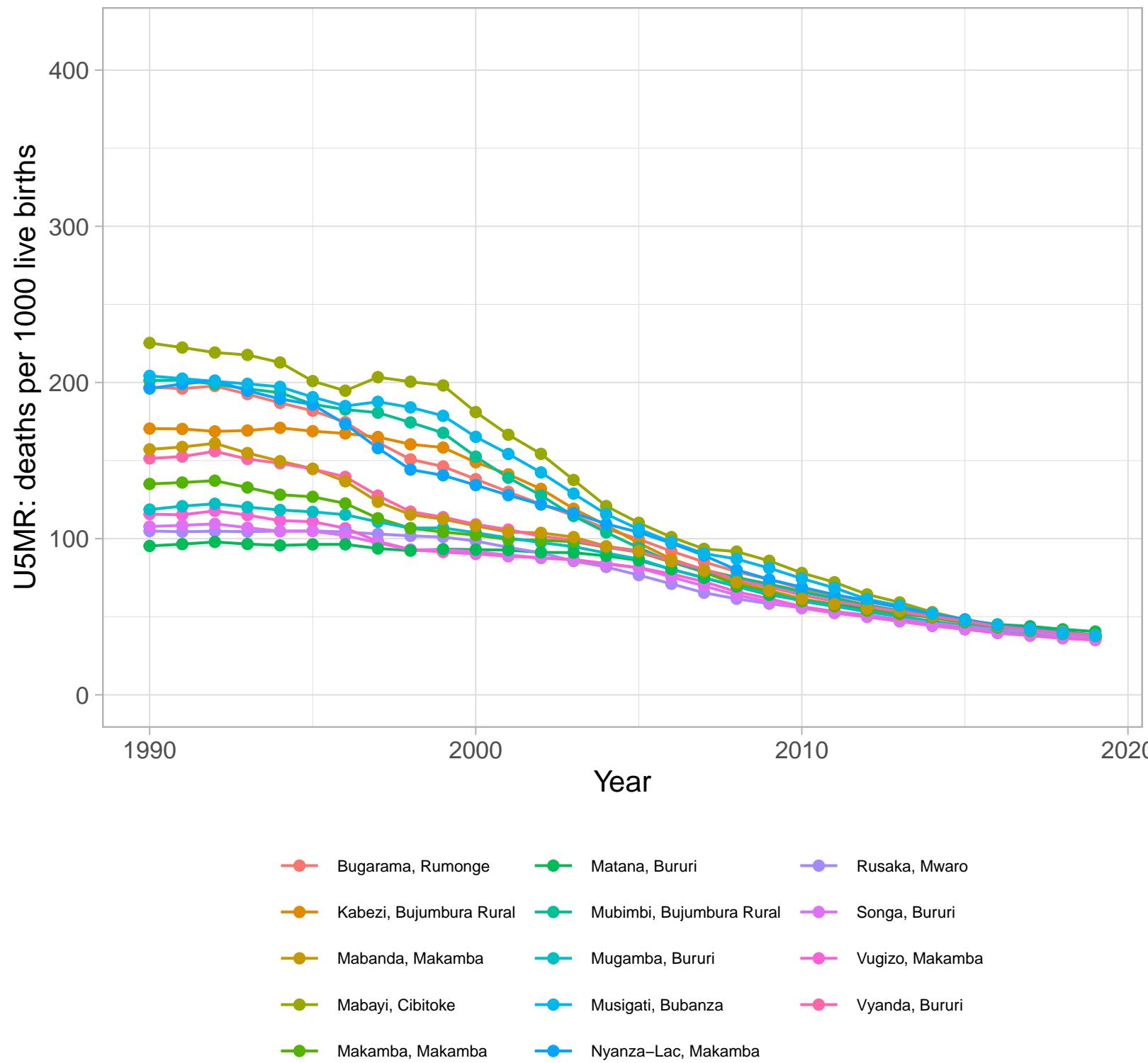


Figure 4: Median estimates for selected years.

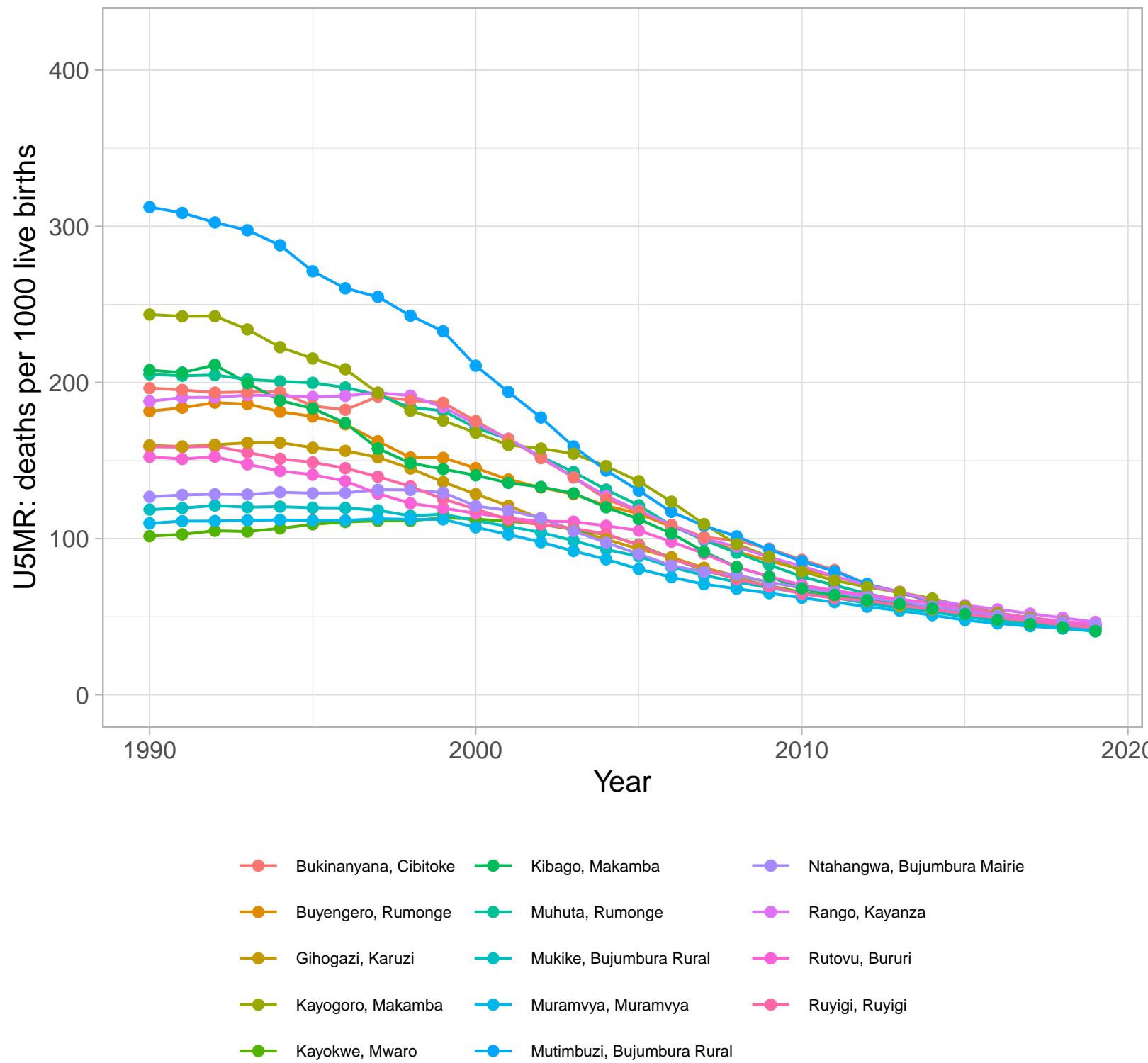
# Burundi



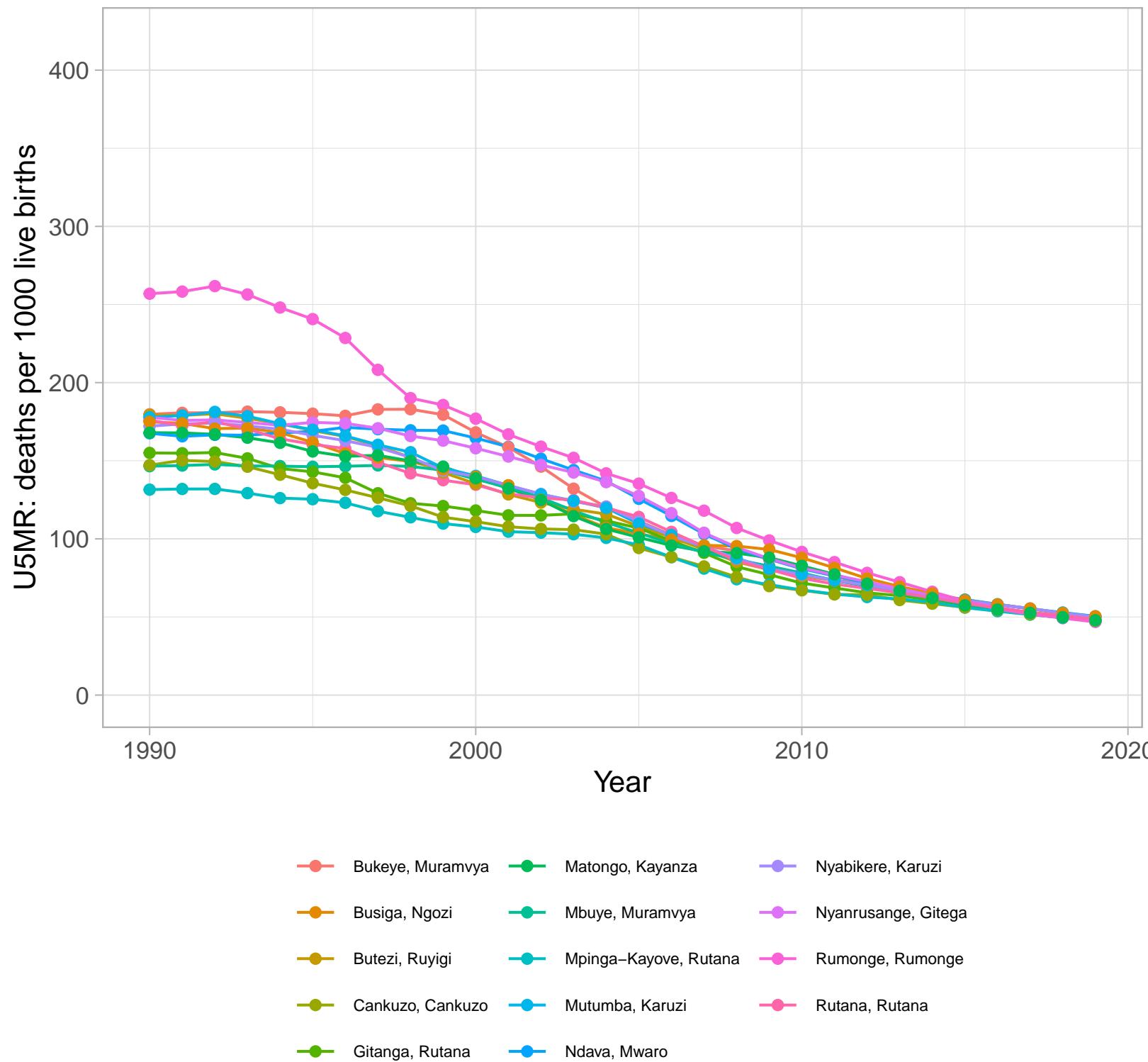
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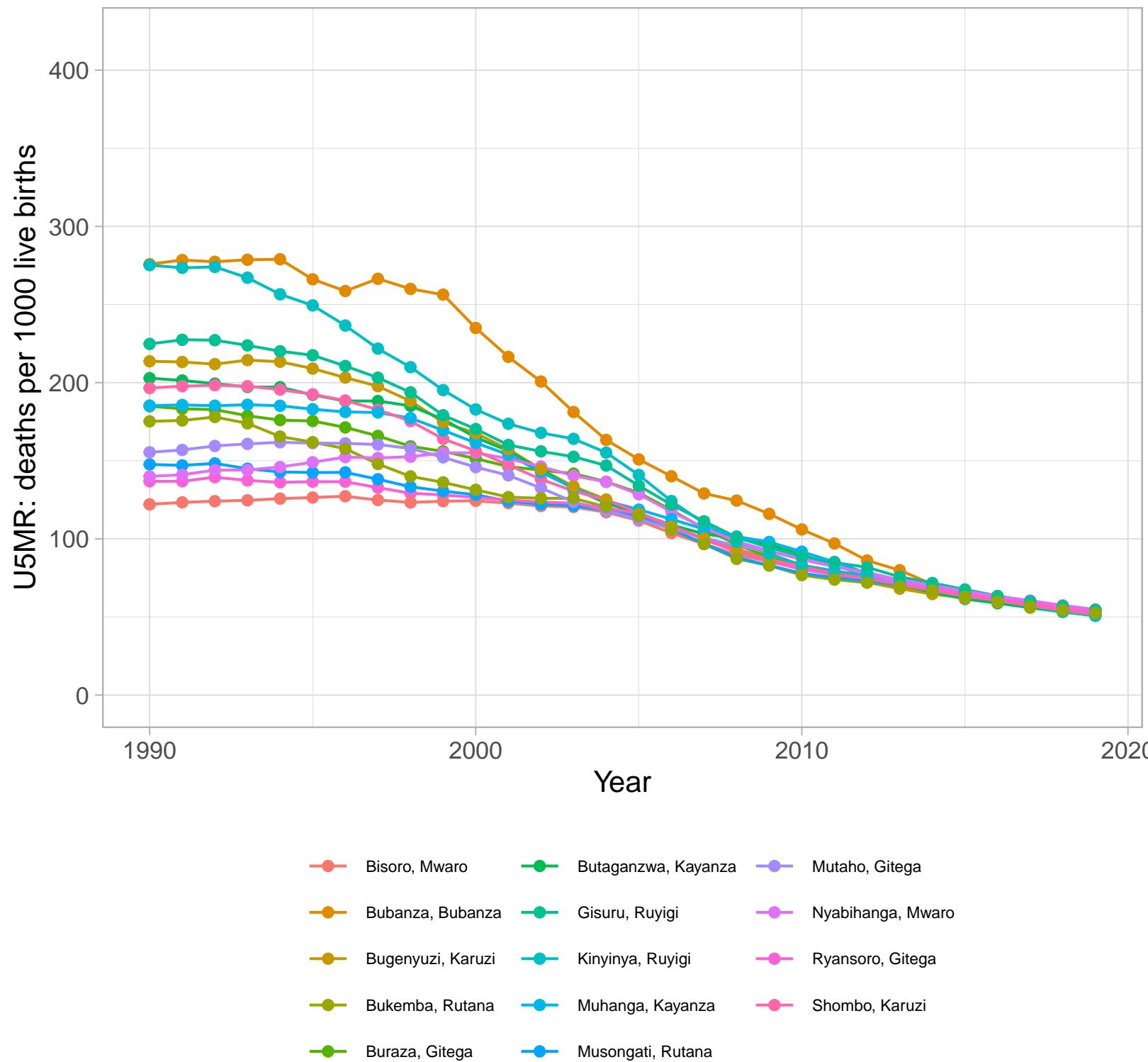
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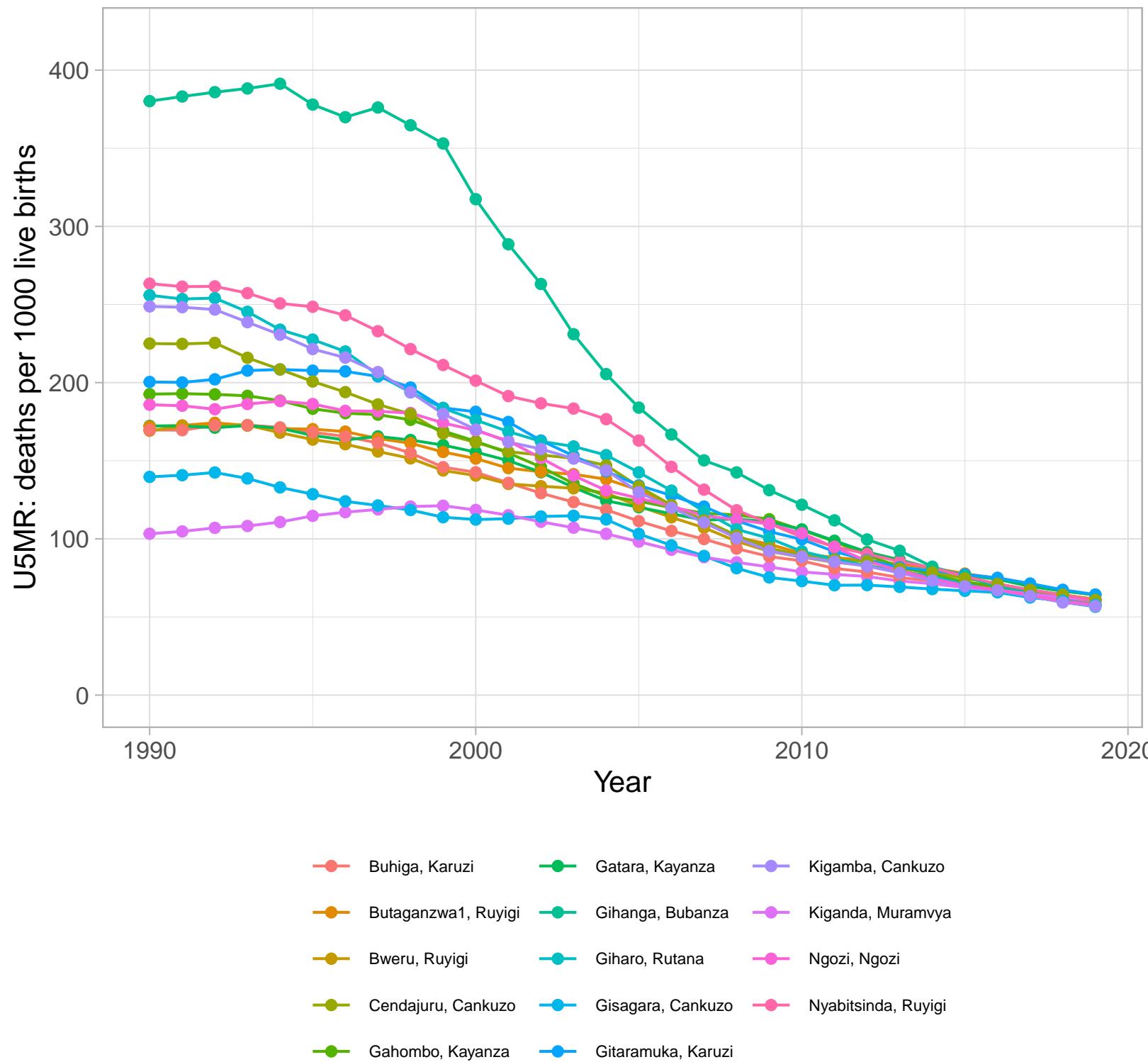
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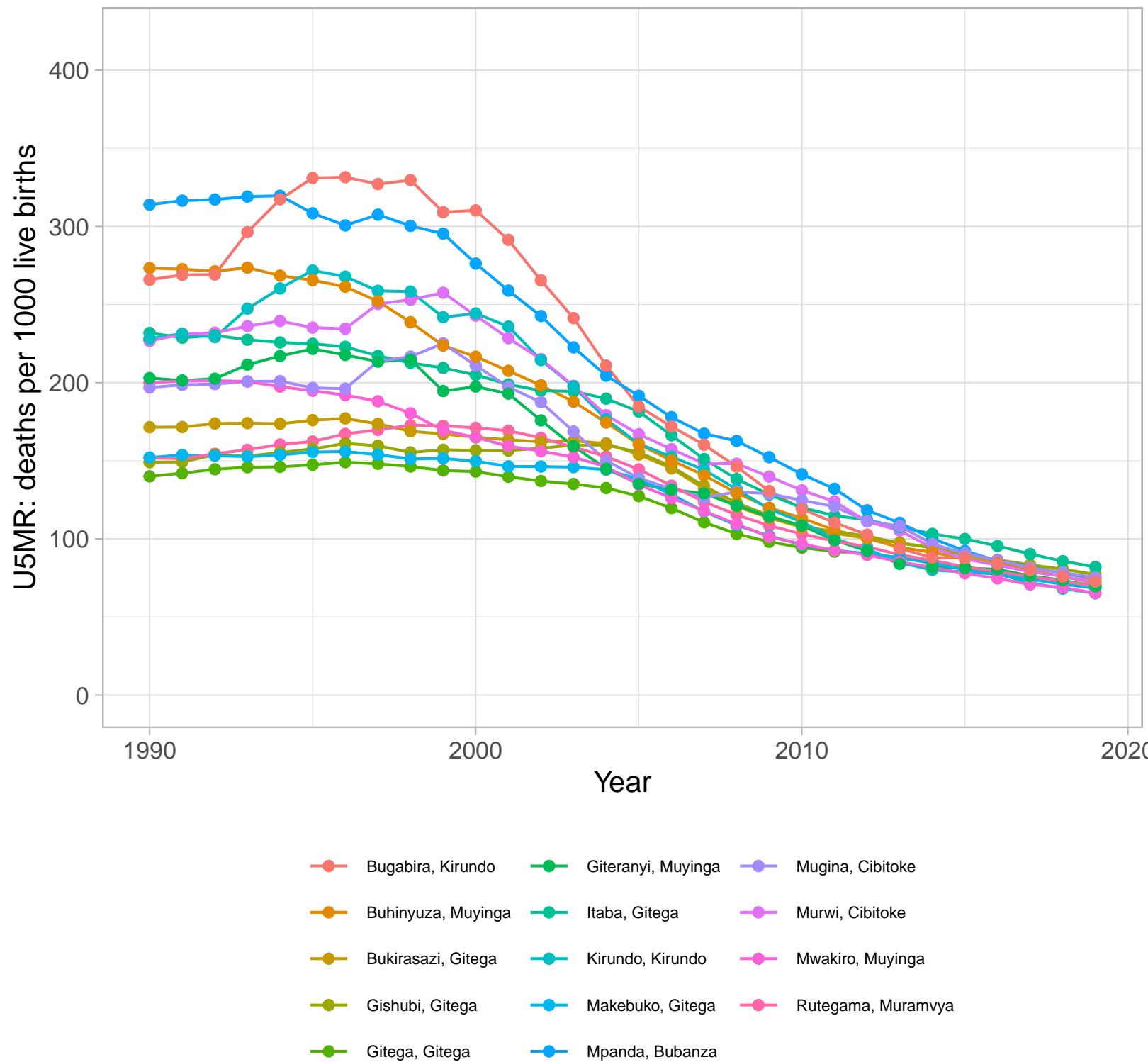
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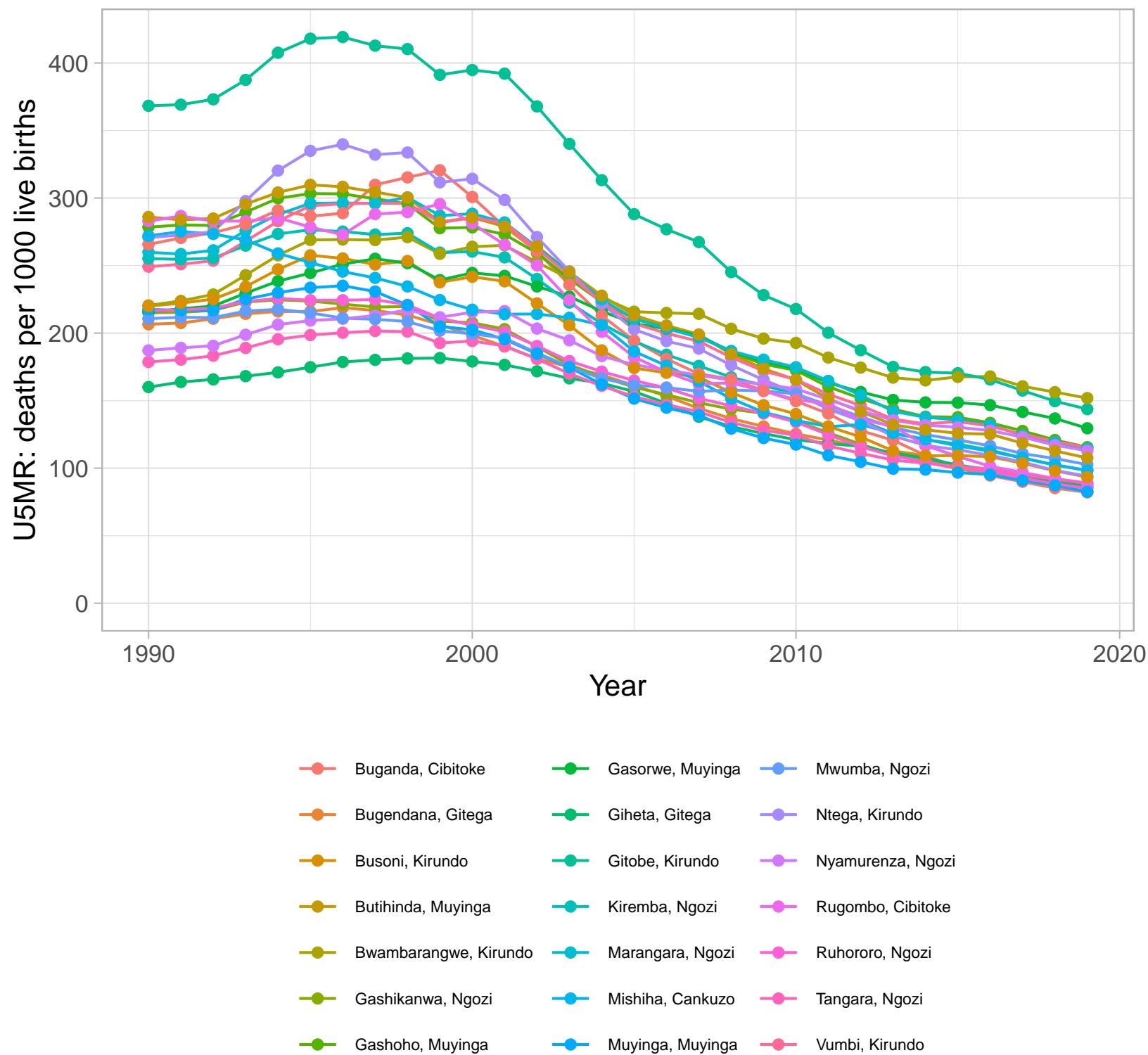
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# Burundi



# Burundi



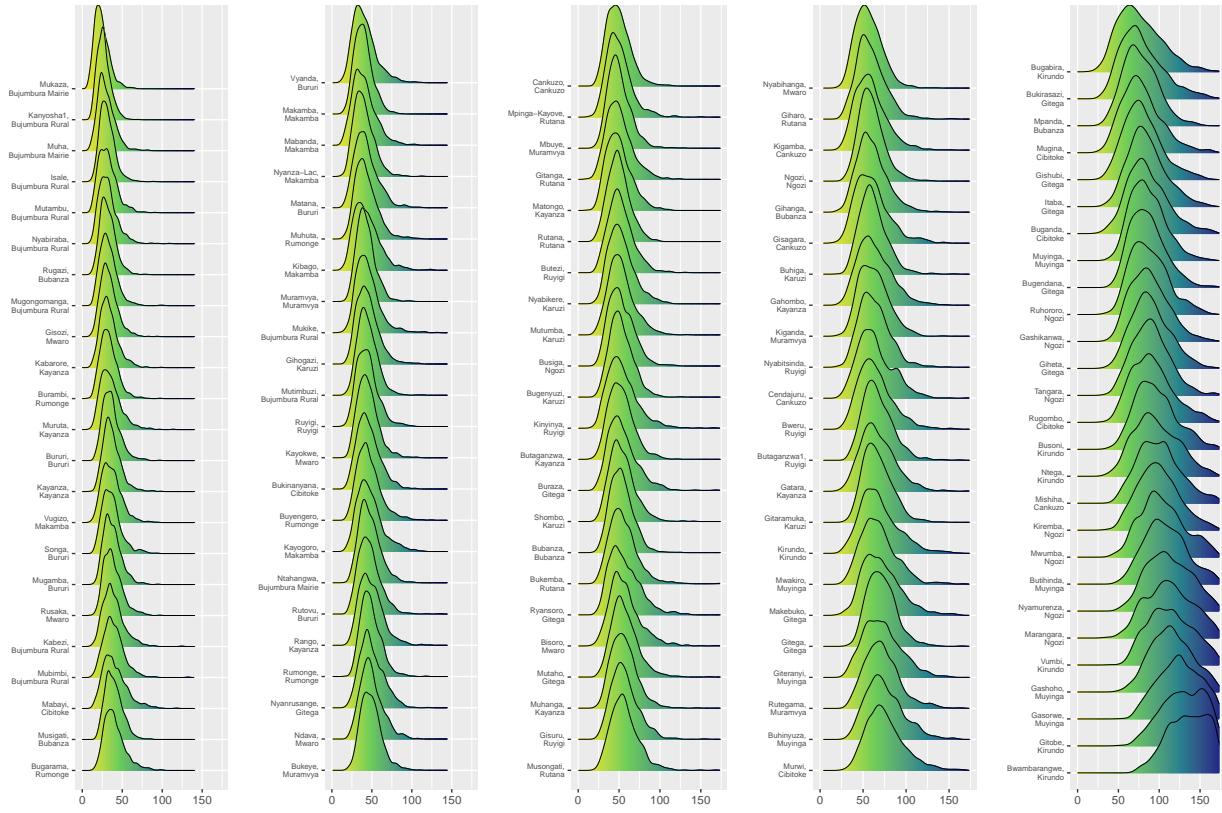


Figure 5: Posterior distributions of U5MR (deaths per 1000 children) in 2019. Areas are ordered by median estimated U5MR in 2019.

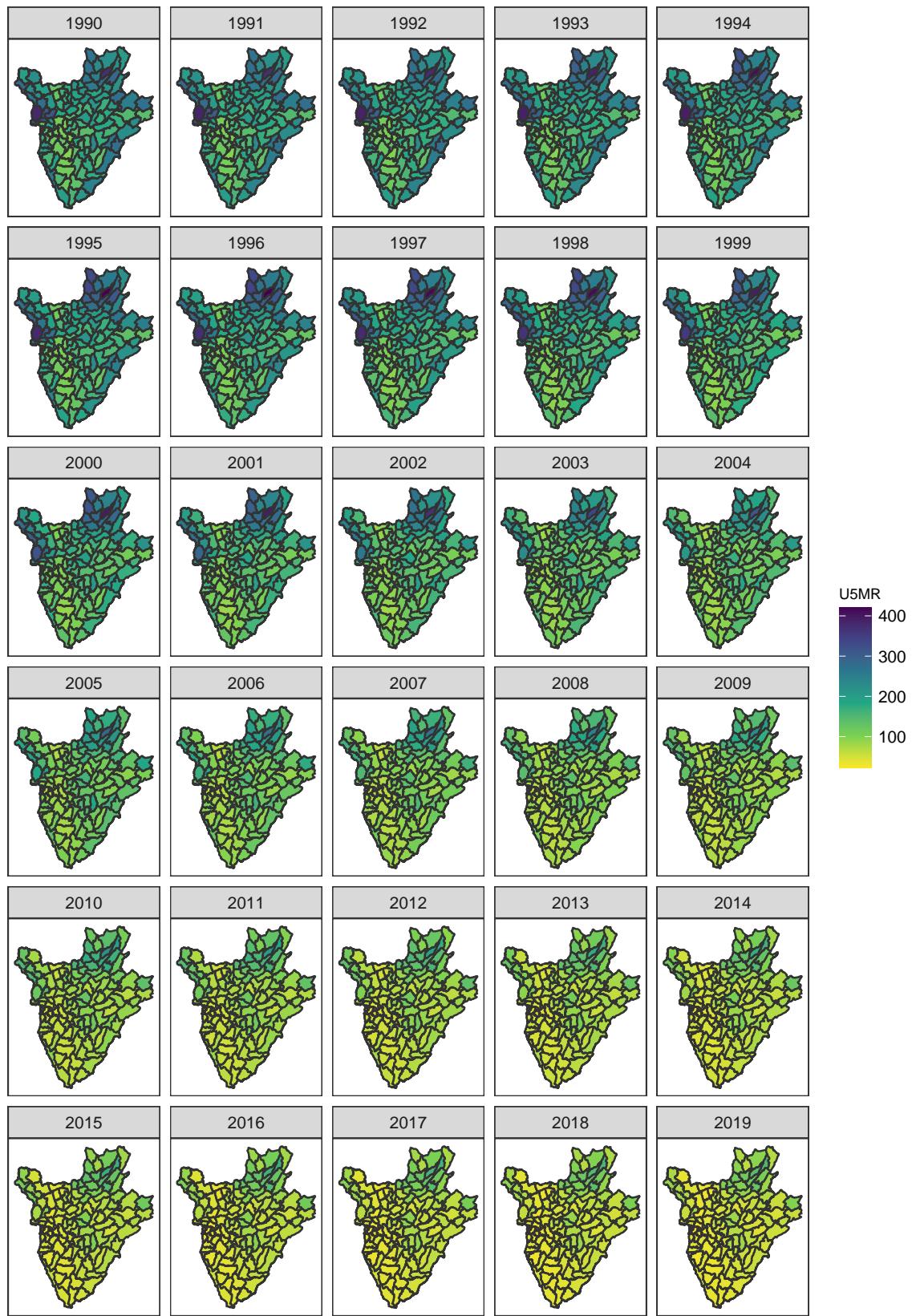


Figure 6: Posterior medians of U5MR (deaths per 1000 births) by Admin 2 area and year.

## 2 National Survey Data

Survey	Urban	Rural	Total
2010	75	301	376
2016-17	105	447	552

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

Age	No. Deaths	No. Agemonths
0	1270	44494
1-11	1537	453884
12-23	644	452891
24-35	395	419067
36-47	350	388036
48-59	163	356624

Table 2: Numbers of agemonths and deaths by age for DHS 2016-17.

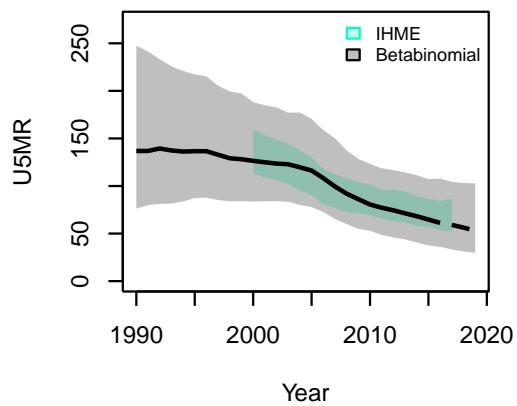
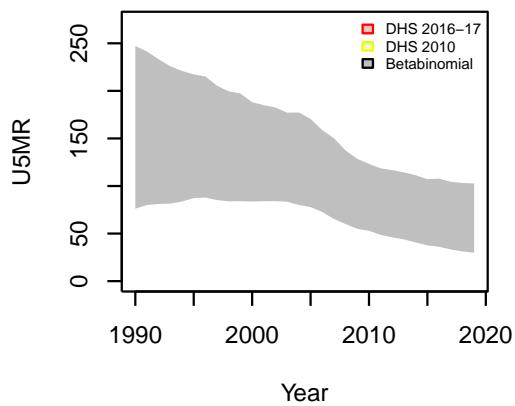
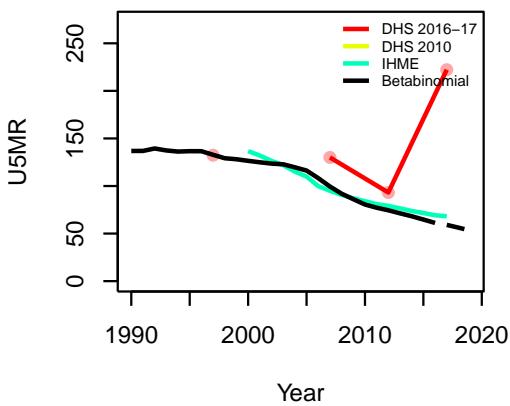
Age	No. Deaths	No. Agemonths
0	838	22354
1-11	1017	224883
12-23	412	222851
24-35	301	203931
36-47	238	186107
48-59	144	169028

Table 3: Numbers of agemonths and deaths by age for DHS 2010.

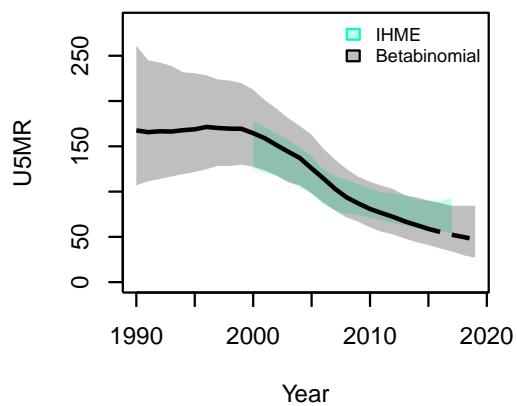
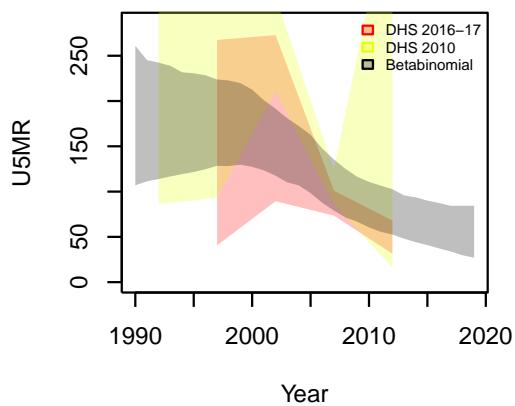
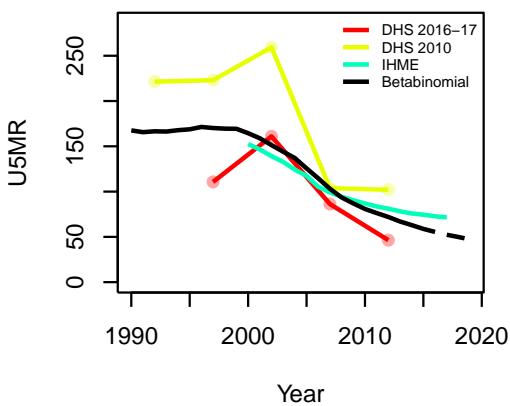
### 3 Admin 2 Figures

The following few pages have estimates by area across time with underlying data included. There are six admin areas per page. 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.

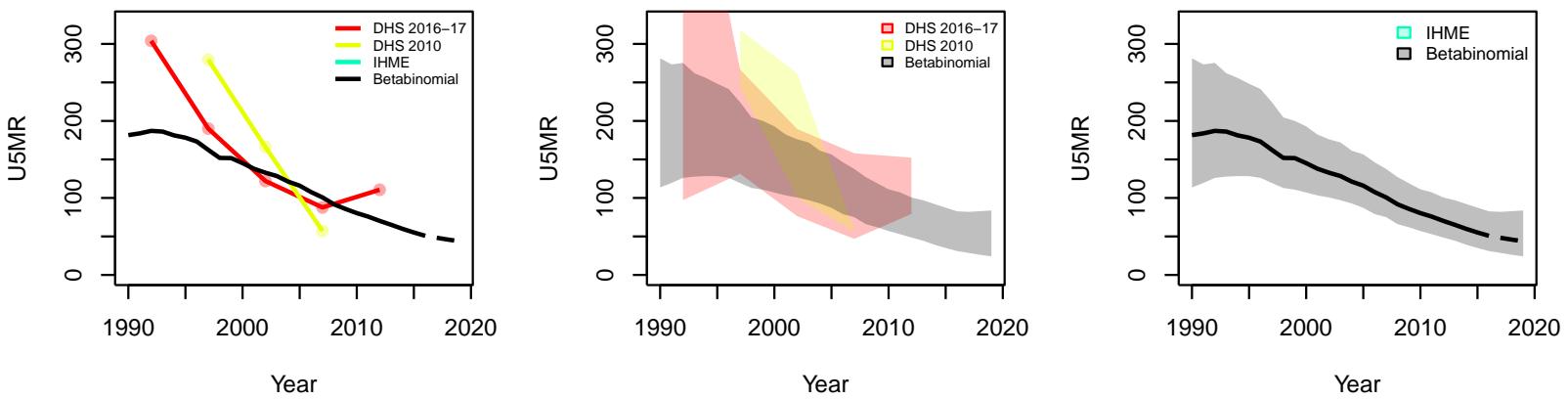
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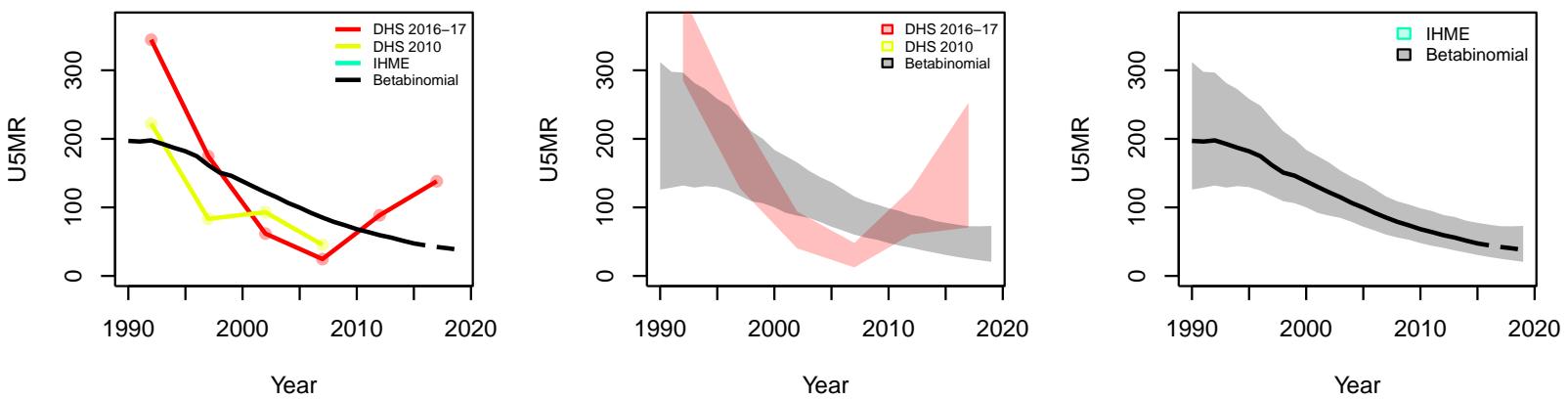
### Ndava, Mwaro



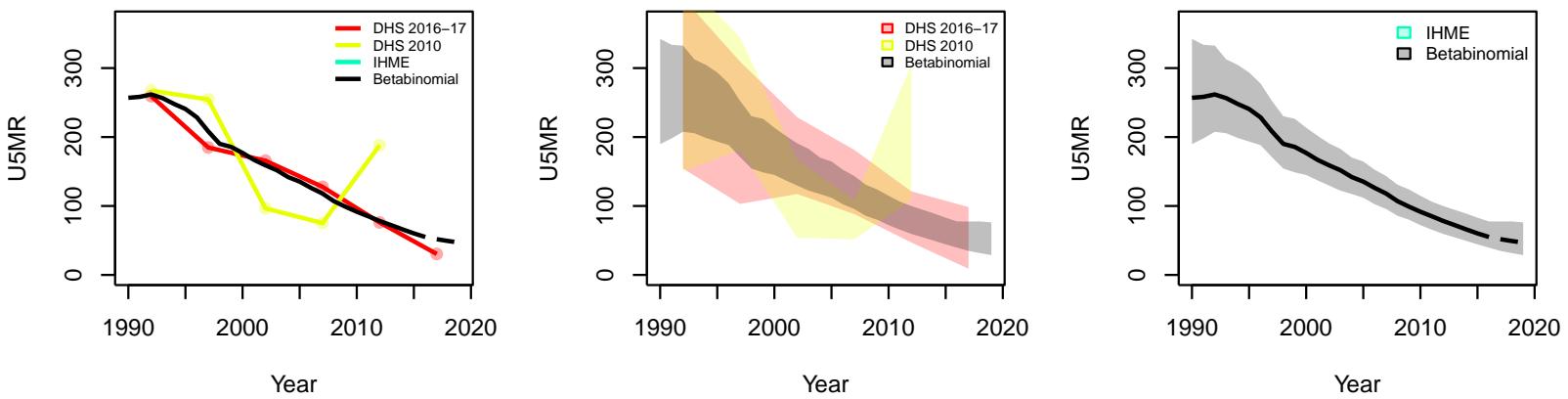
### Buyengero, Rumonge



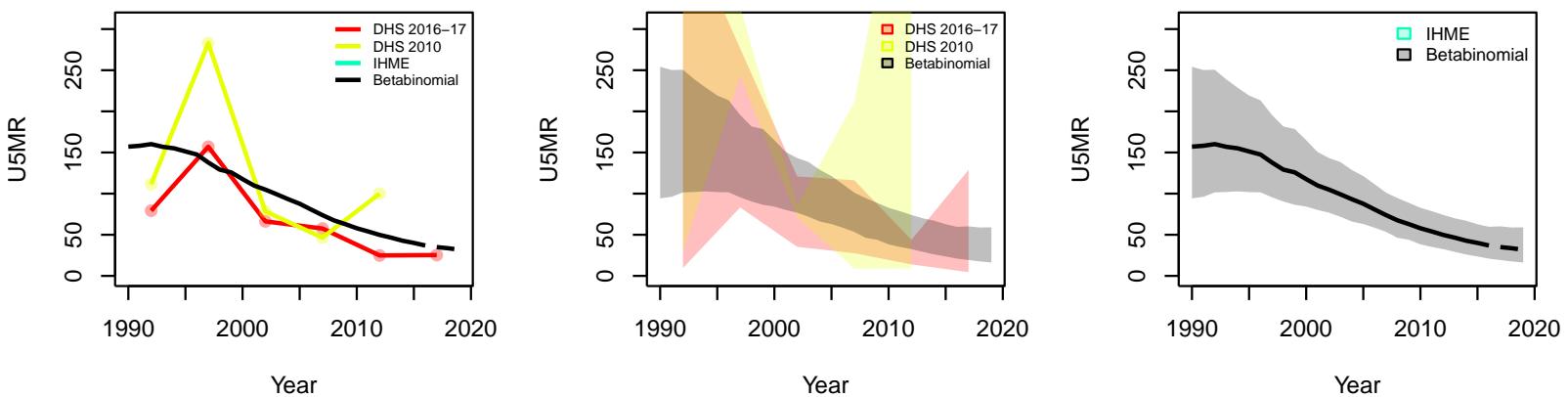
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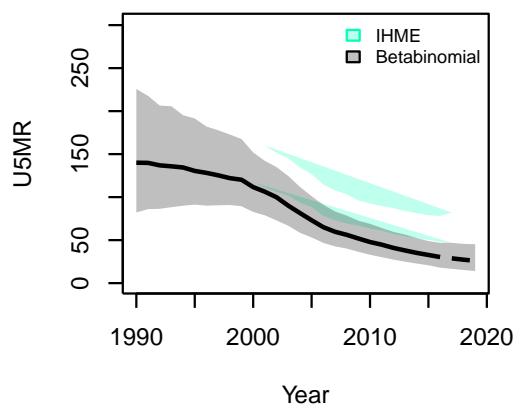
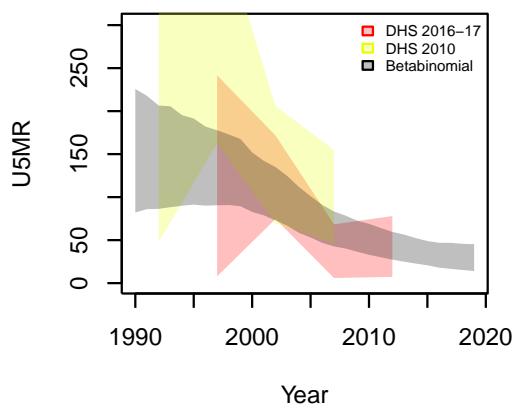
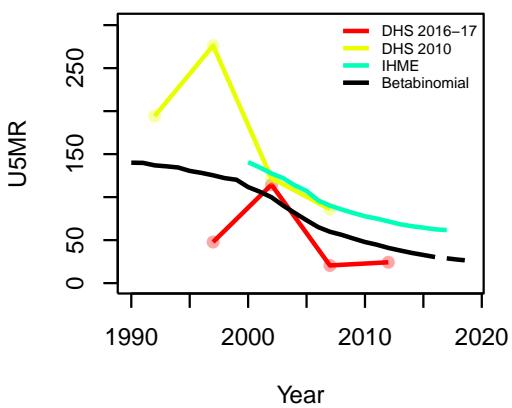
### Rumonge, Rumonge



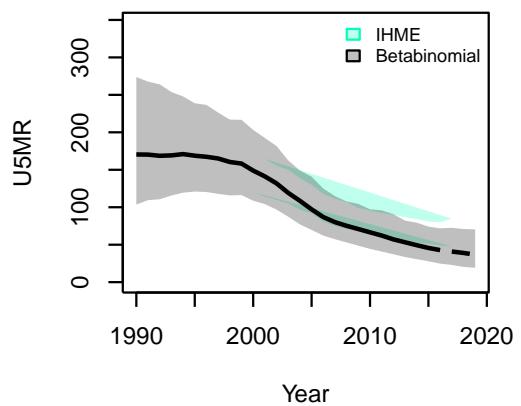
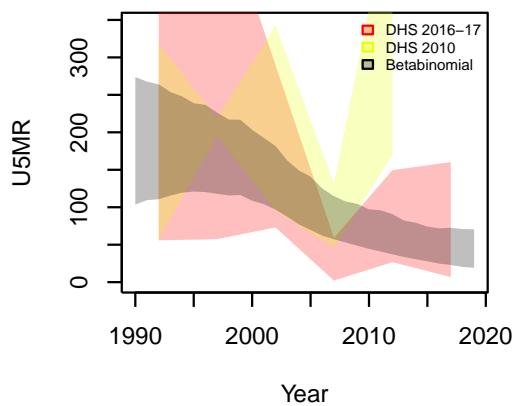
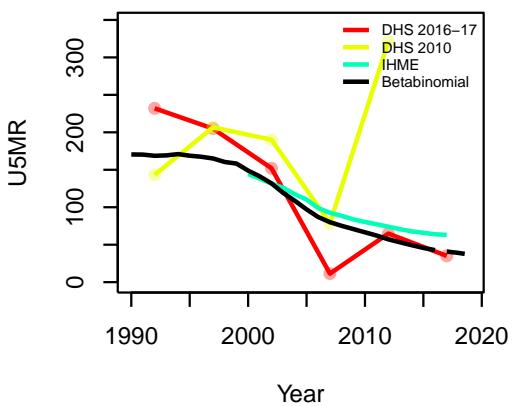
### Burambi, Rumonge



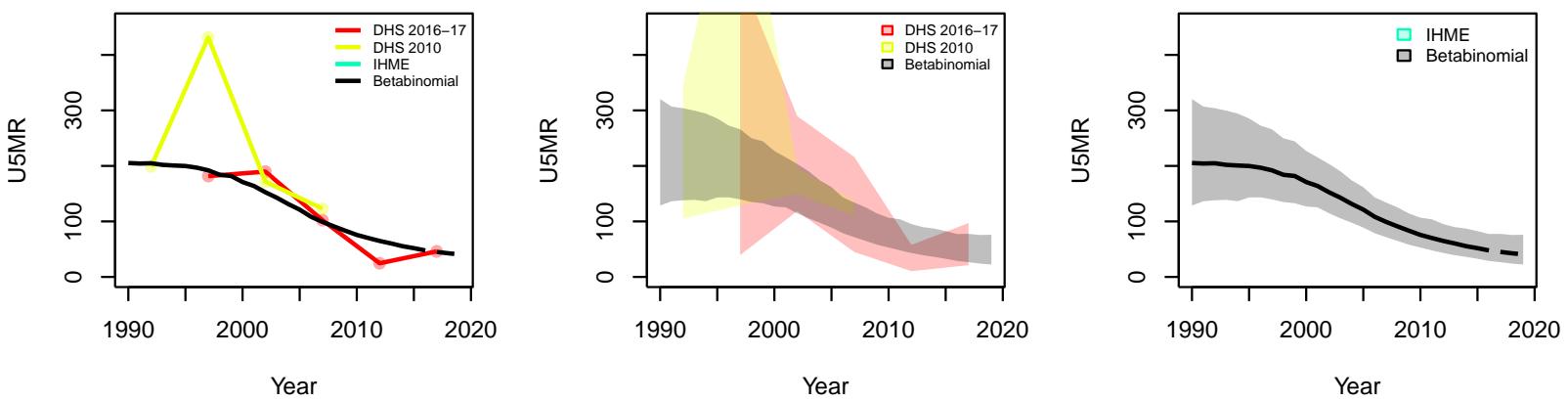
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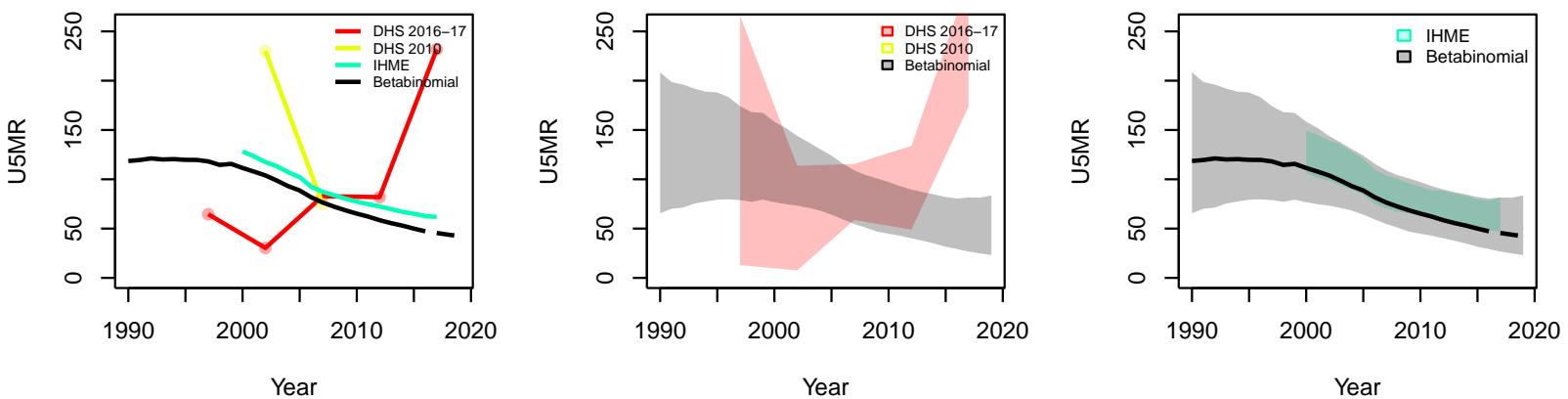
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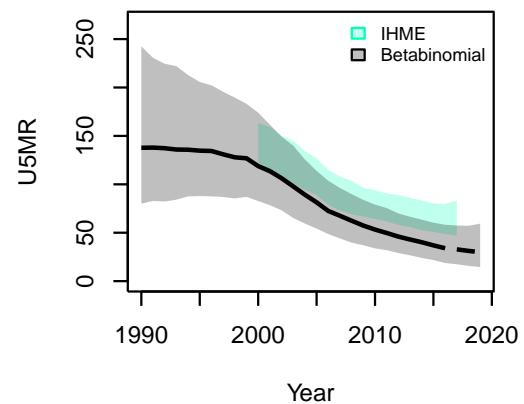
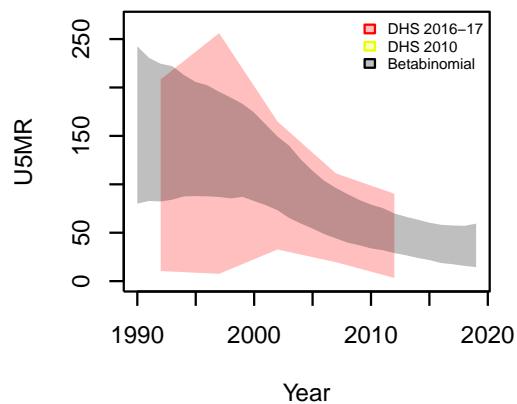
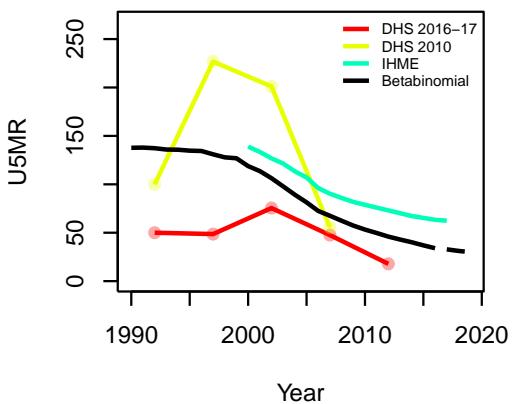
### Muhuta, Rumonge



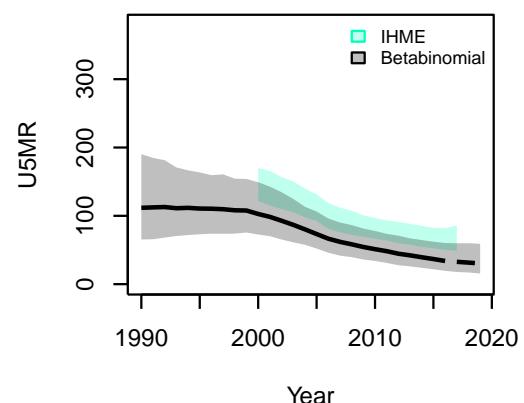
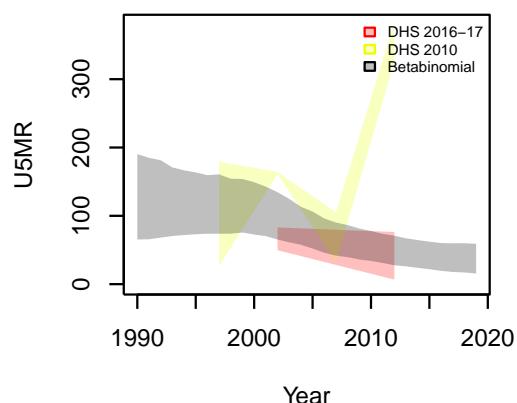
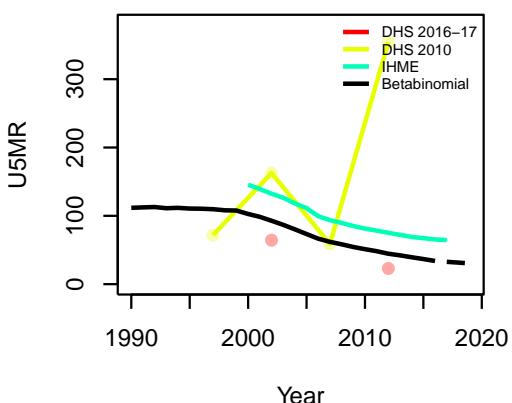
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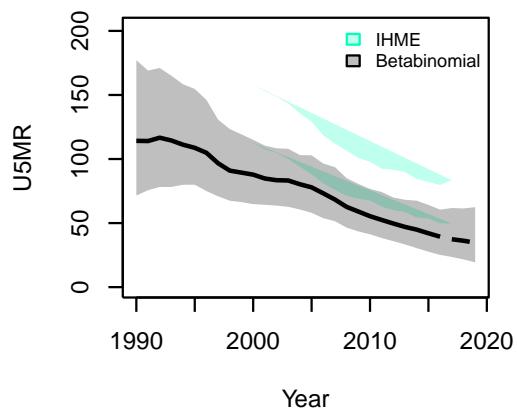
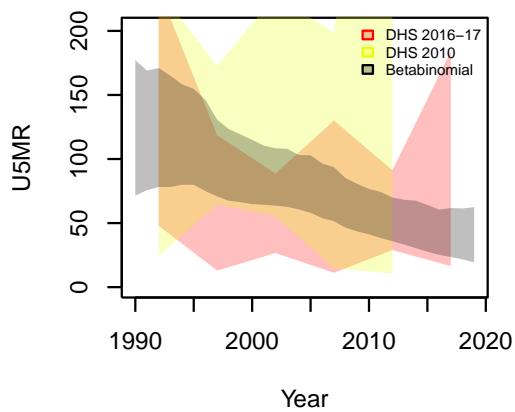
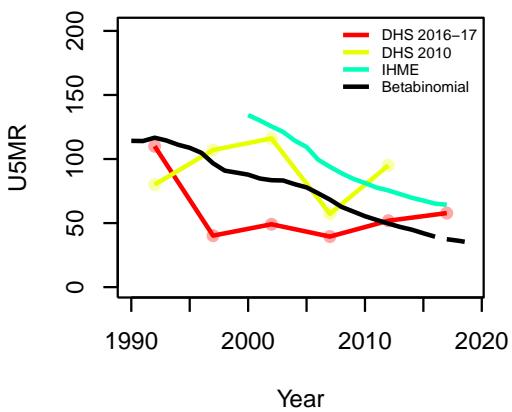
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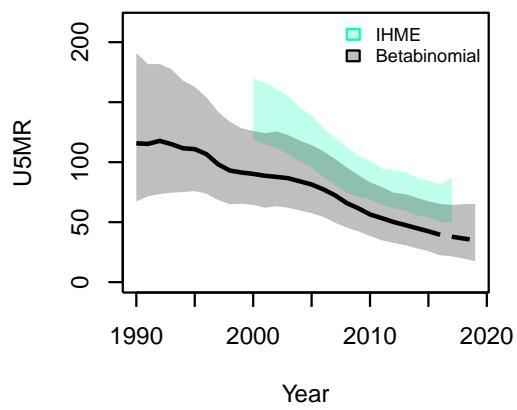
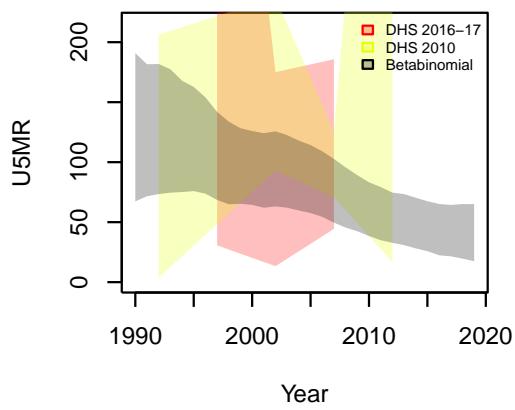
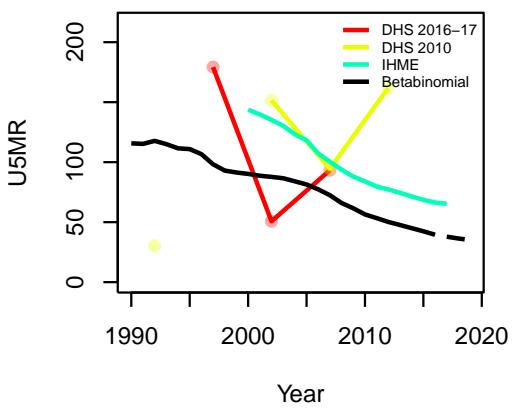
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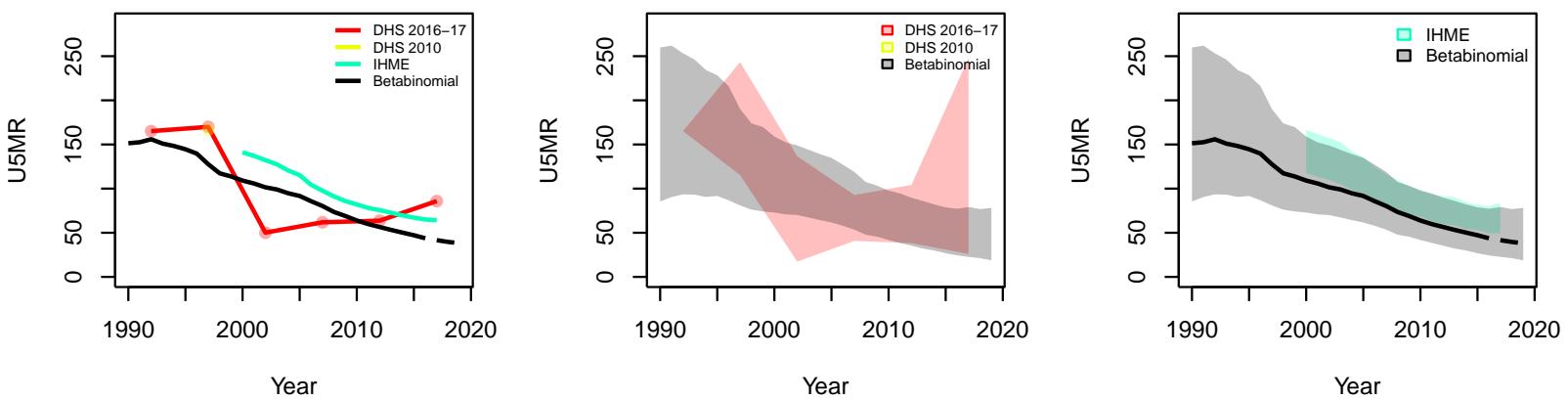
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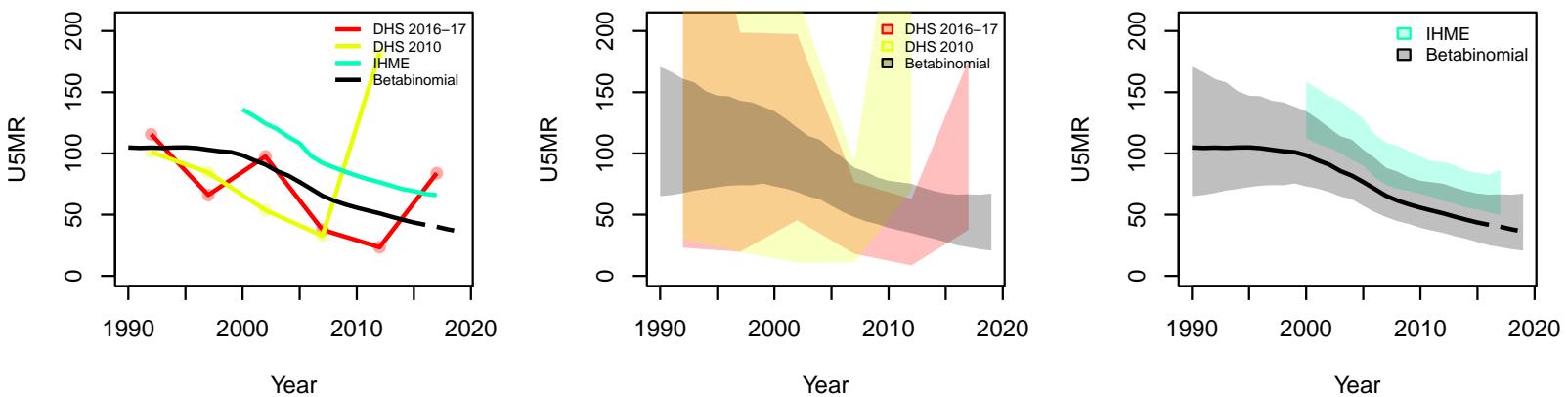
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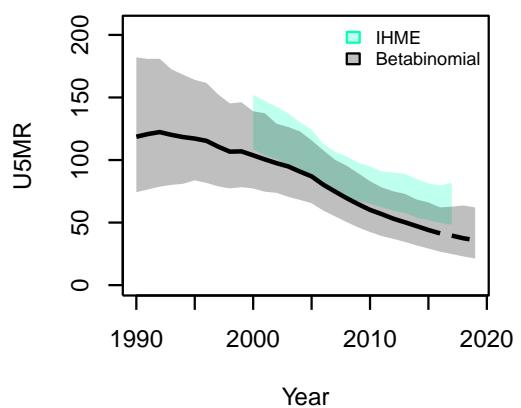
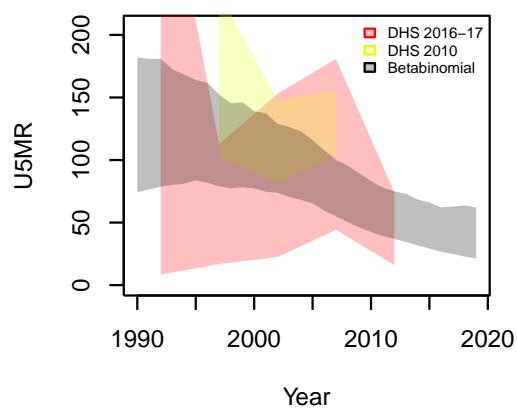
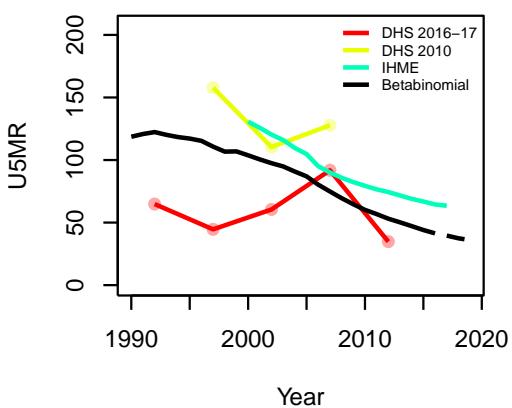
### Vyanda, Bururi



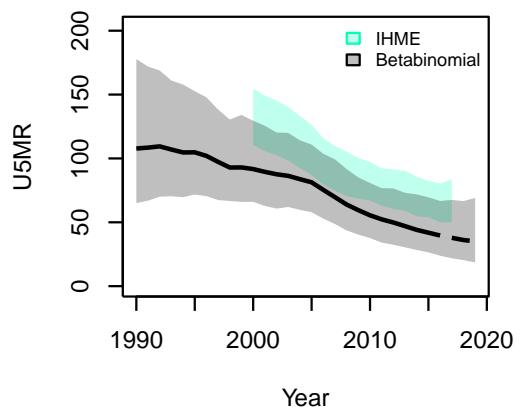
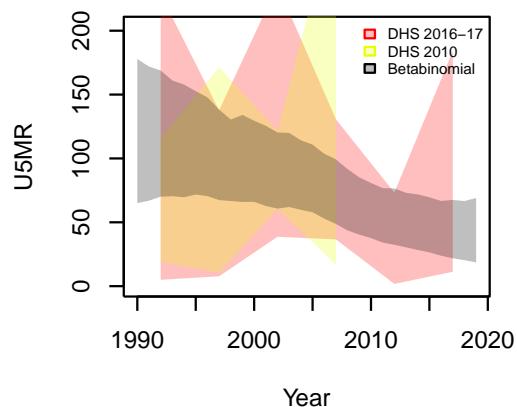
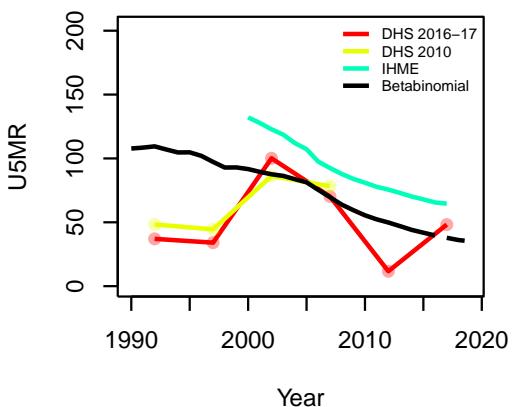
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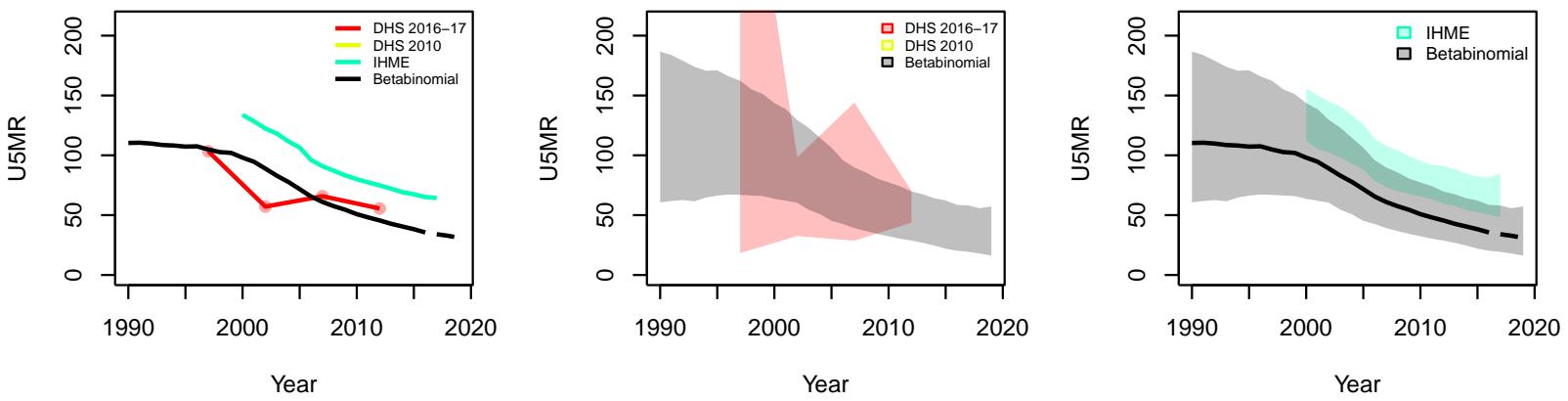
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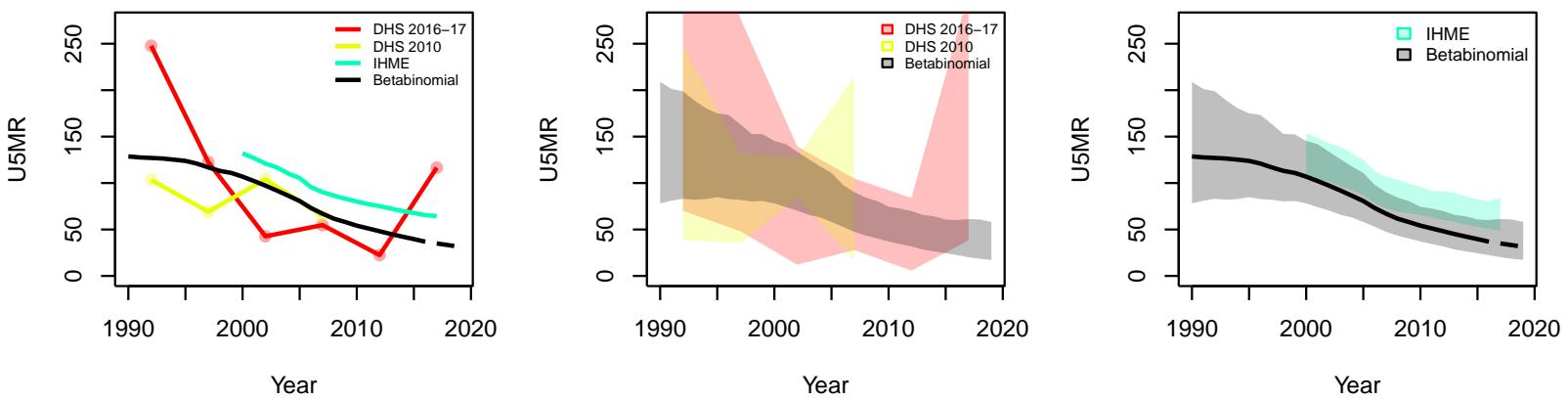
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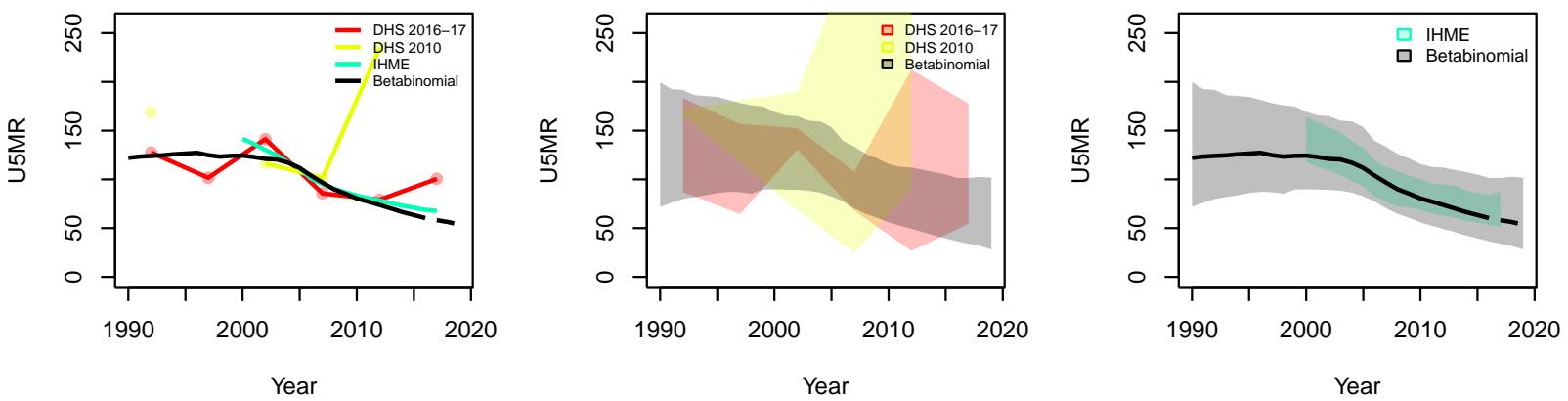
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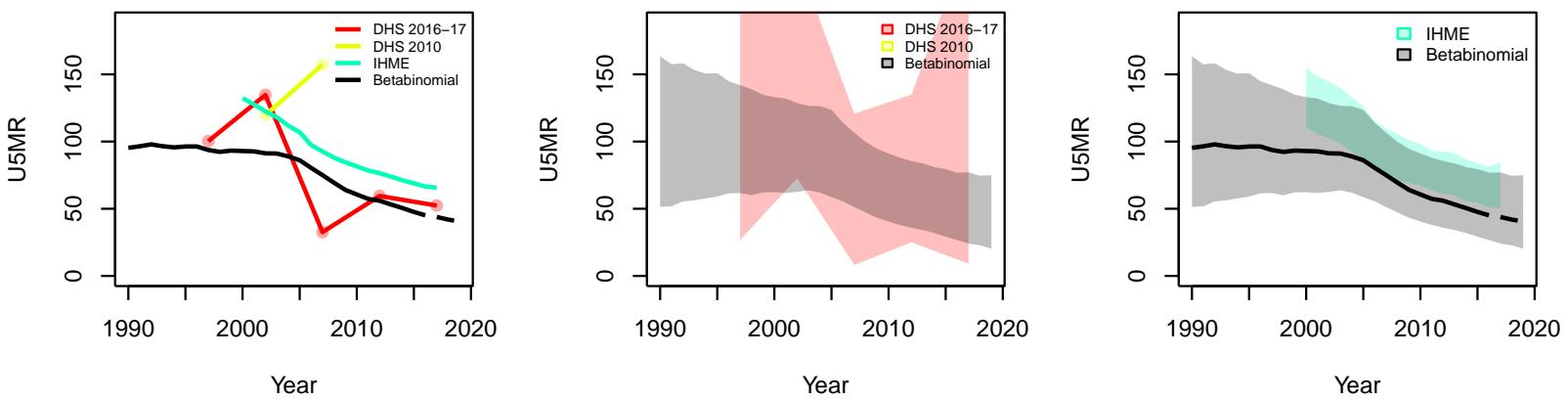
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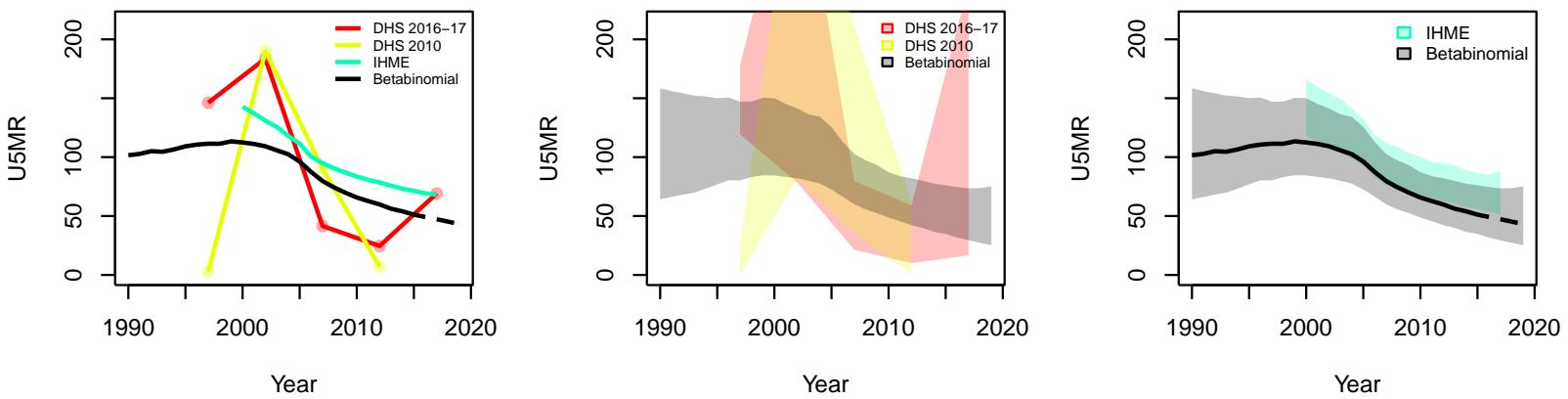
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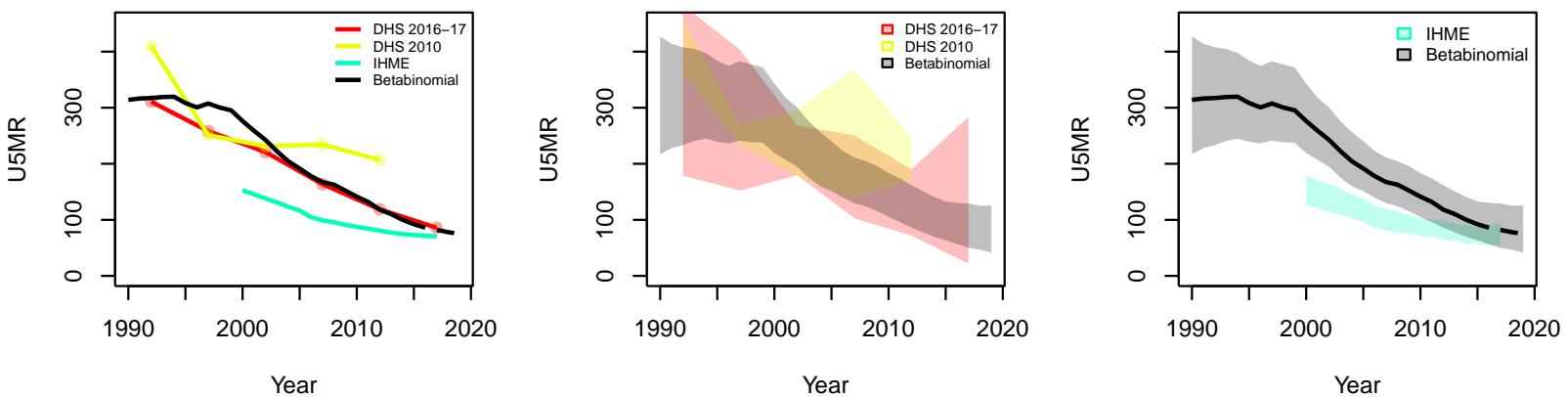
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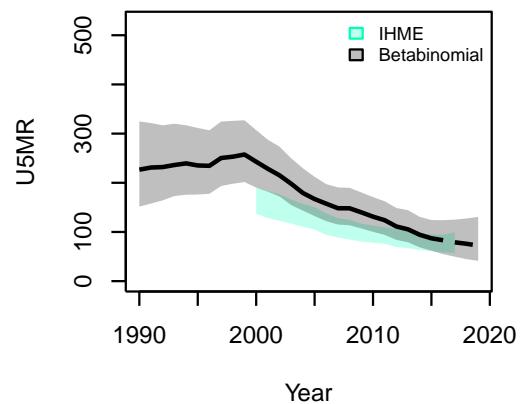
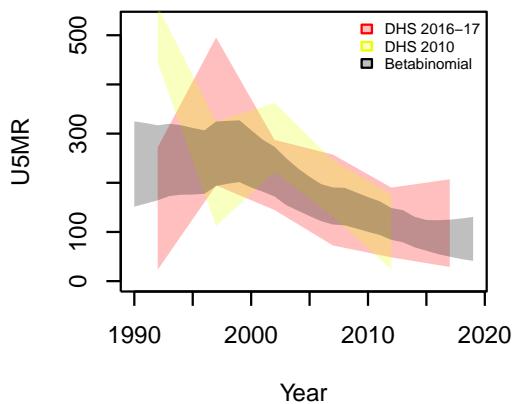
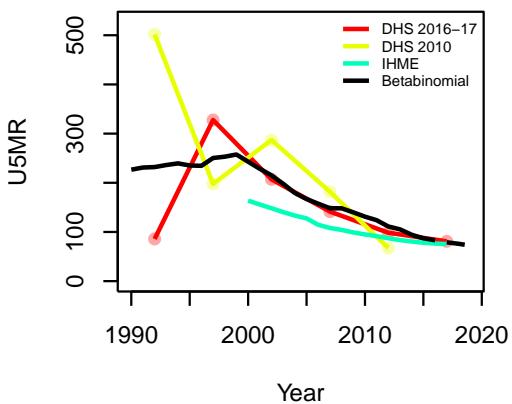
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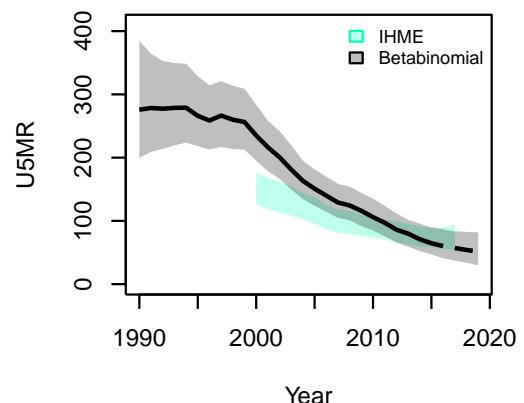
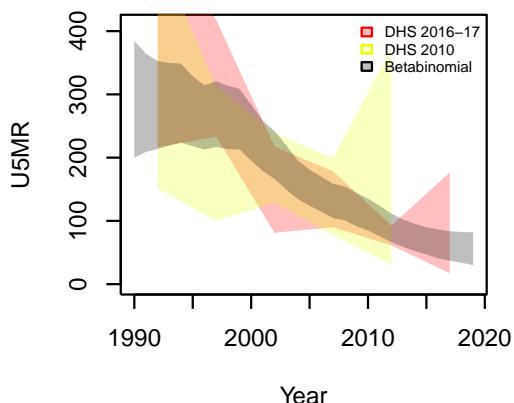
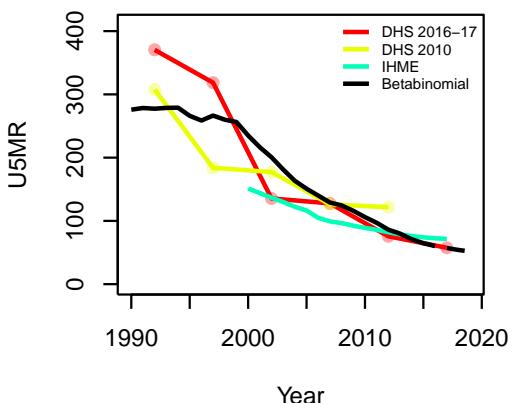
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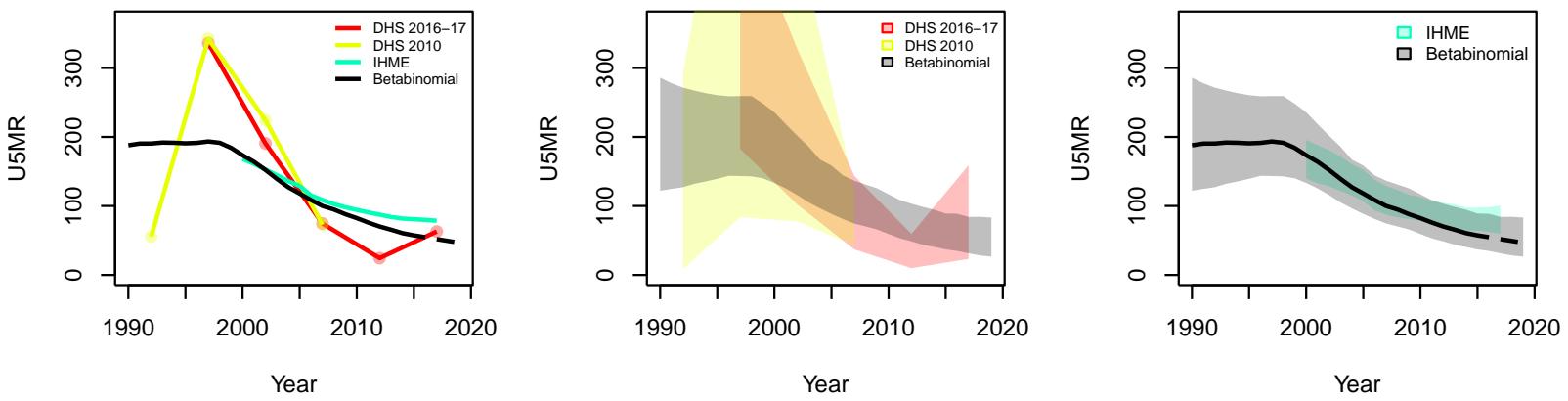
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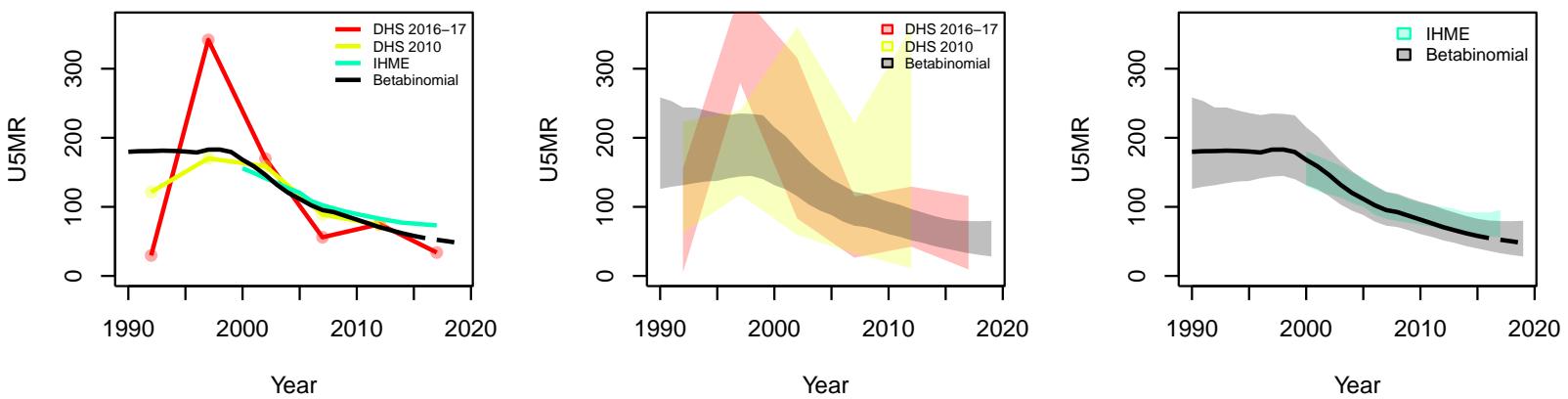
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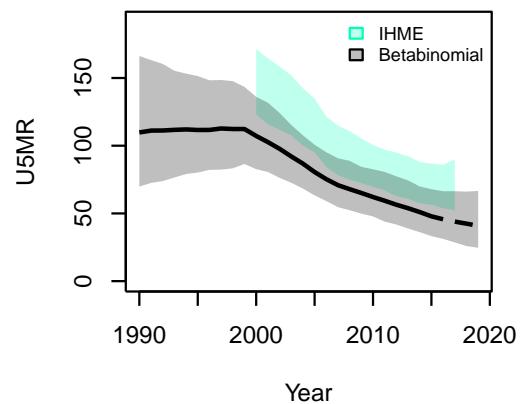
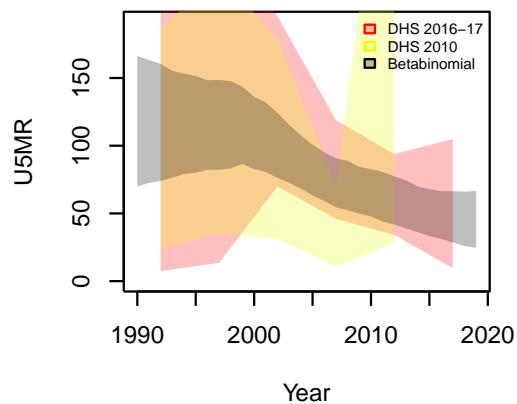
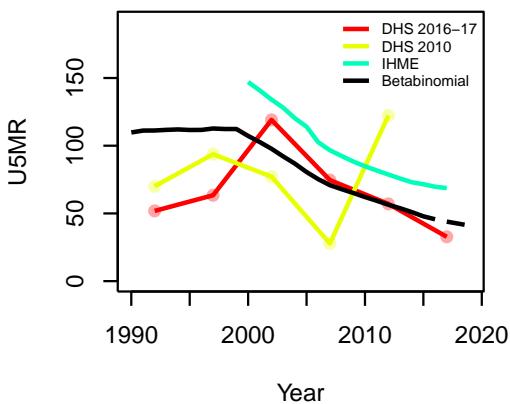
### Rango, Kayanza



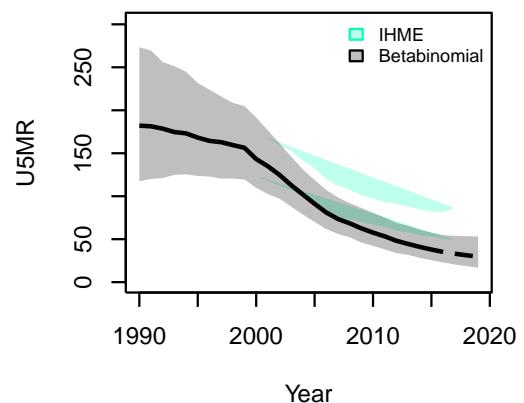
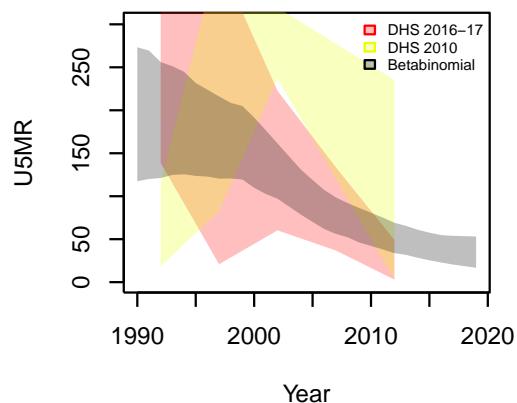
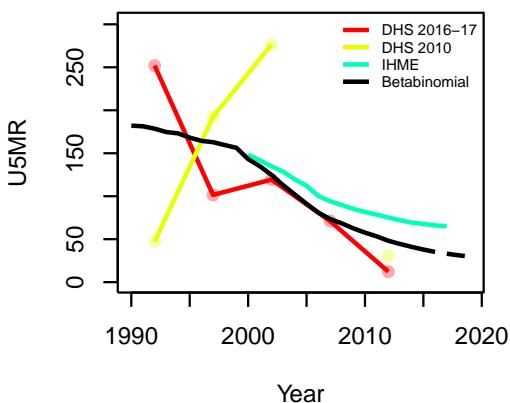
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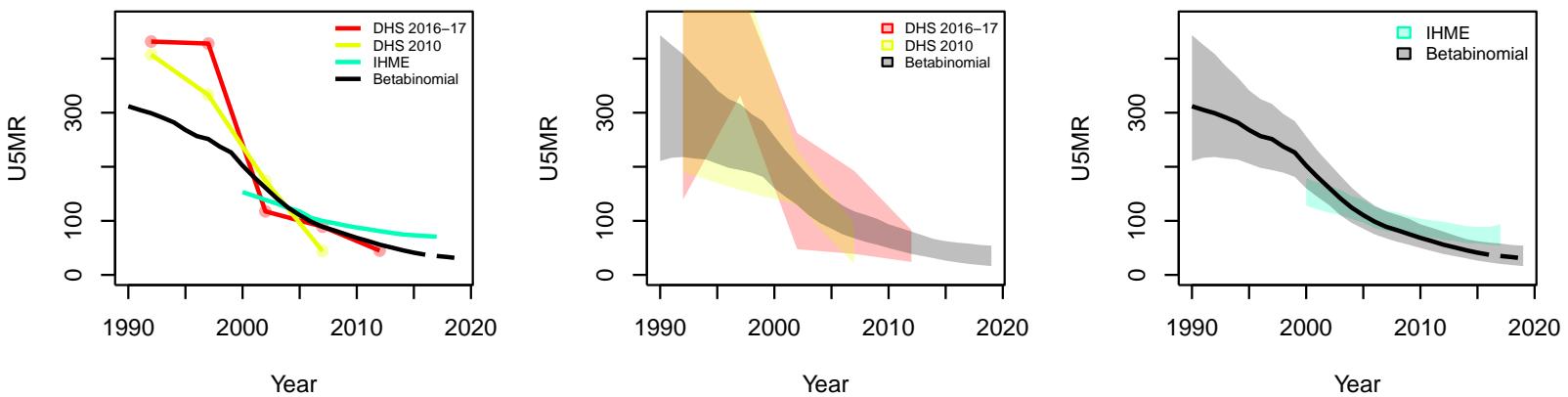
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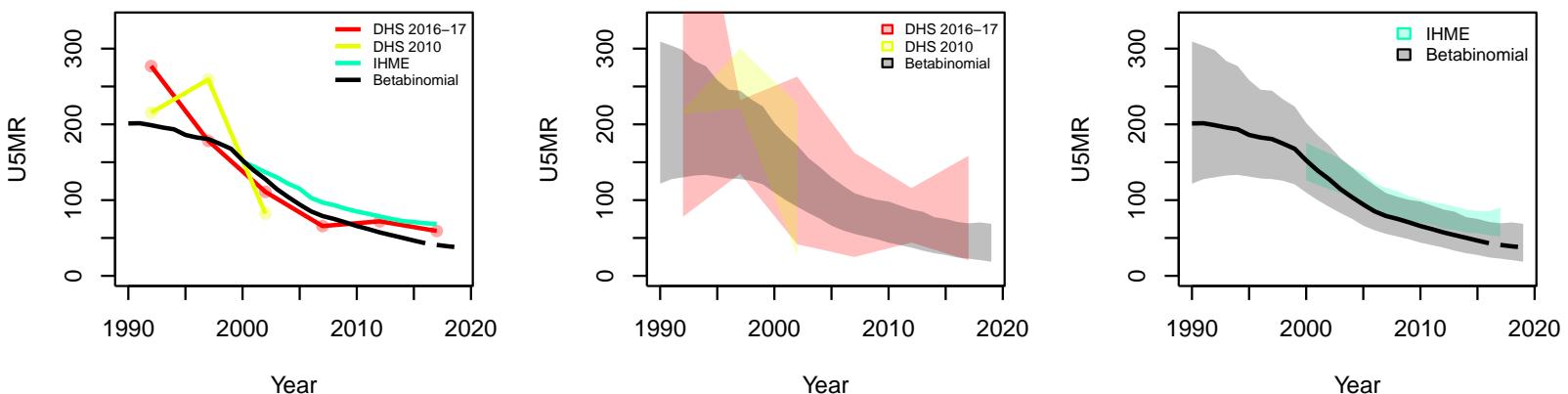
### Isale, Bujumbura Rural



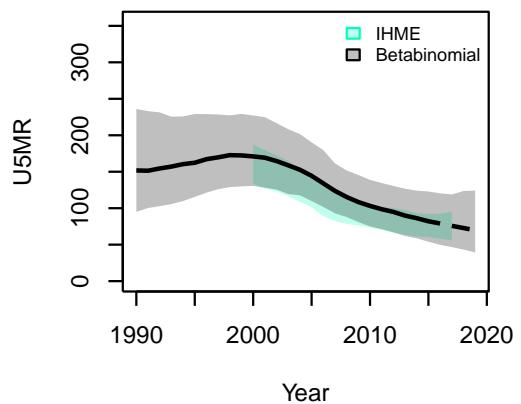
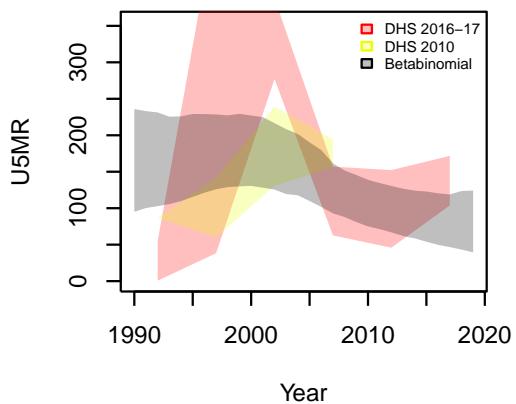
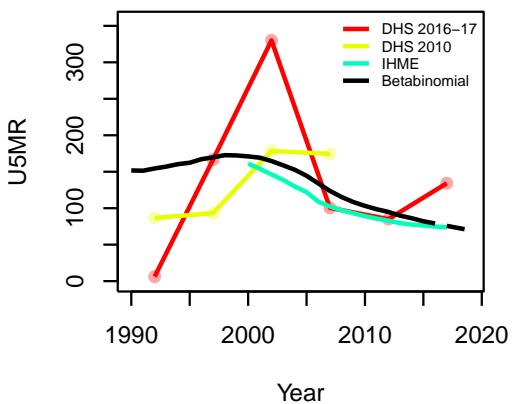
### Rugazi, Bubanza



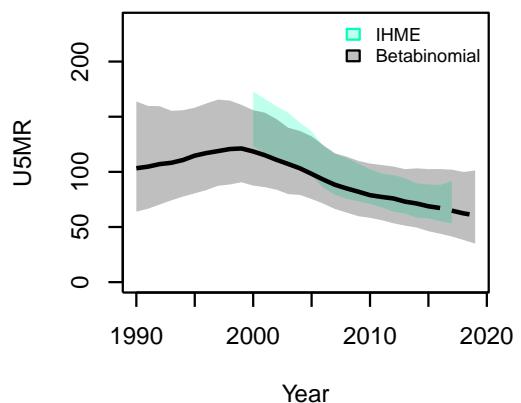
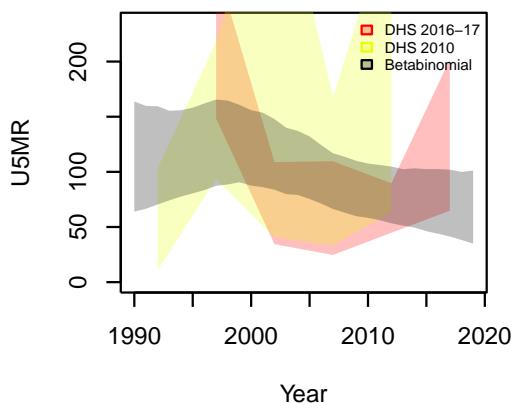
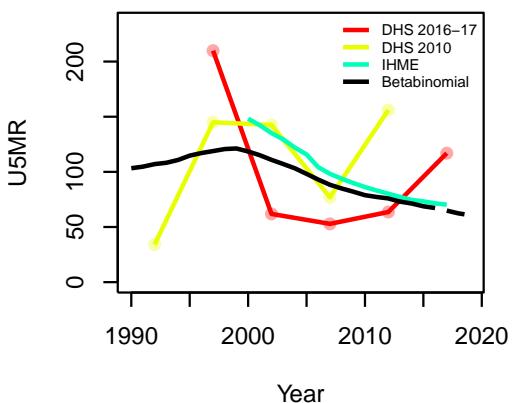
### Mubimbi, Bujumbura Rural



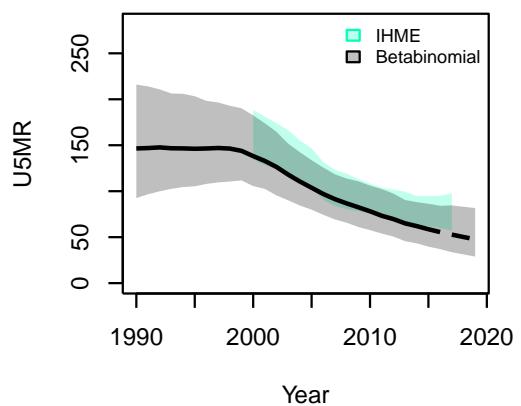
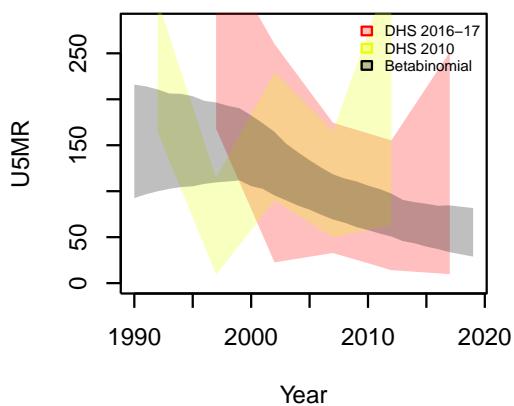
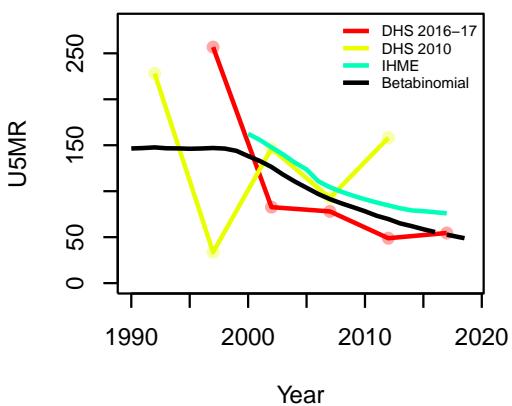
### Rutegama, Muramvya



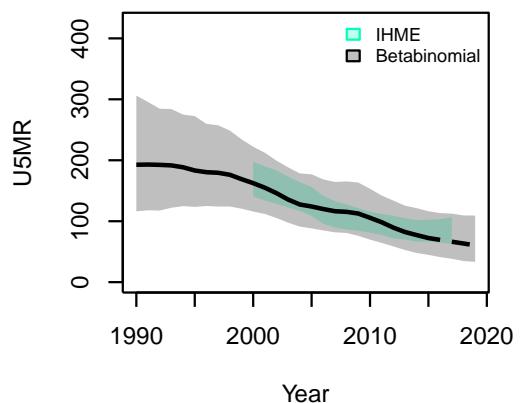
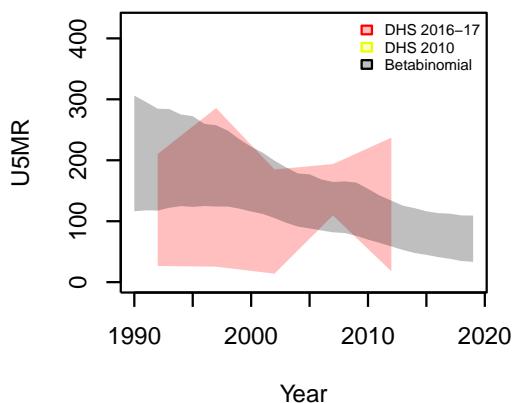
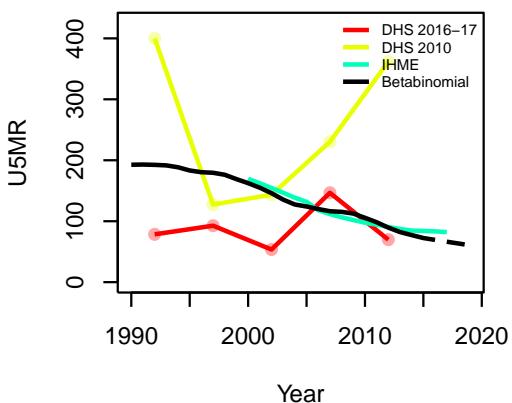
### Kiganda, Muramvya



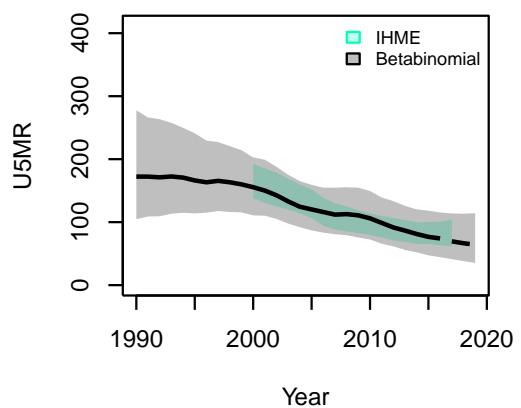
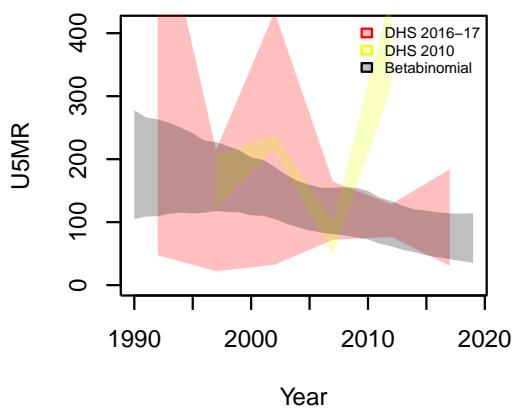
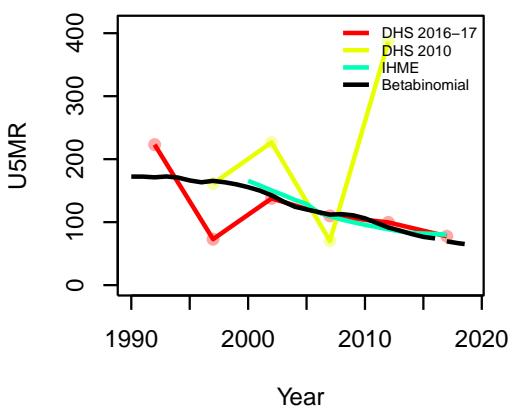
### Mbuye, Muramvya



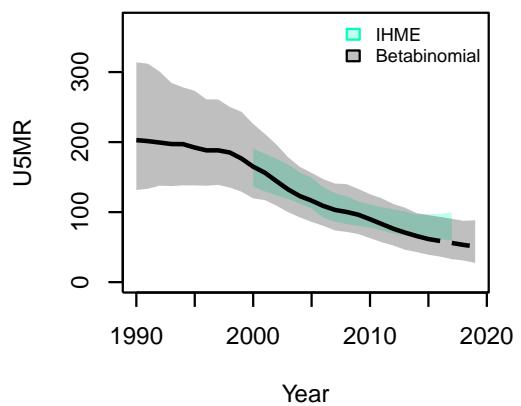
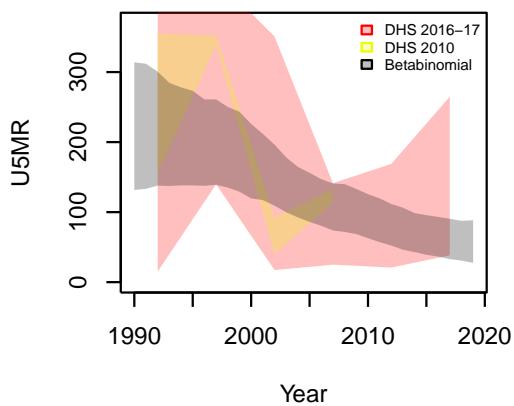
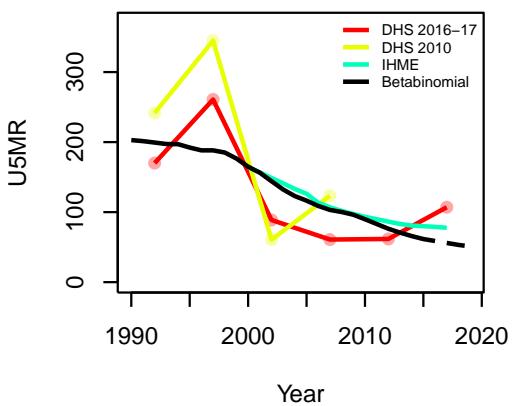
### Gahombo, Kayanza



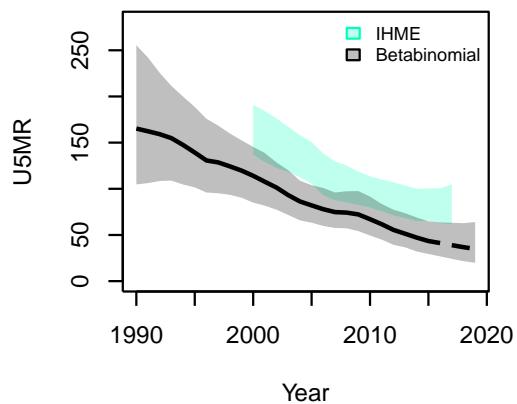
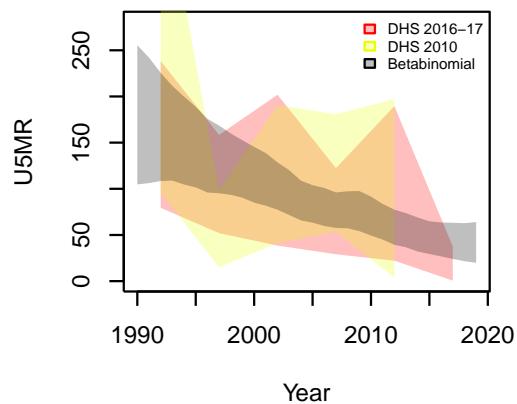
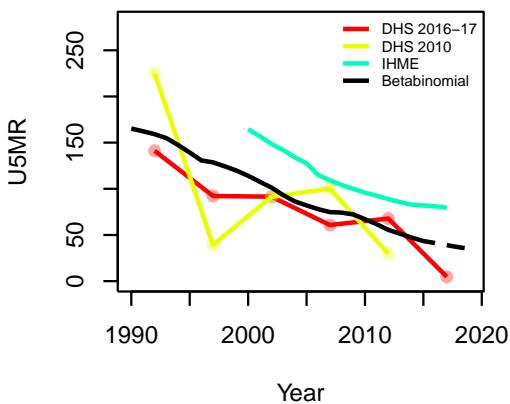
### Gatara, Kayanza



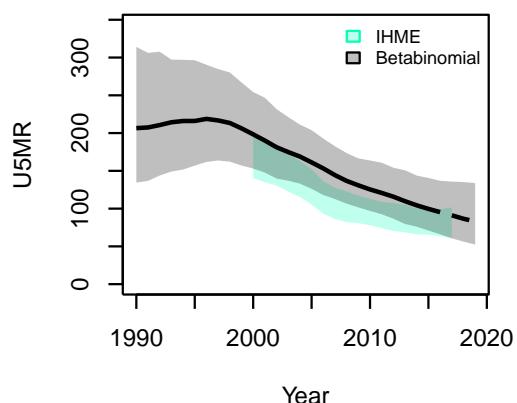
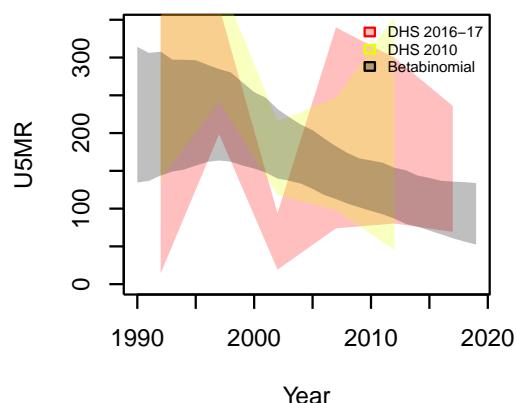
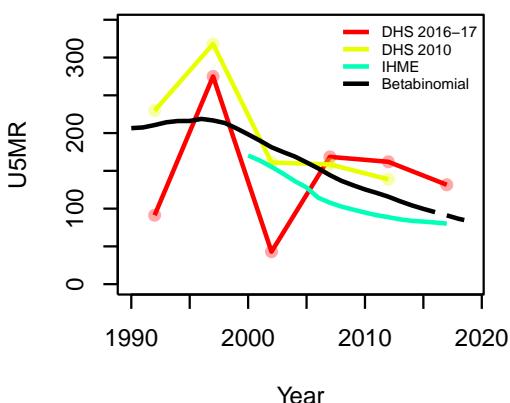
### Butaganzwa, Kayanza



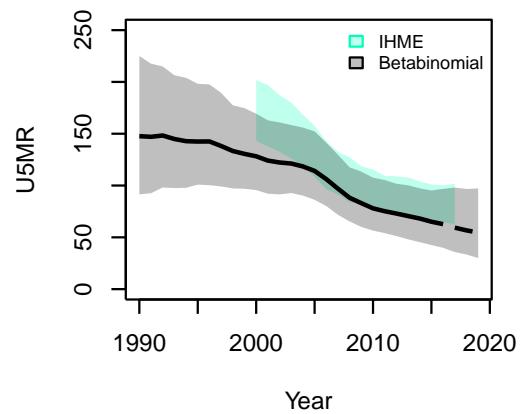
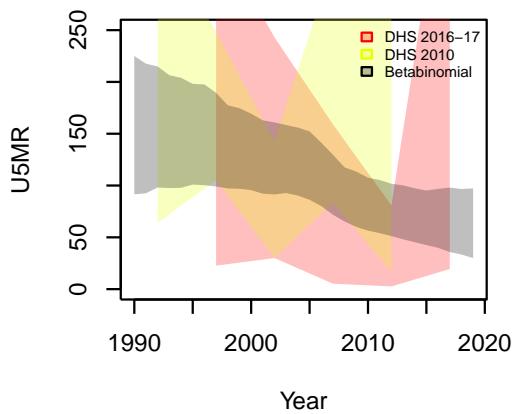
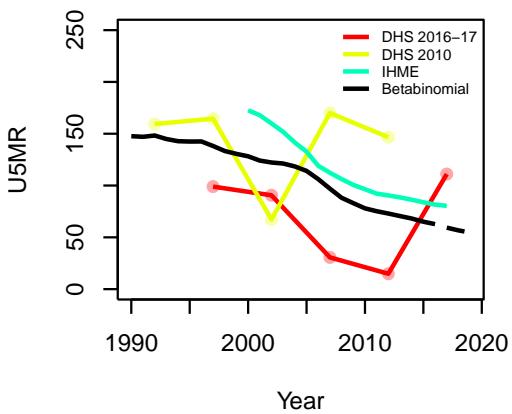
### Kayanza, Kayanza



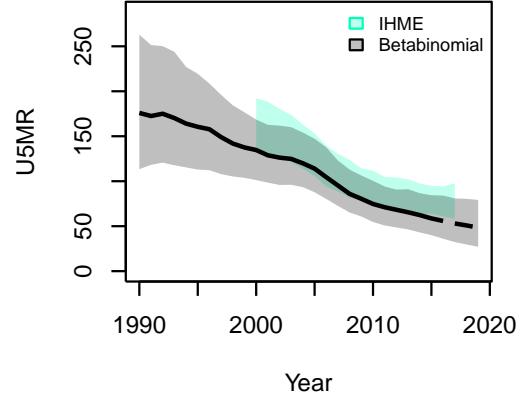
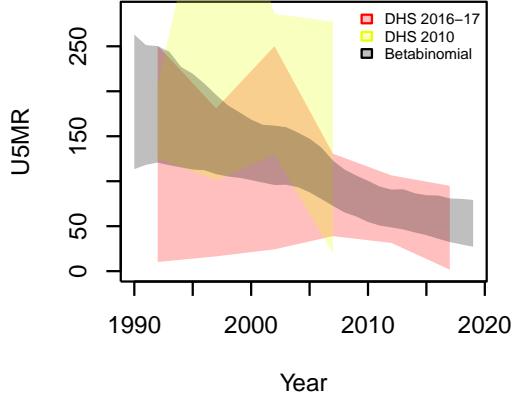
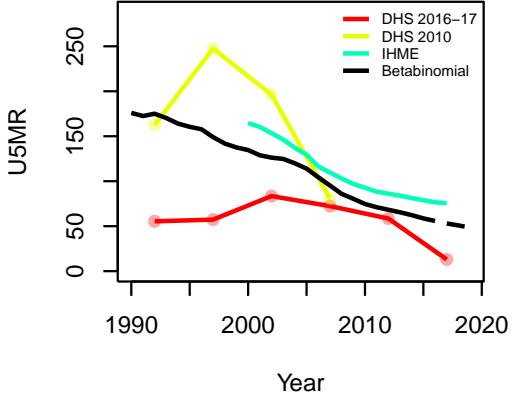
### Bugendana, Gitega



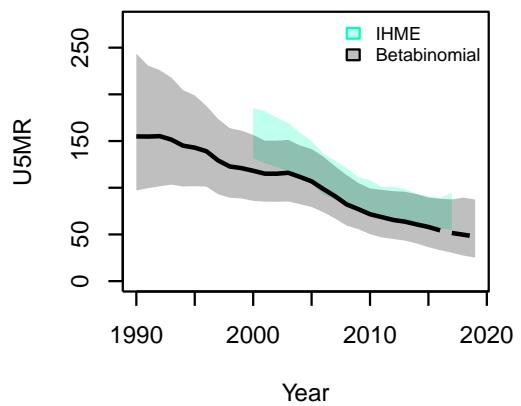
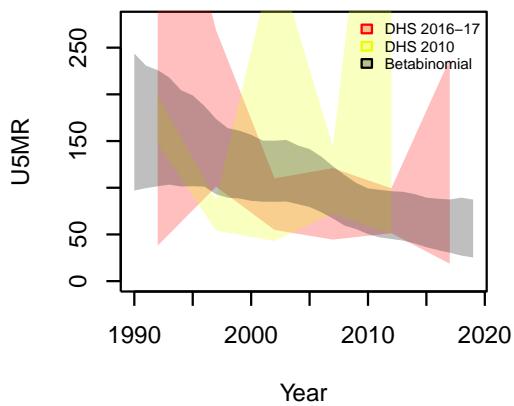
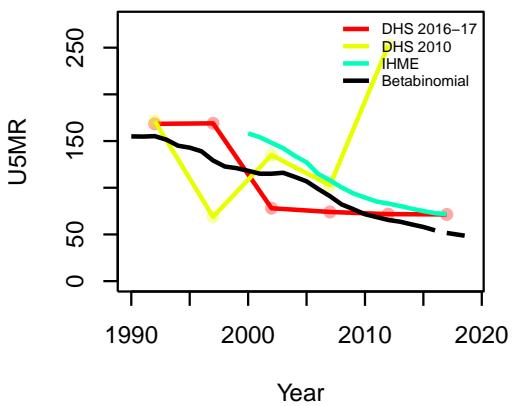
### Musongati, Rutana



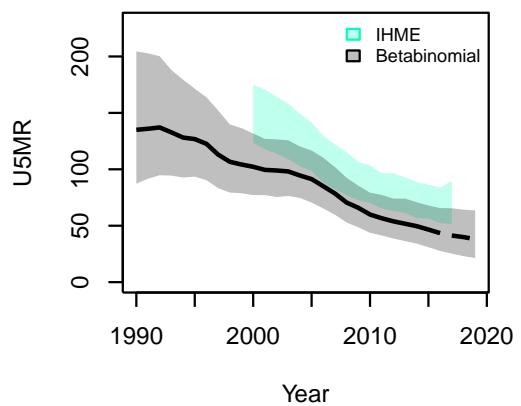
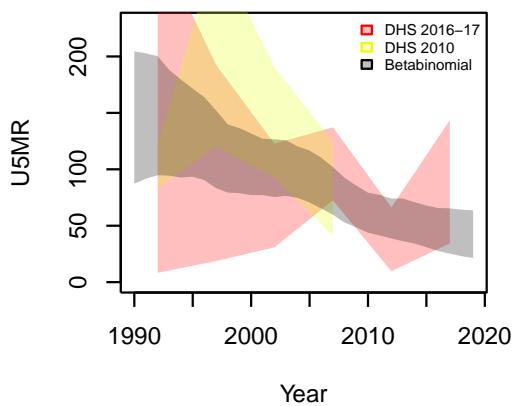
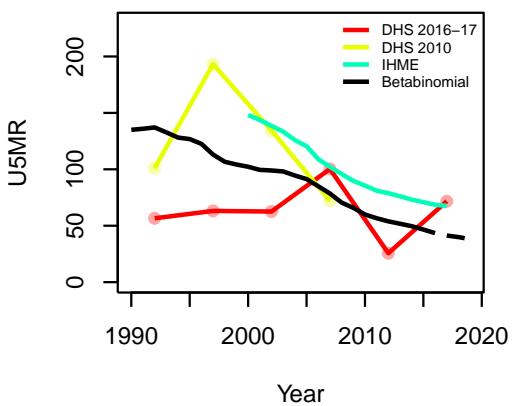
### Rutana, Rutana



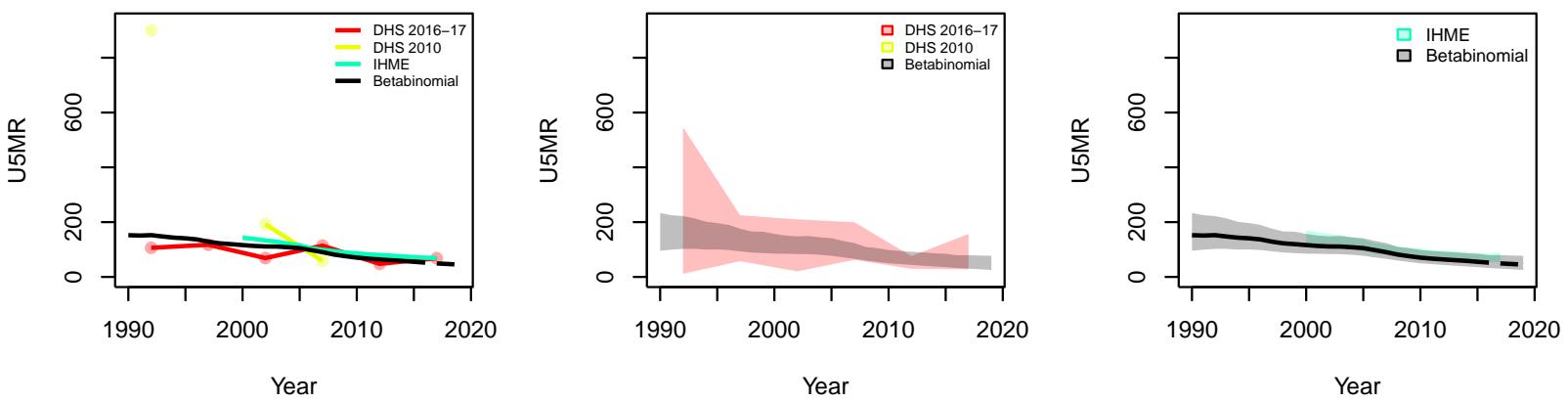
### Gitanga, Rutana



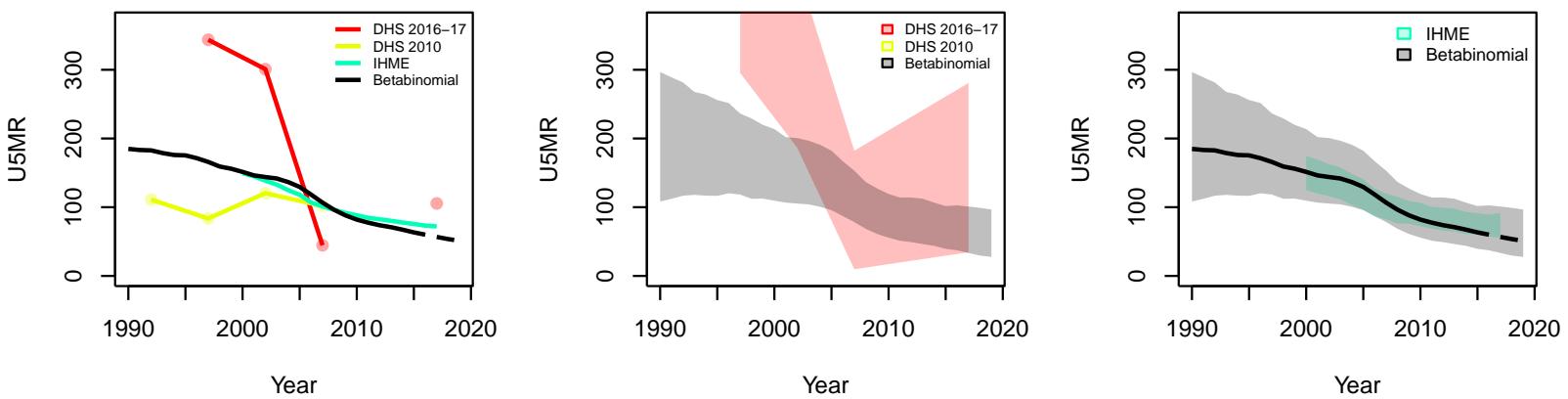
### Makamba, Makamba



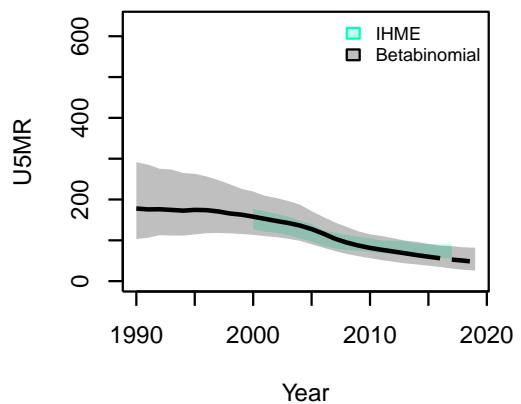
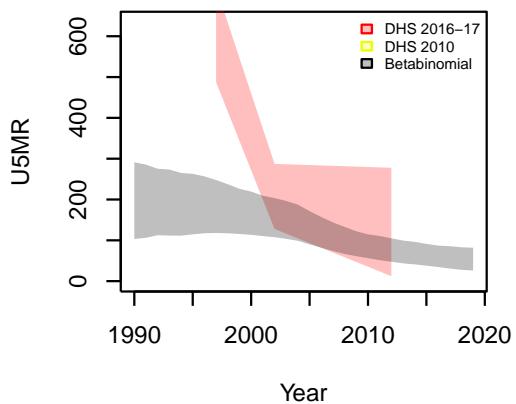
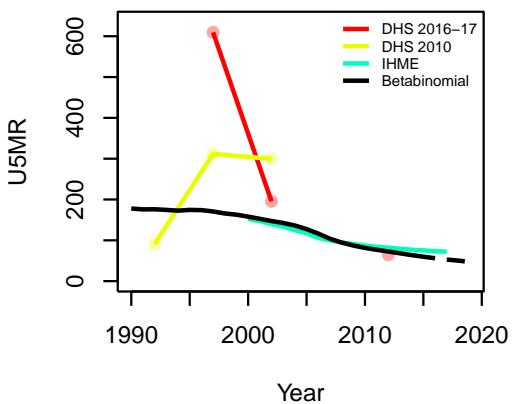
### Rutovu, Bururi



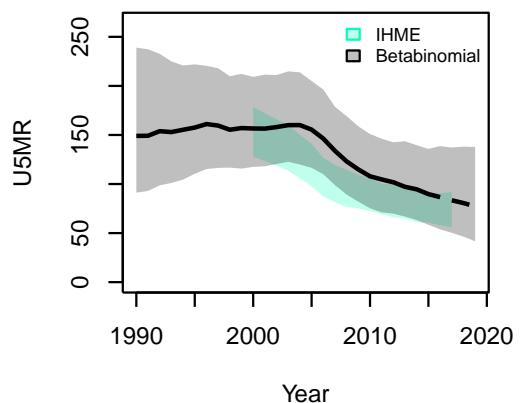
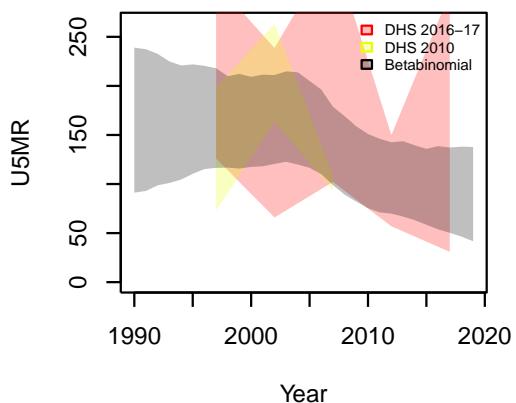
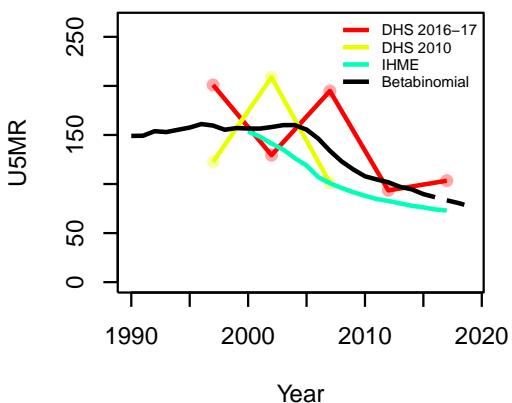
### Buraza, Gitega



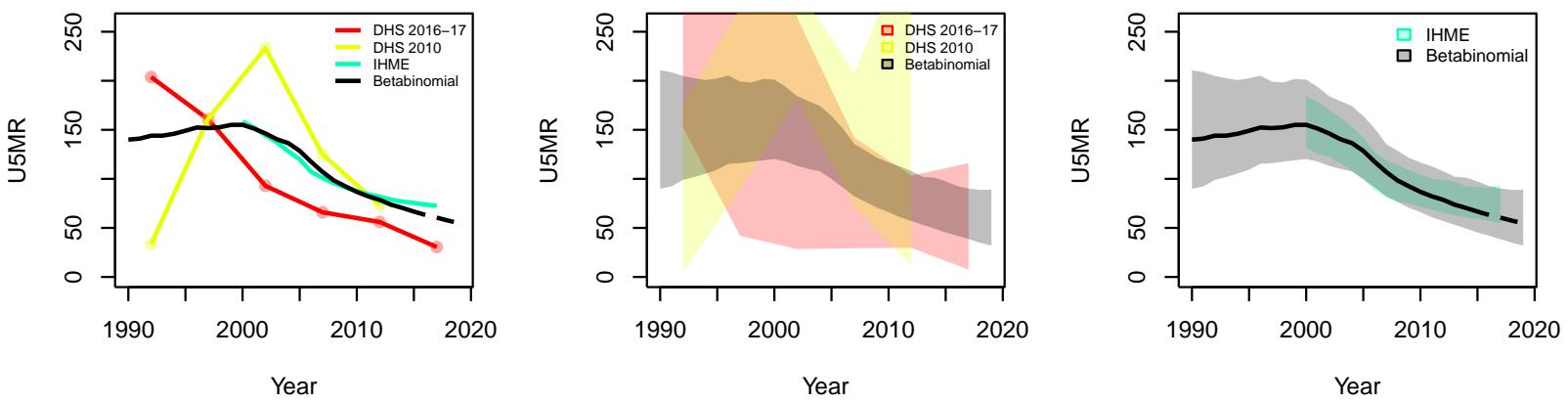
### Nyanrusange, Gitega



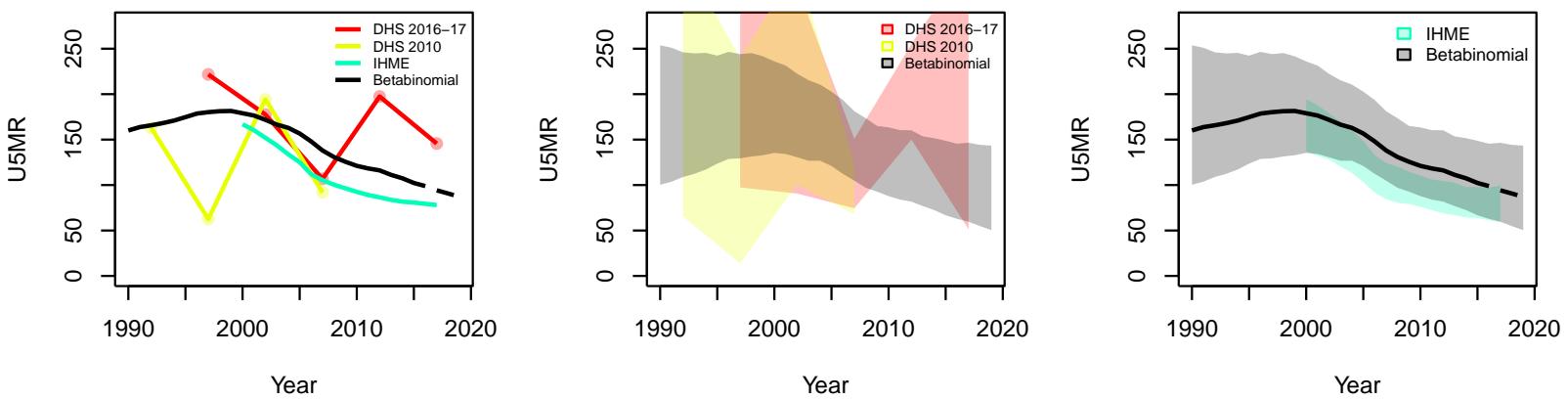
### Gishubi, Gitega



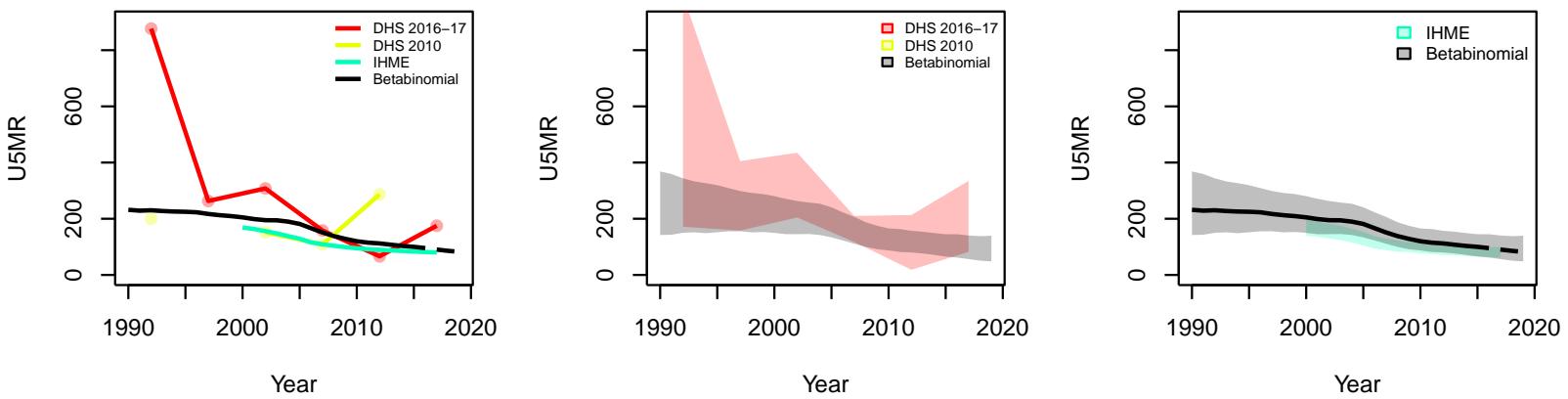
### Nyabihanga, Mwaro



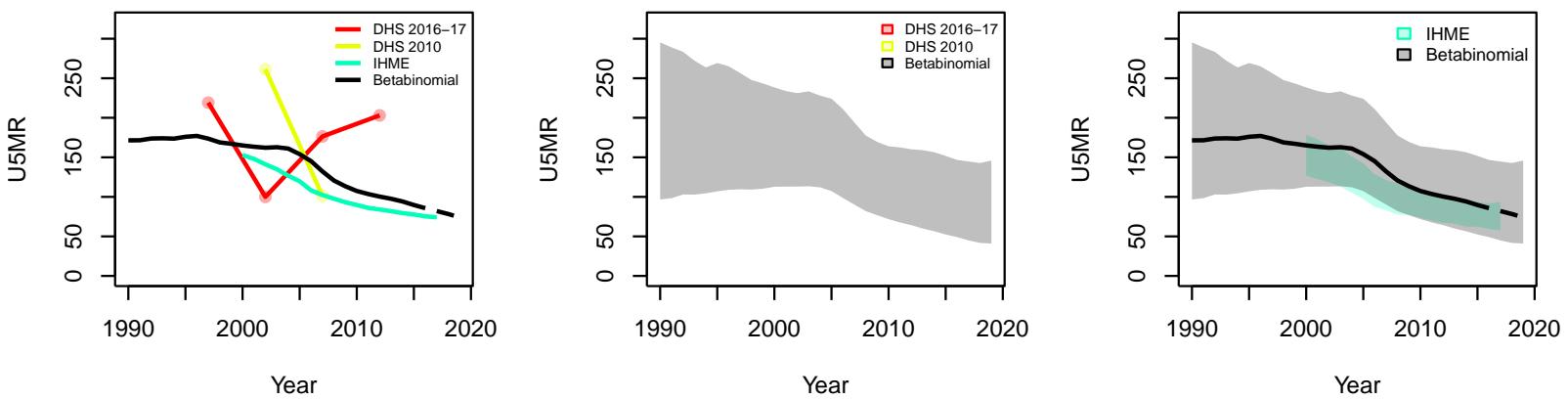
### Giheta, Gitega



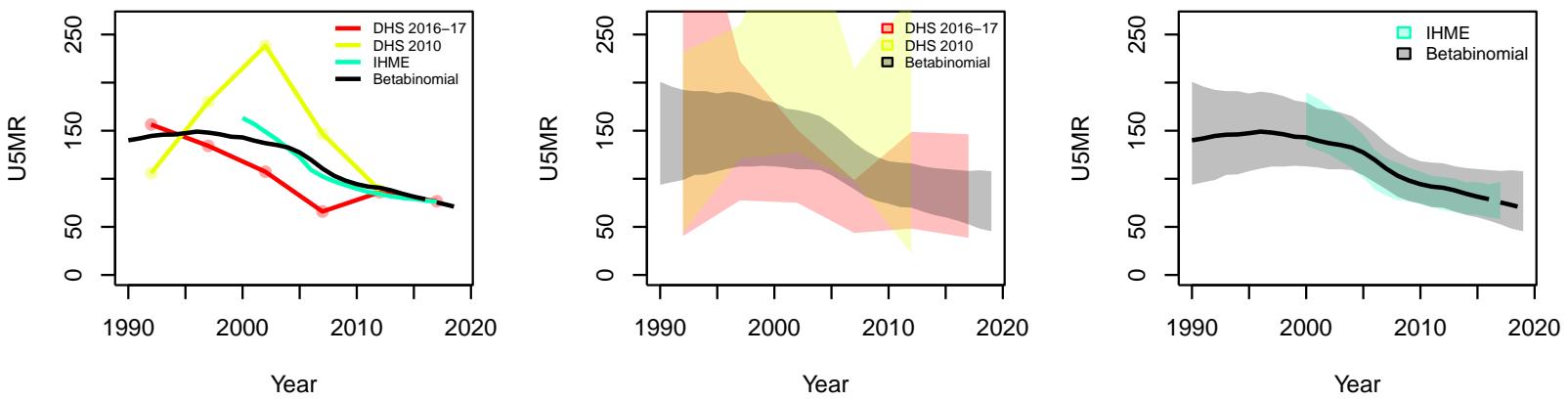
### Itaba, Gitega



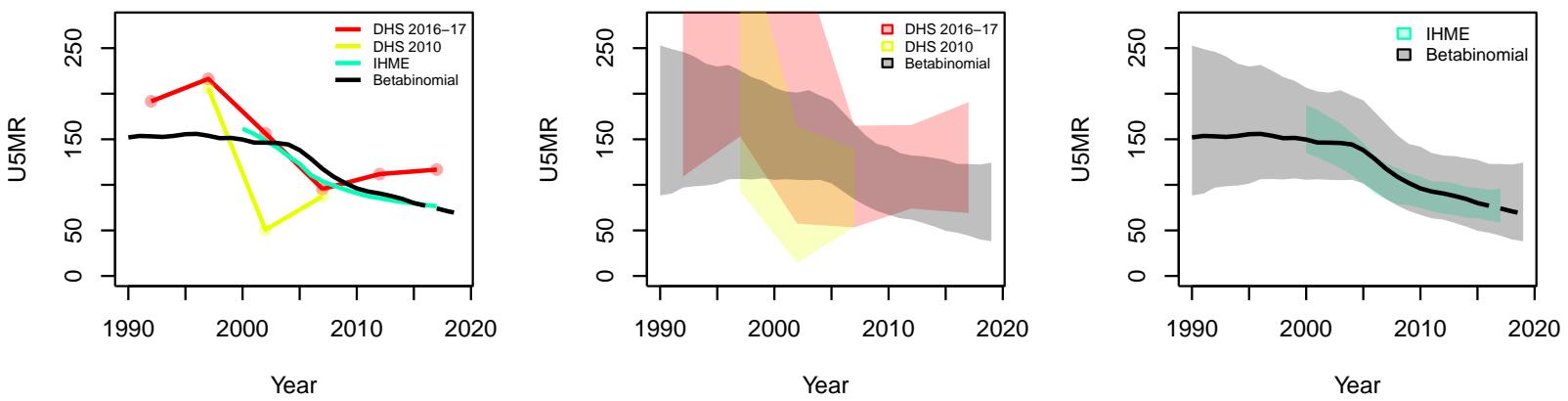
### Bukirasazi, Gitega



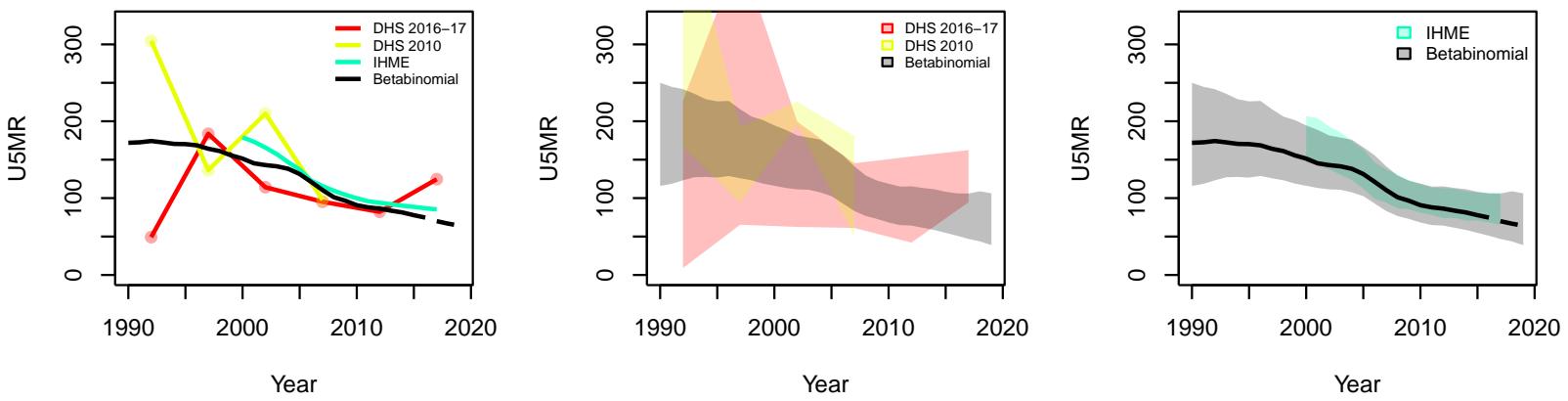
### Gitega, Gitega



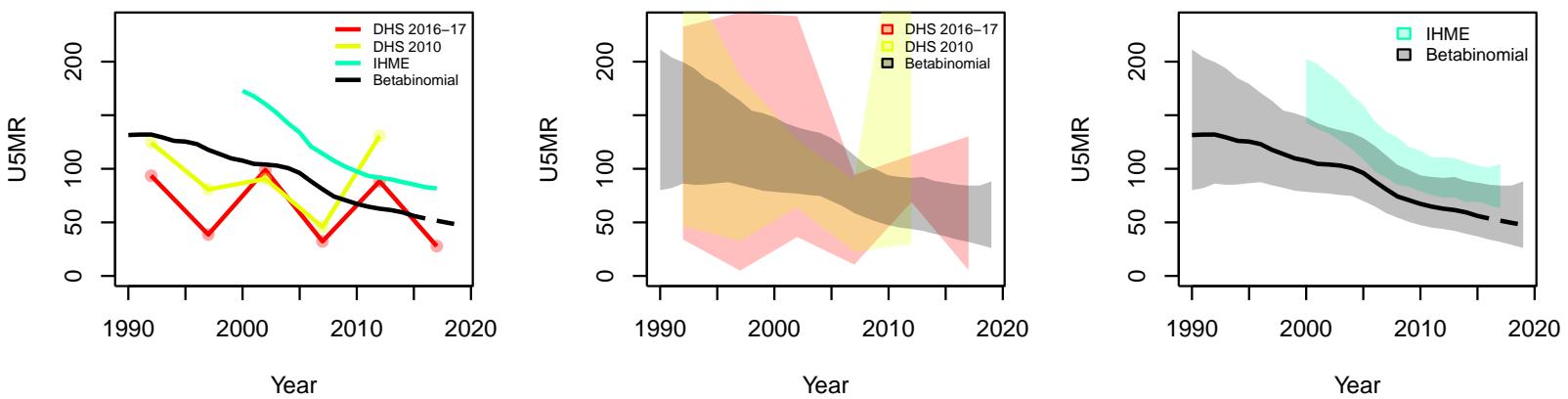
### Makebuko, Gitega



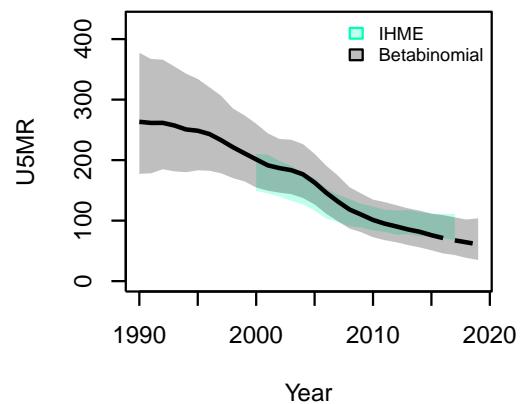
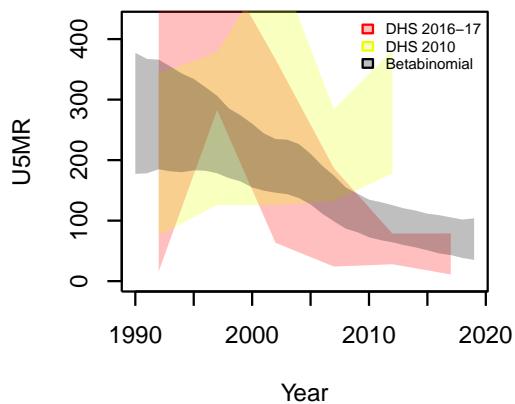
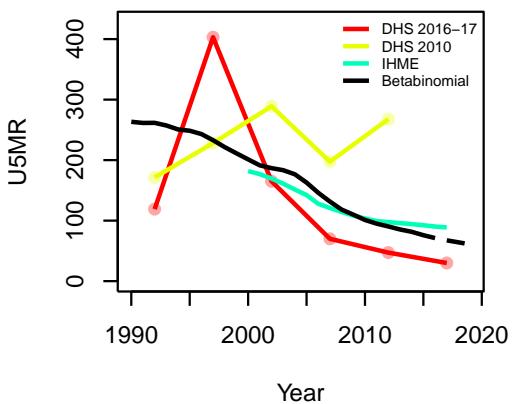
### Butaganzwa1, Ruyigi



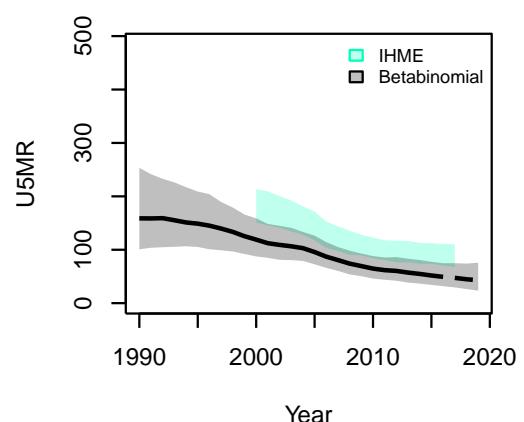
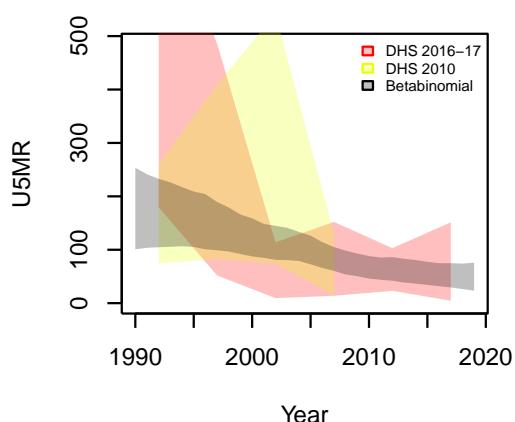
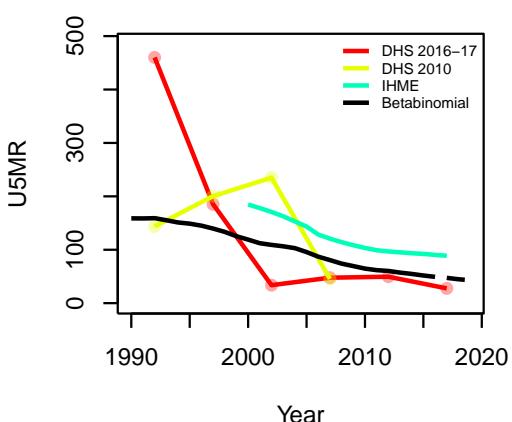
### Mpinga-Kayove, Rutana



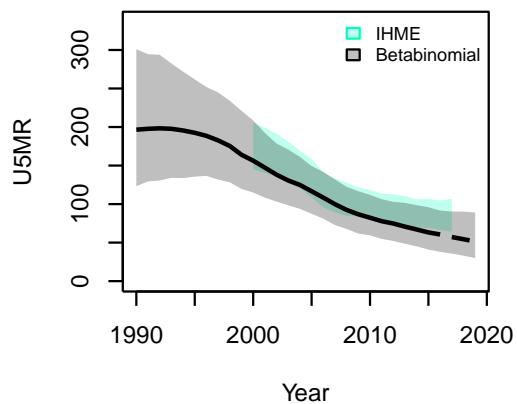
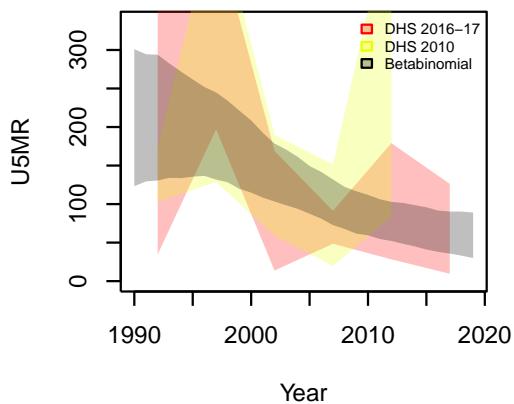
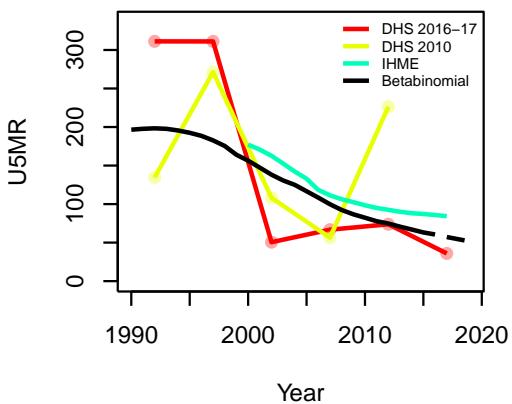
### Nyabitsinda, Ruyigi



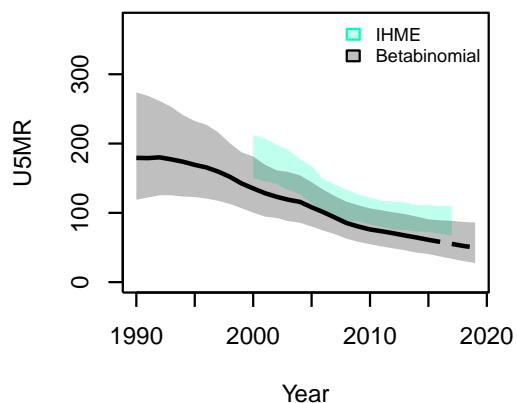
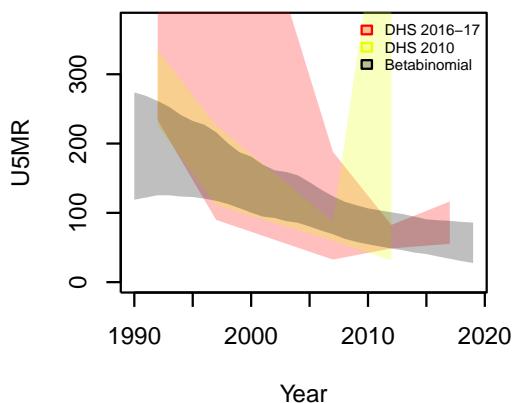
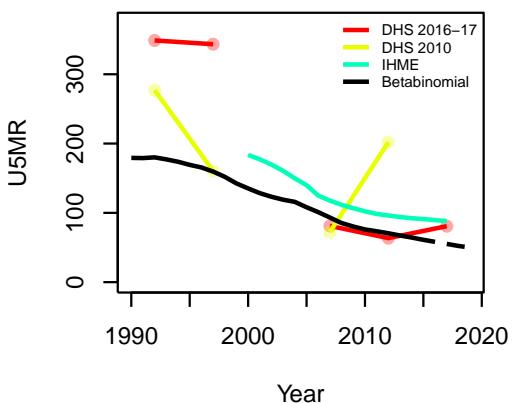
### Ruyigi, Ruyigi



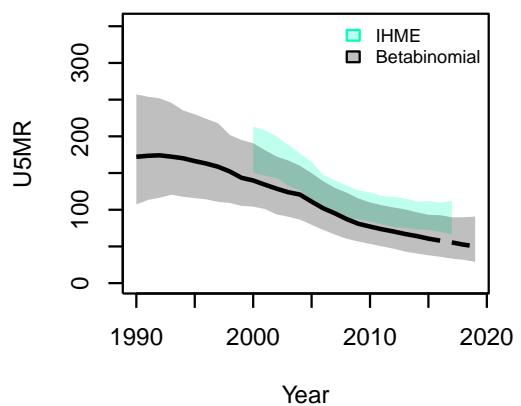
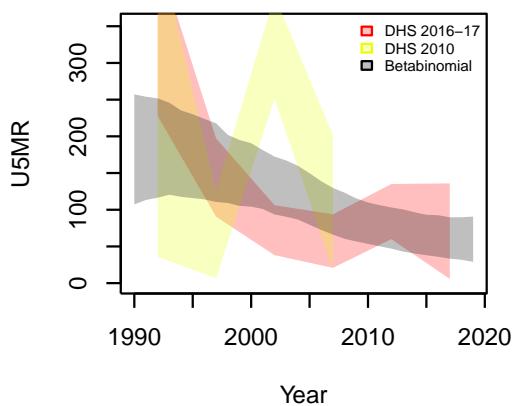
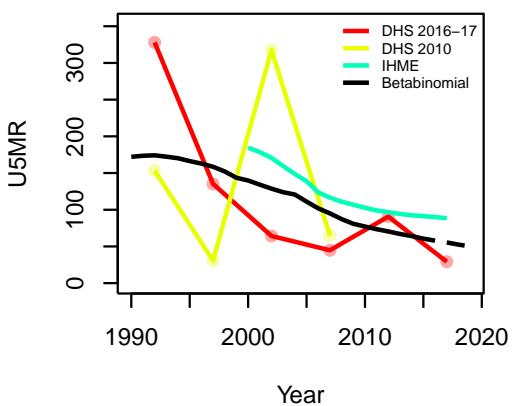
### Shombo, Karuzi



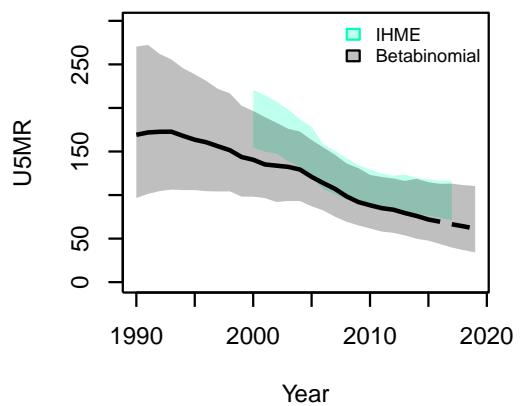
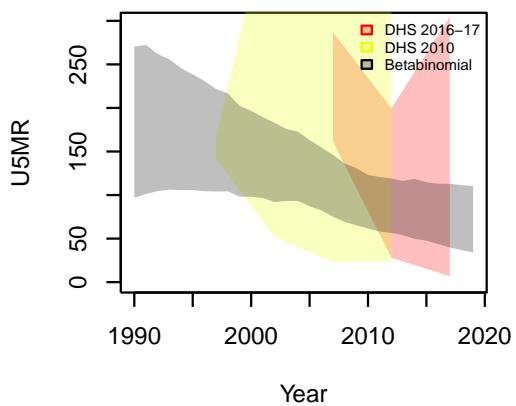
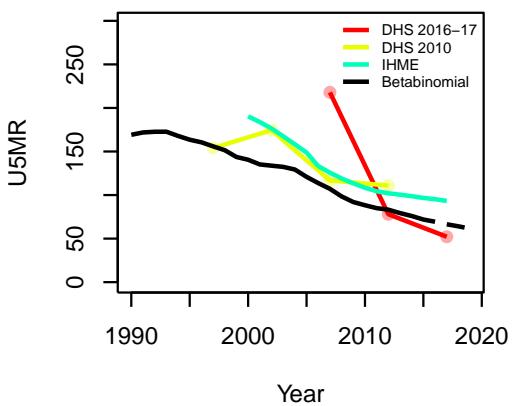
### Butezi, Ruyigi



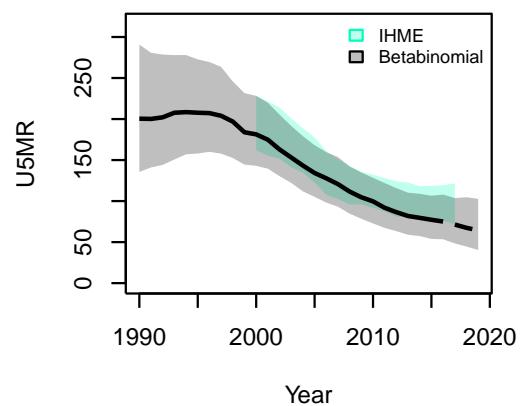
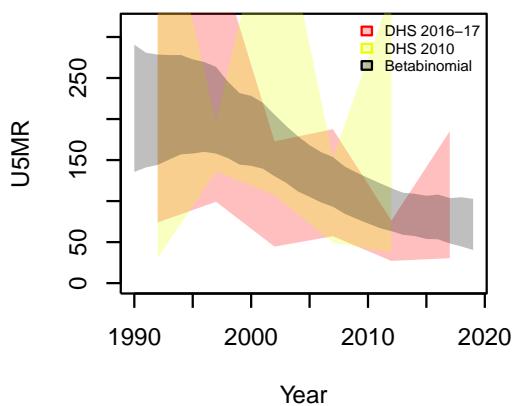
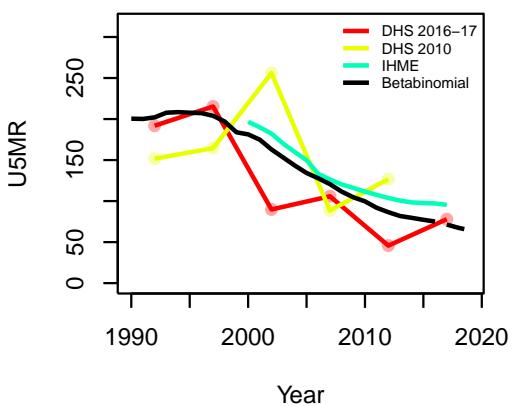
### Nyabikere, Karuzi



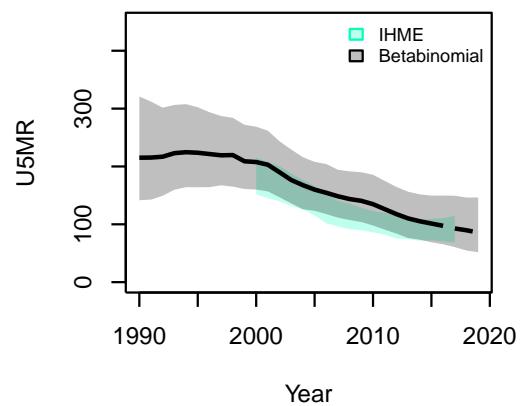
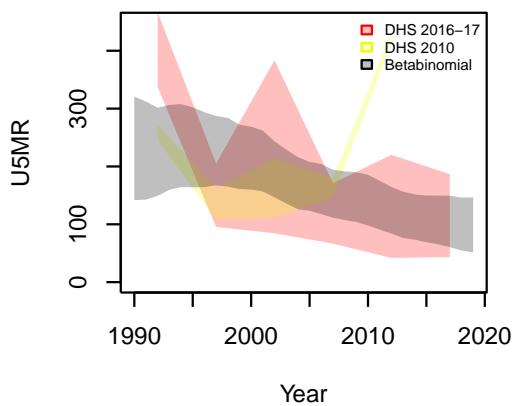
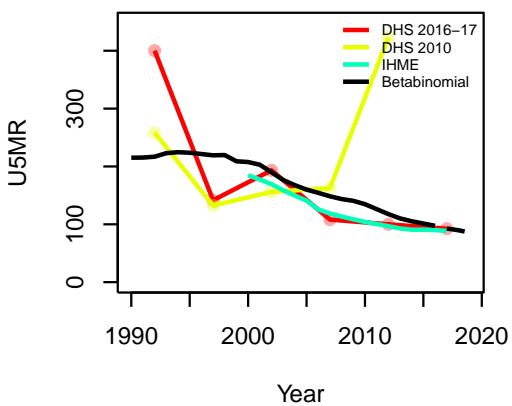
### Bweru, Ruyigi



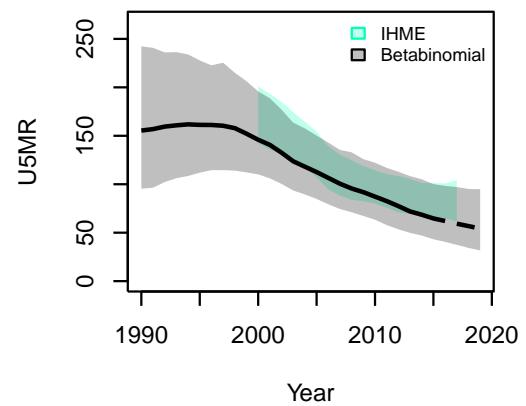
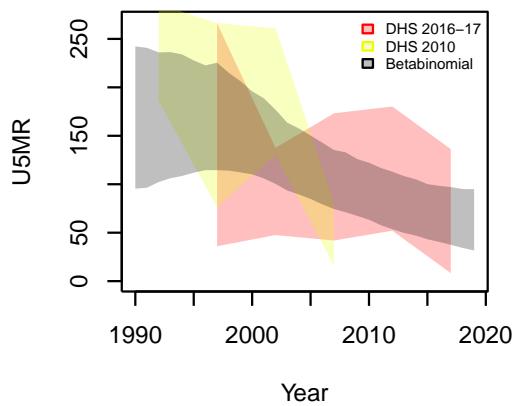
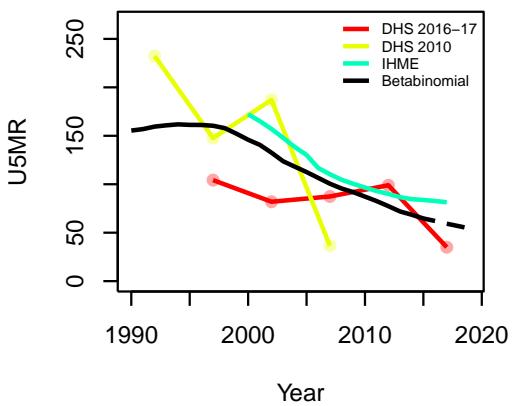
### Gitaramuka, Karuzi



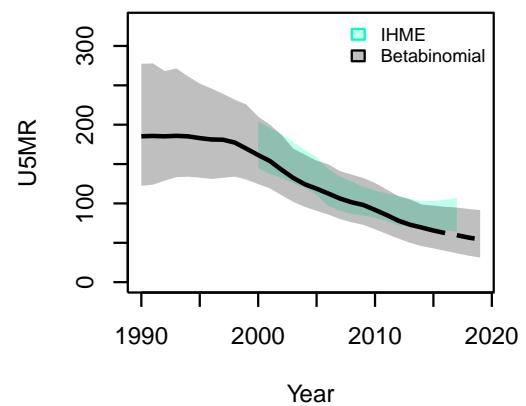
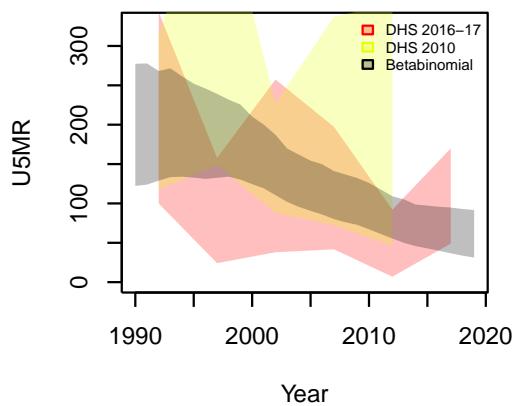
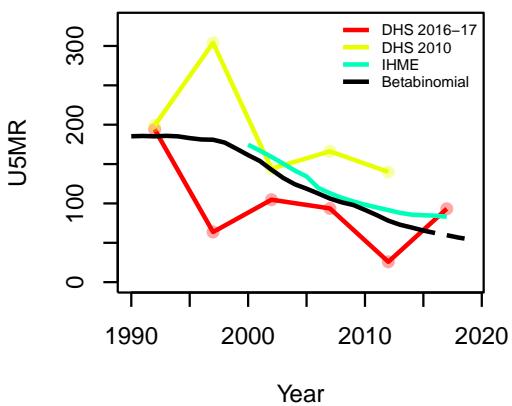
### Gashikanwa, Ngozi



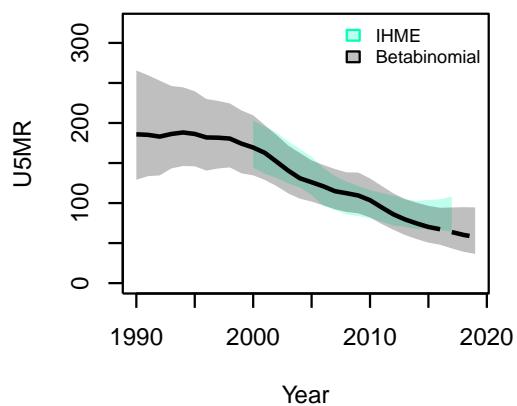
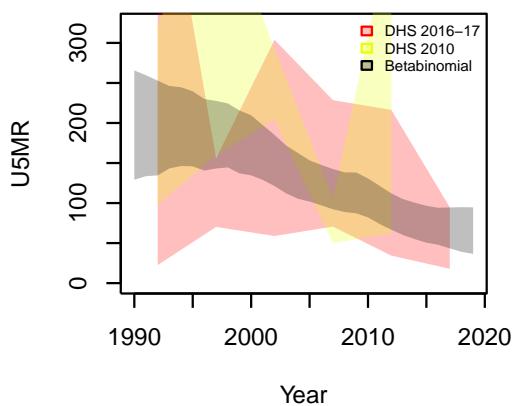
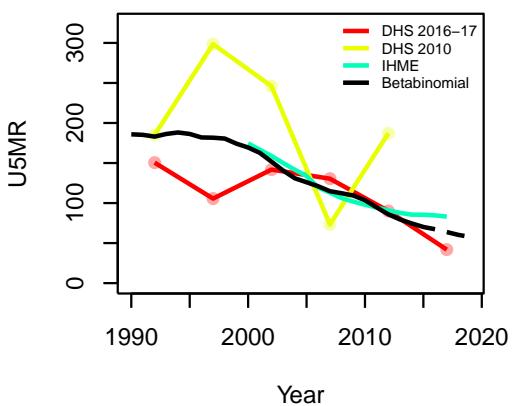
### Mutaho, Gitega



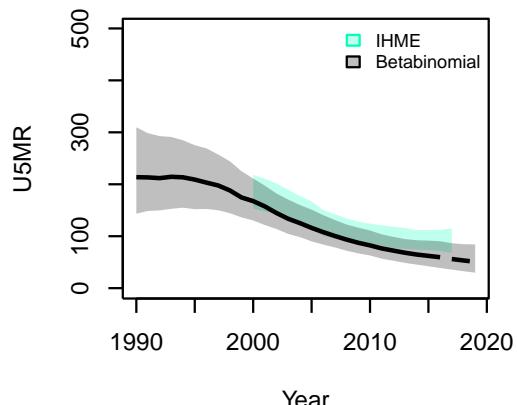
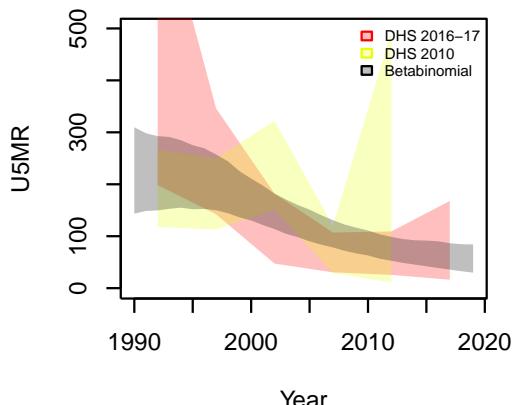
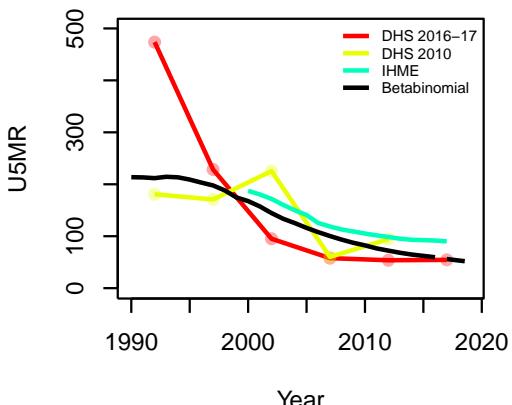
### Muhanga, Kayanza



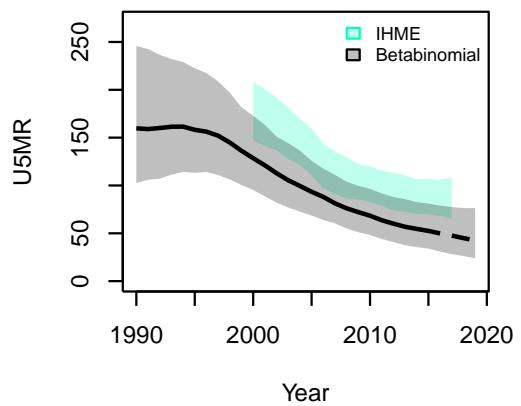
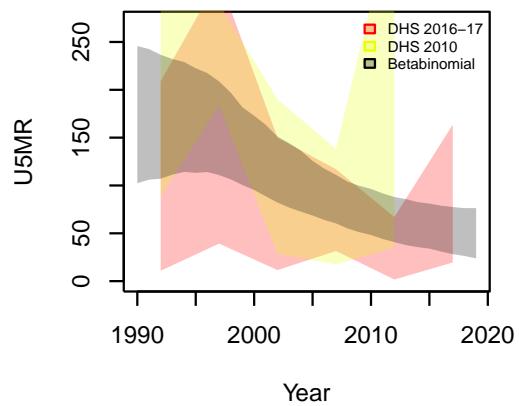
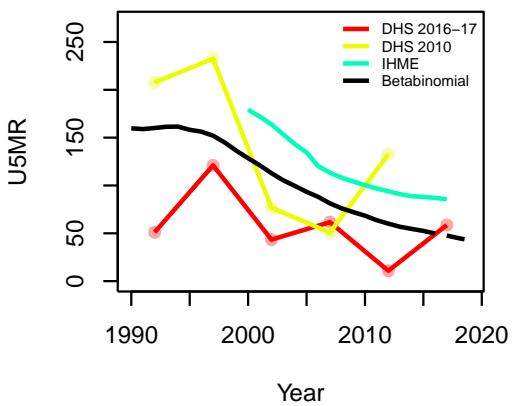
### Ngozi, Ngozi



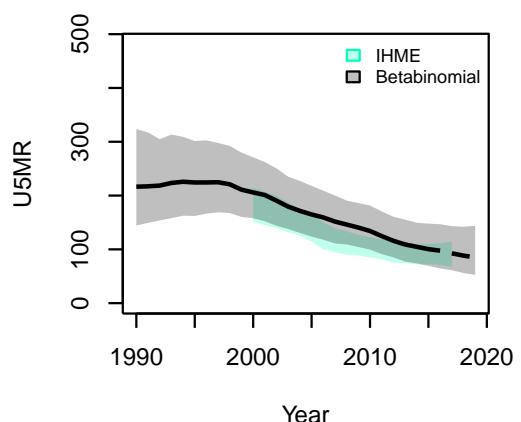
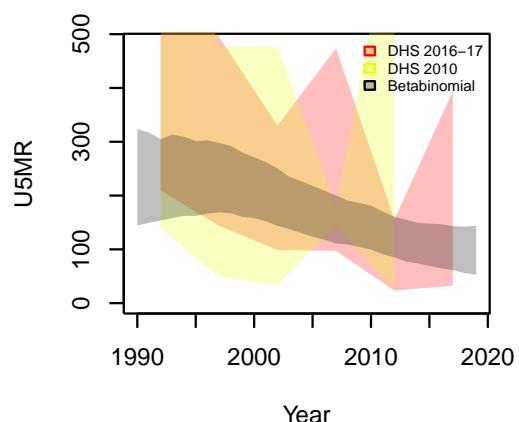
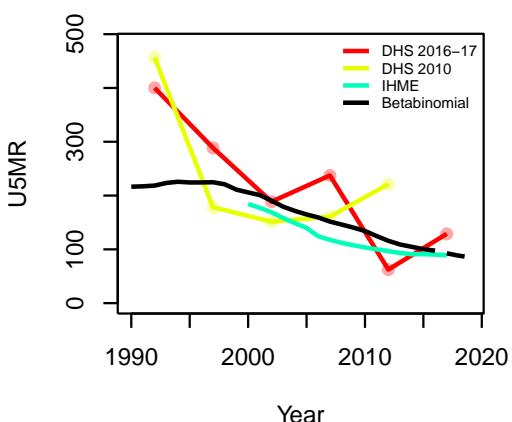
### Bugenyuzi, Karuzi



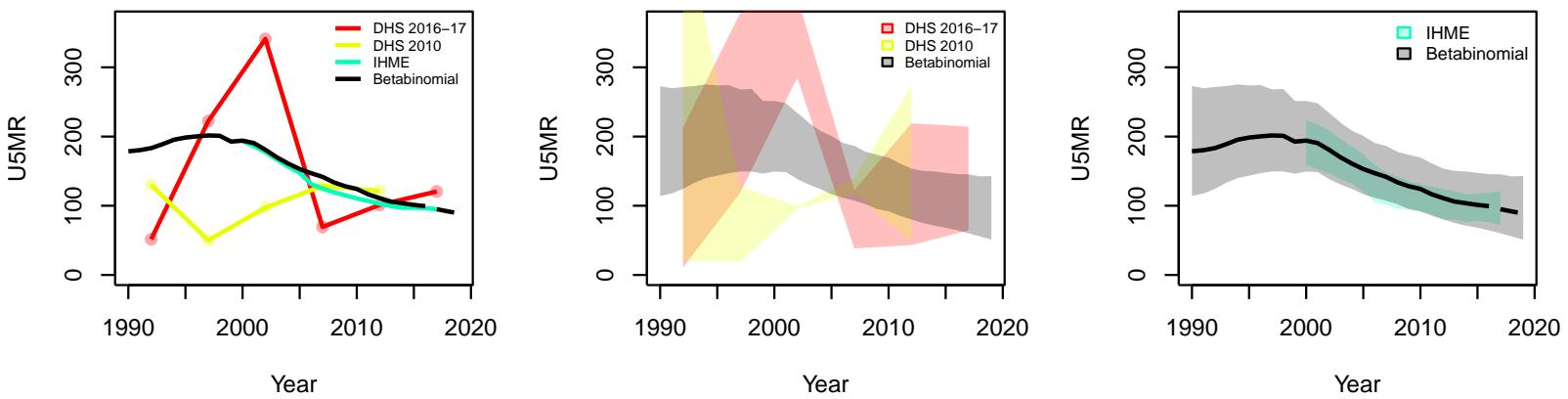
### Gihogazi, Karuzi



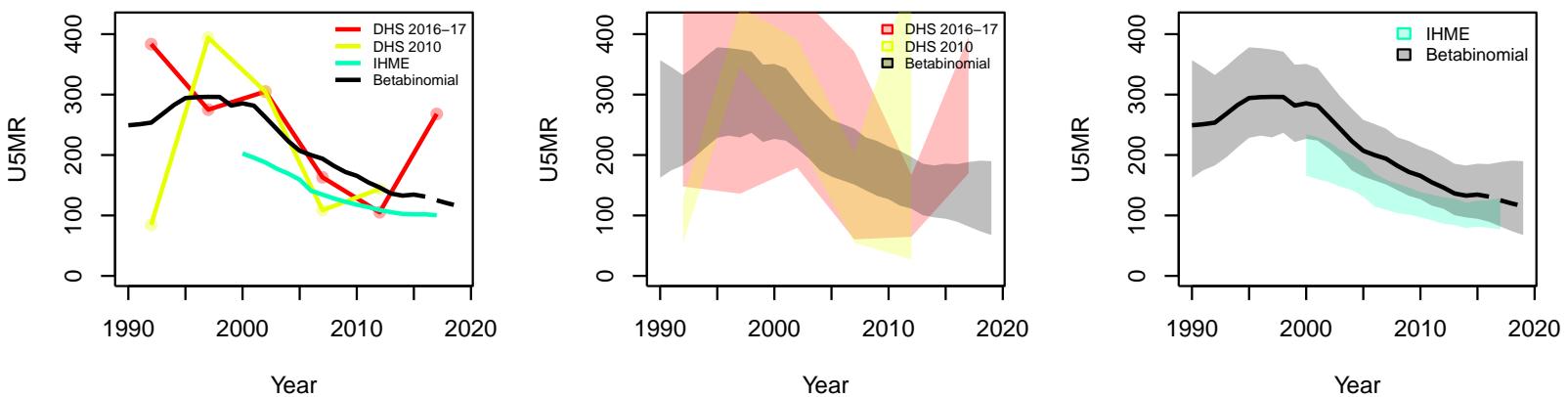
### Ruhororo, Ngozi



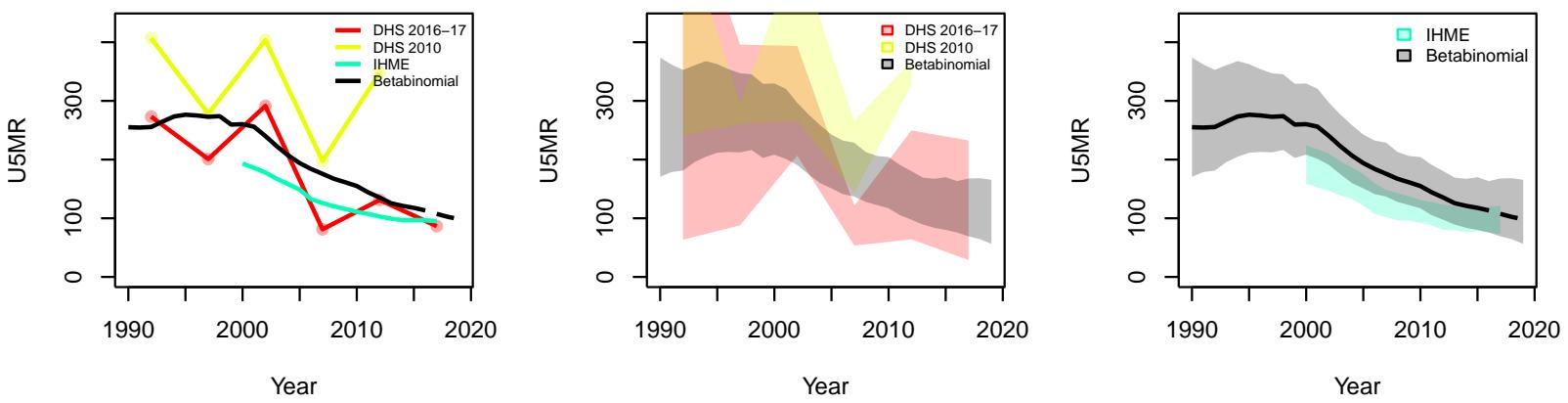
### Tangara, Ngozi



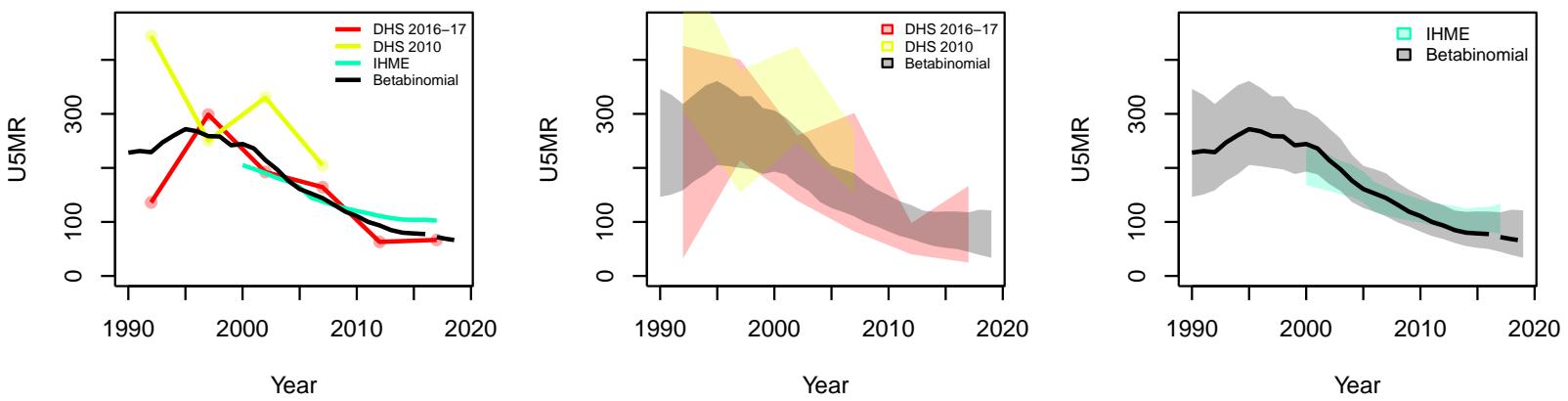
### Vumbi, Kirundo



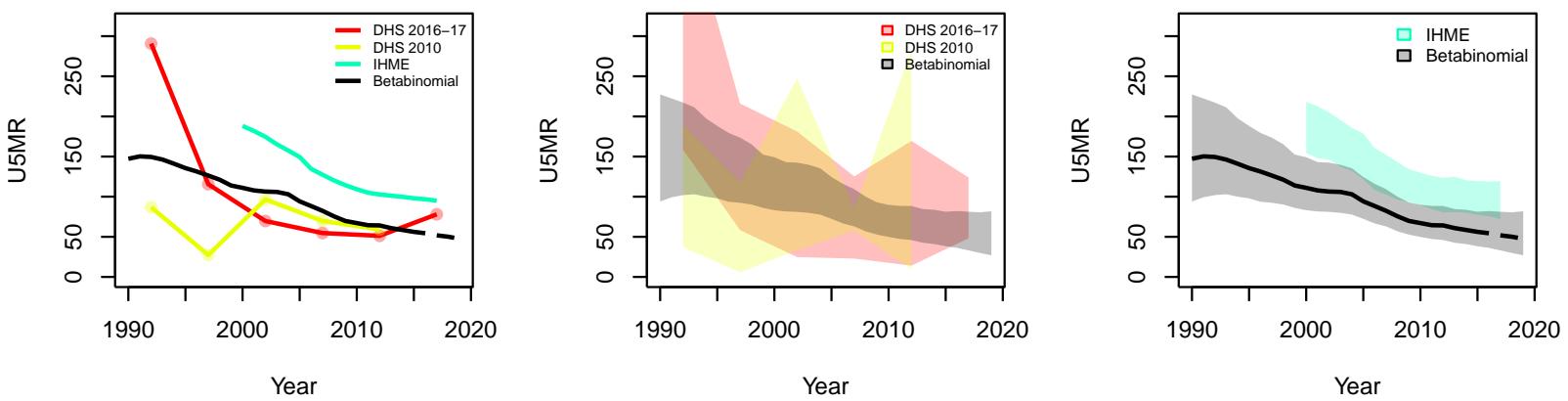
### Kiremba, Ngozi



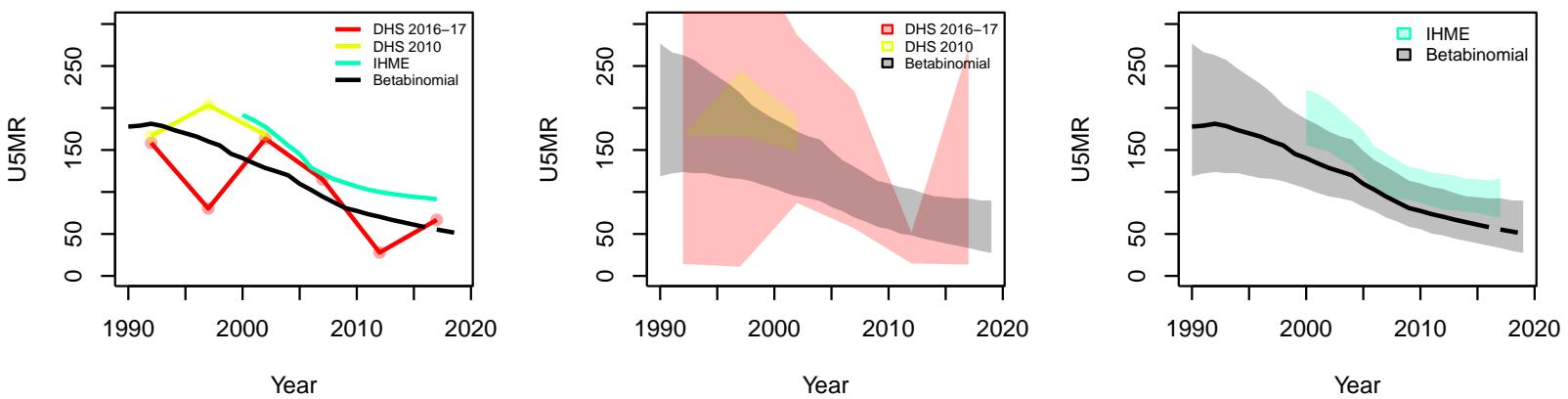
### Kirundo, Kirundo



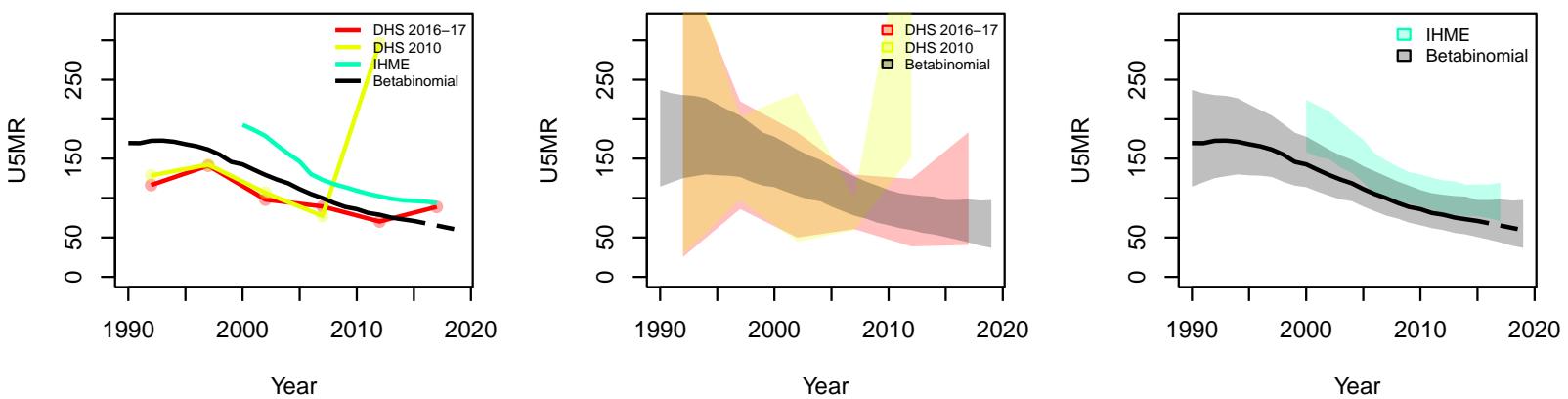
### Cankuzo, Cankuzo



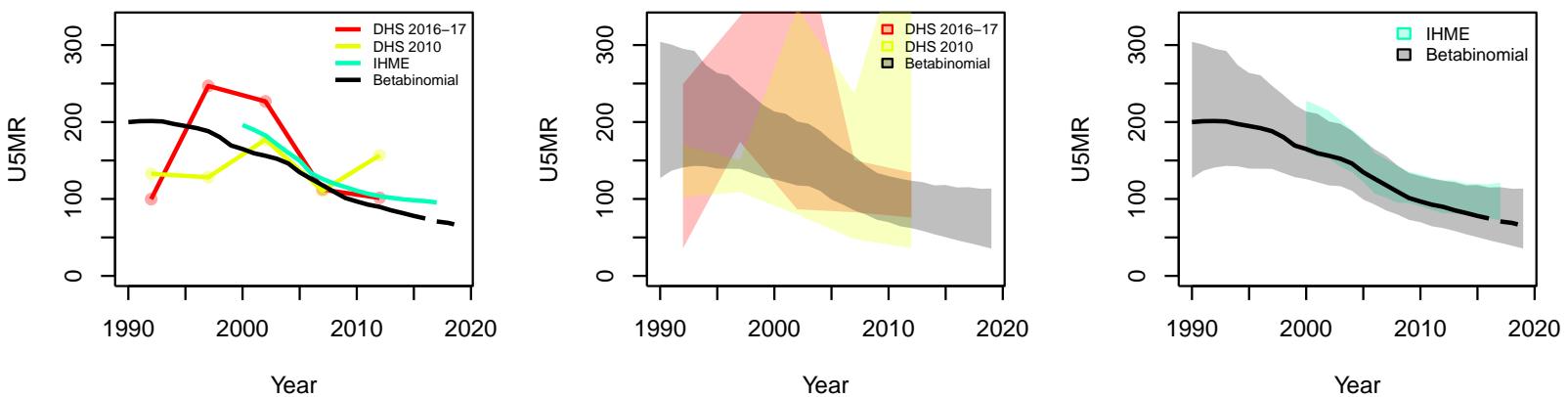
### Mutumba, Karuзи



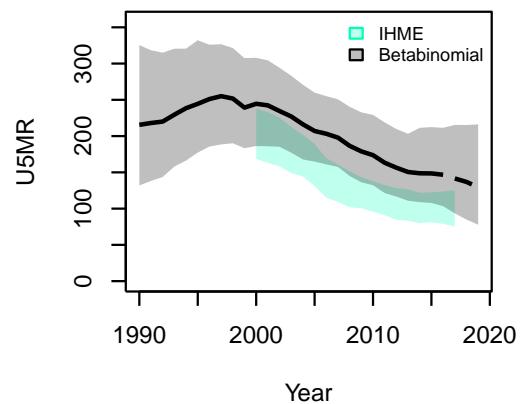
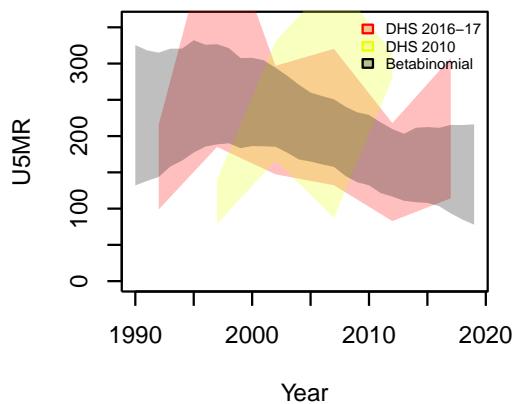
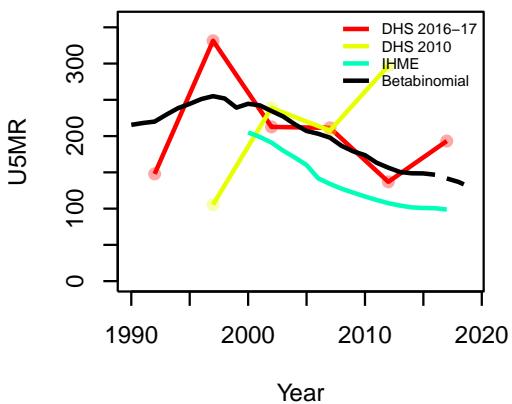
### Buhiga, Karuzi



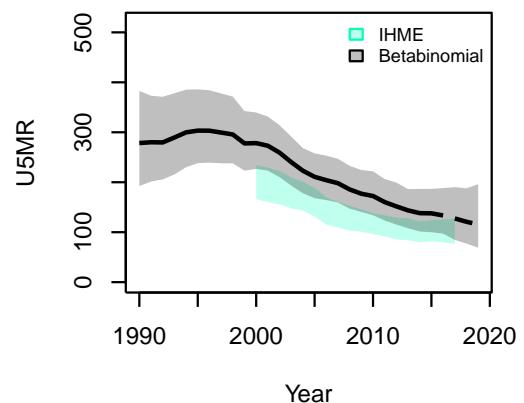
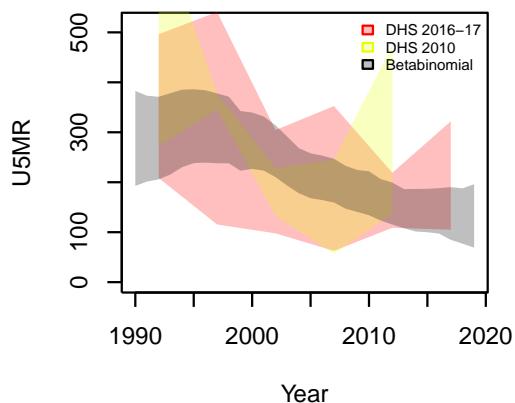
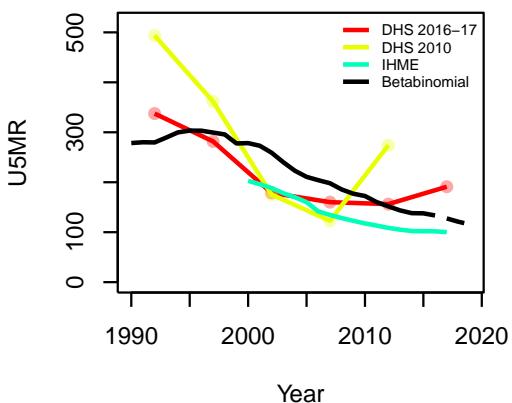
### Mwakiro, Muyinga



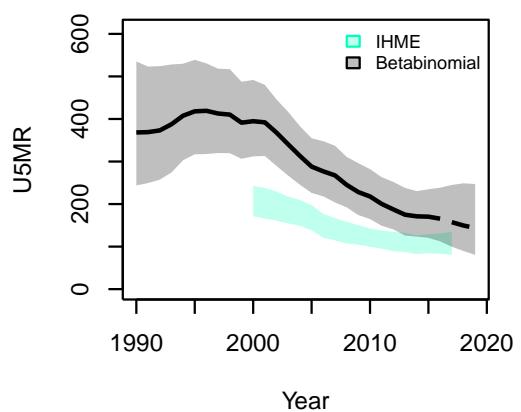
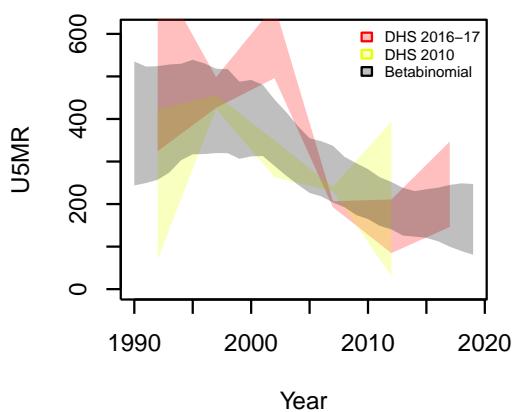
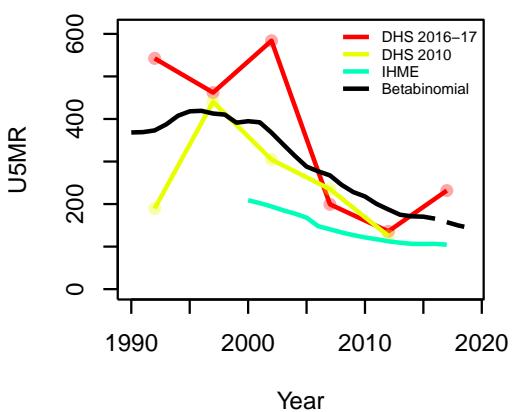
### Gasorwe, Muyinga



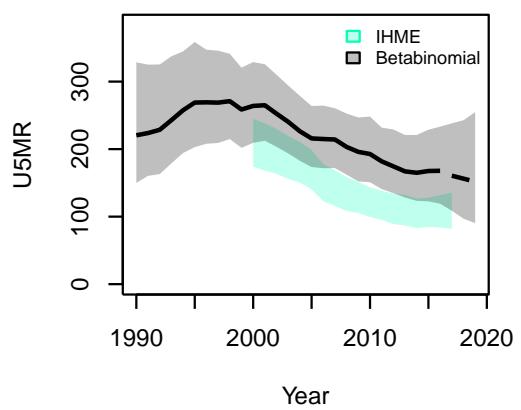
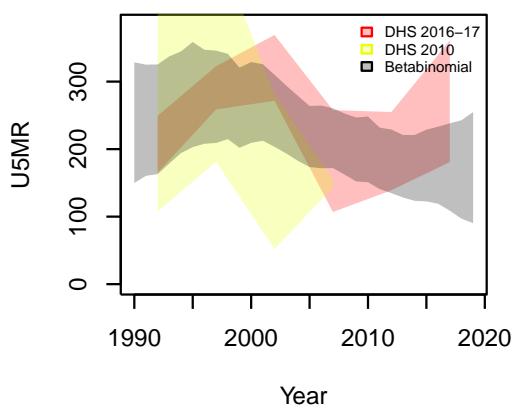
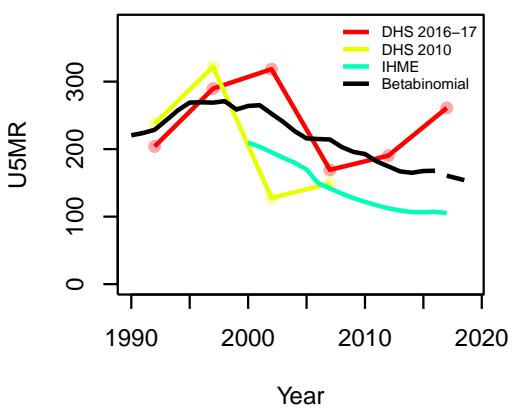
### Gashoho, Muyinga



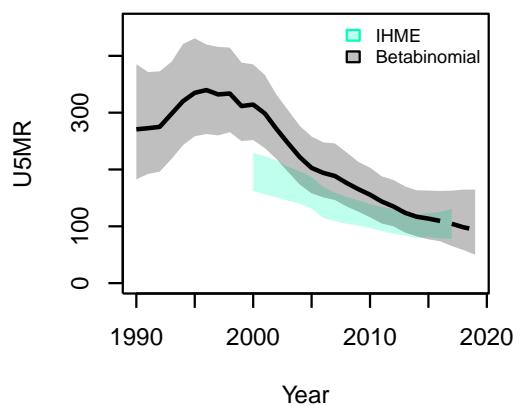
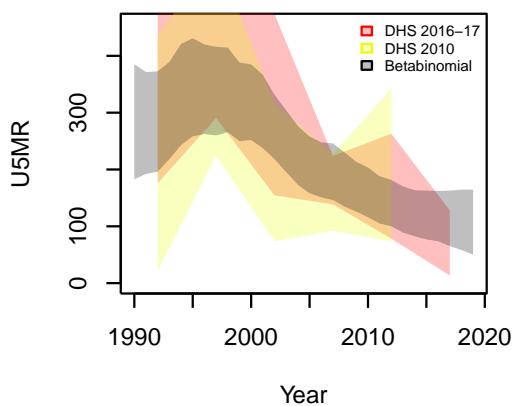
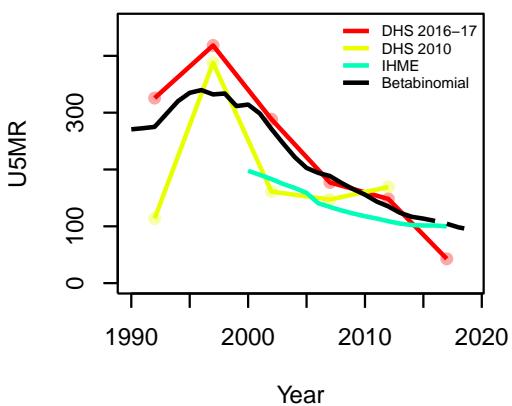
### Citobe, Kirundo



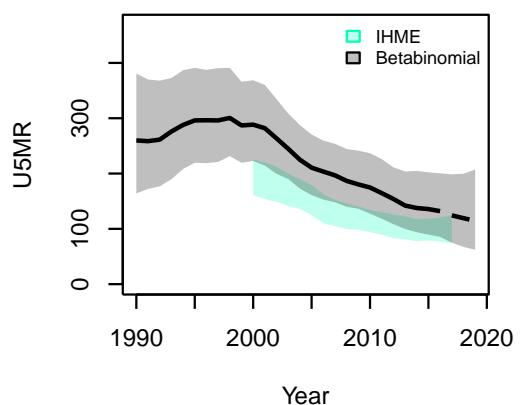
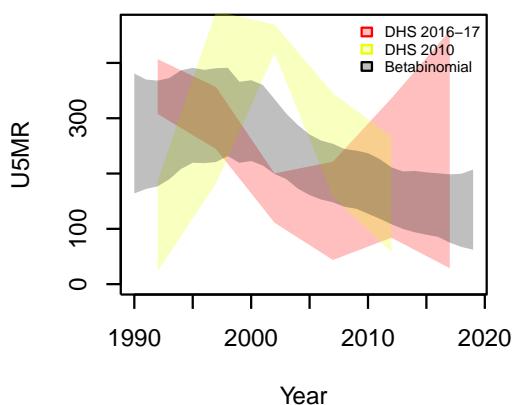
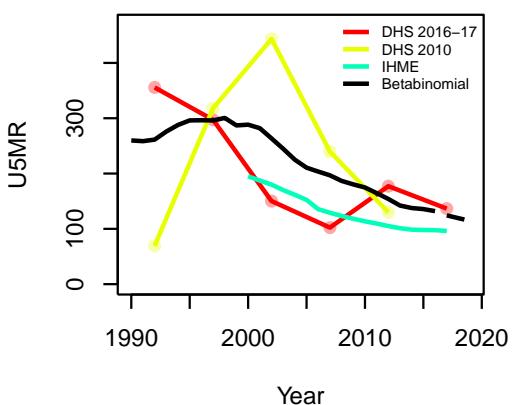
### Bwambarangwe, Kirundo



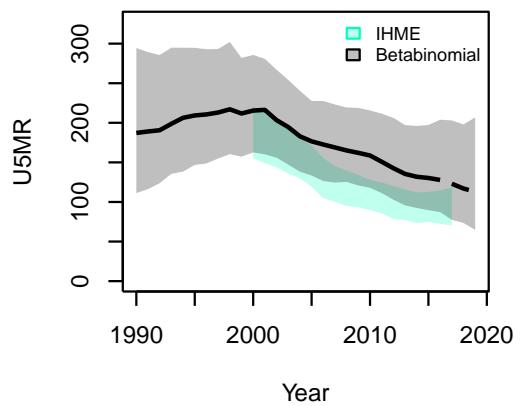
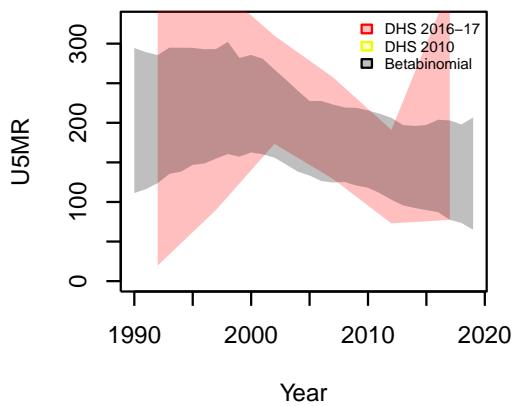
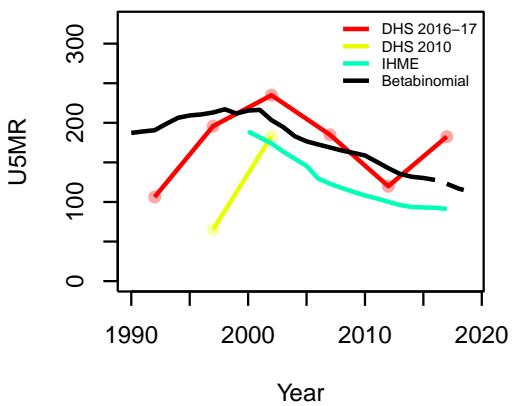
### Ntega, Kirundo



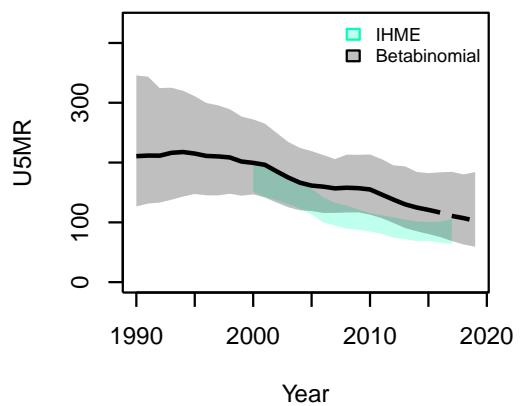
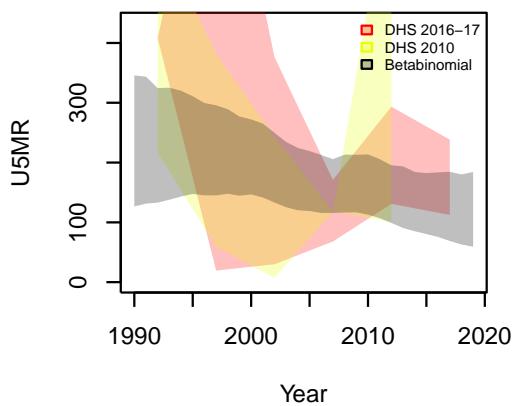
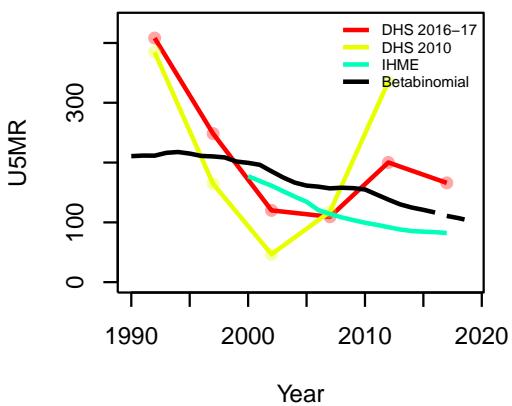
### Marangara, Ngozi



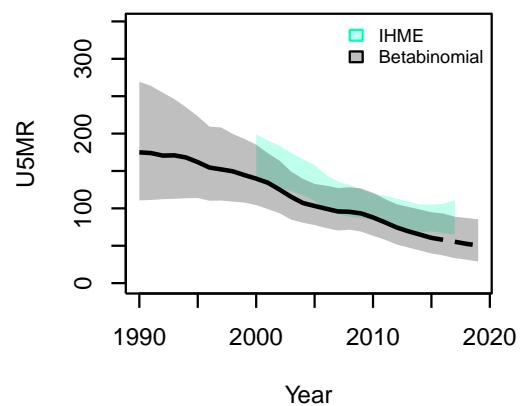
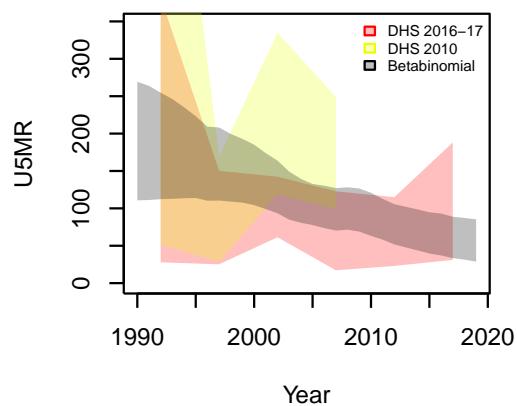
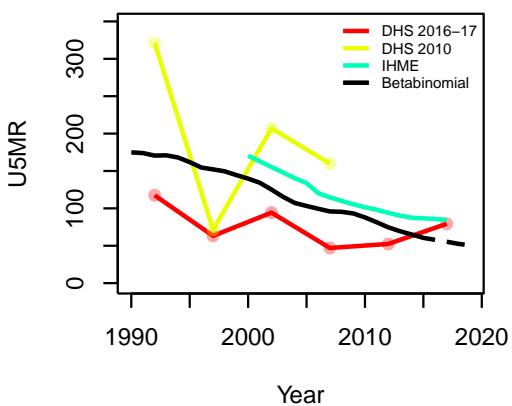
### Nyamurenza, Ngozi



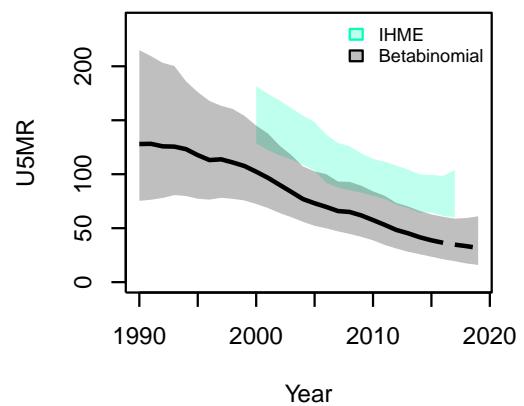
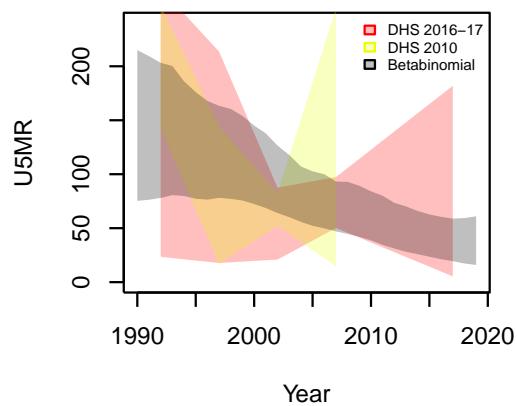
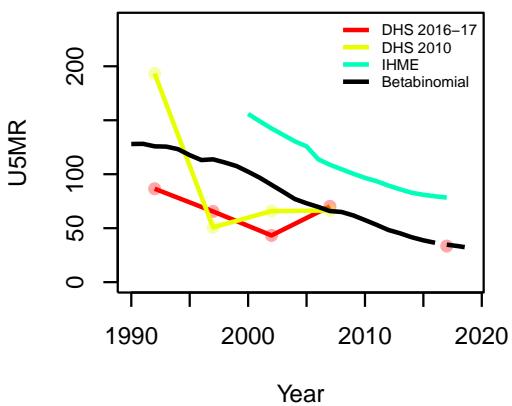
### Mwumba, Ngozi



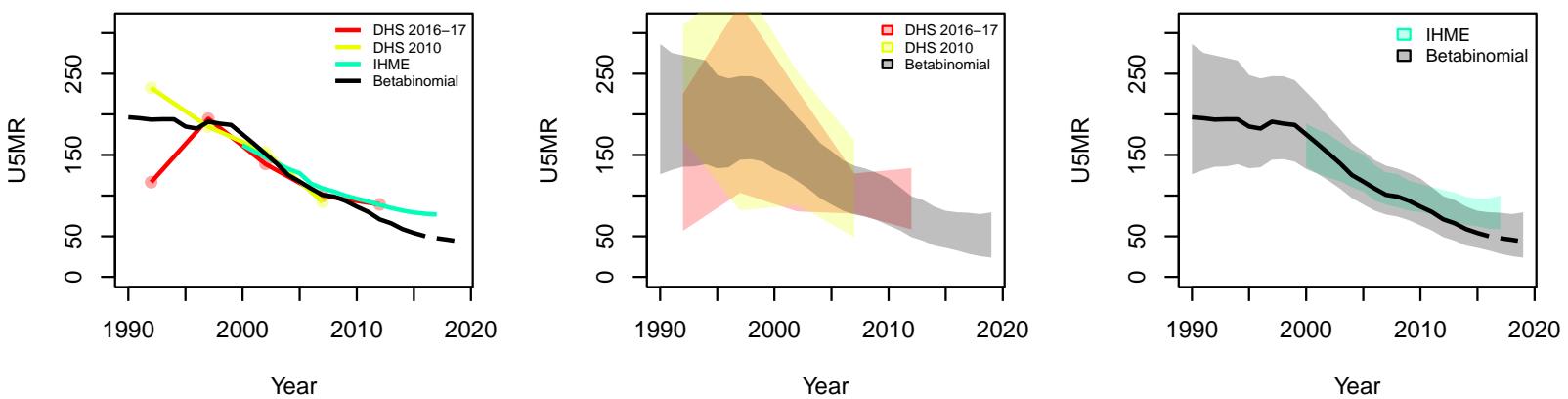
### Busiga, Ngozi



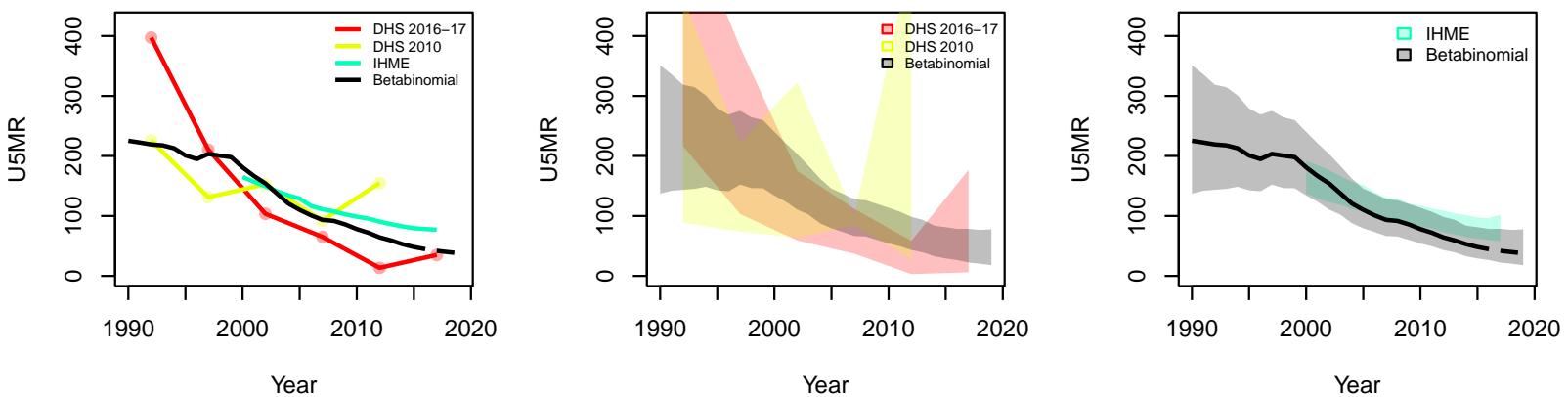
### Kabarore, Kayanza



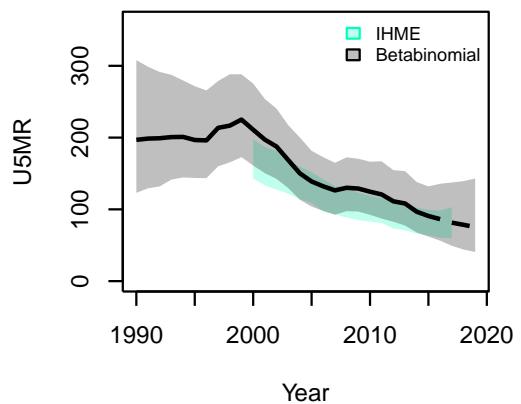
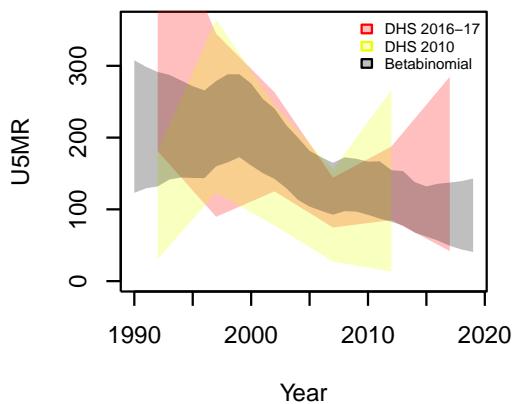
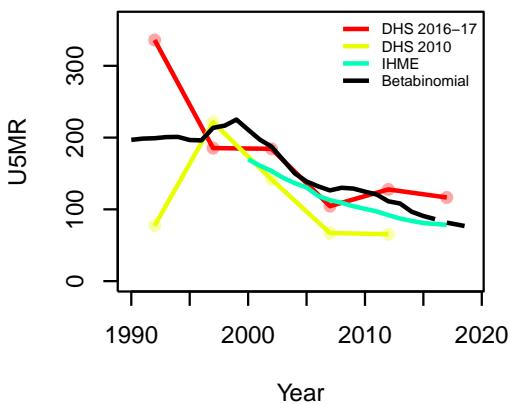
### Bukinanyana, Cibitoke



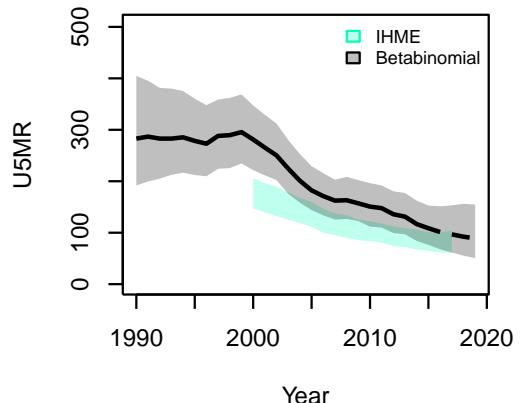
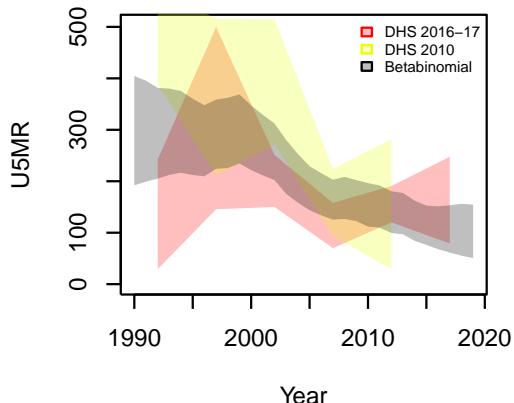
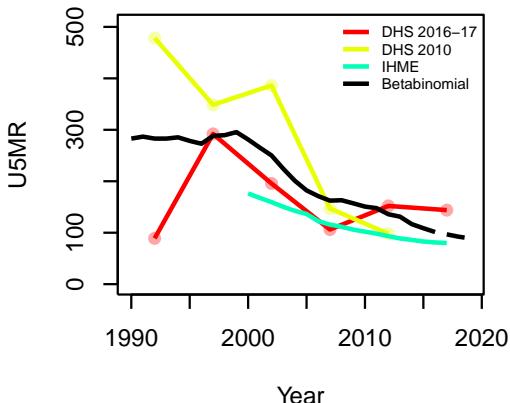
### Mabayi, Cibitoke



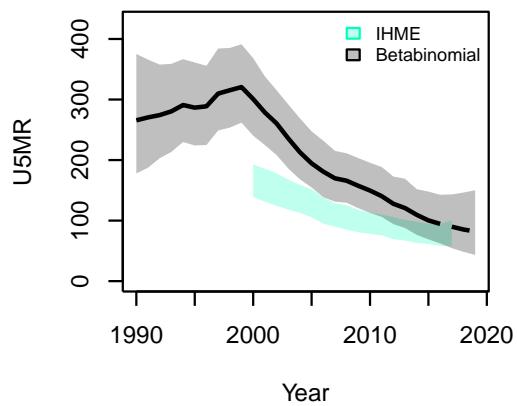
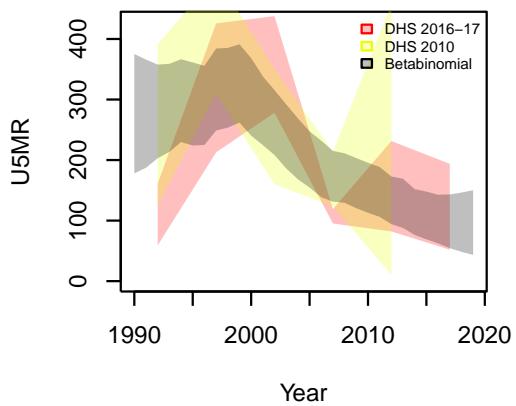
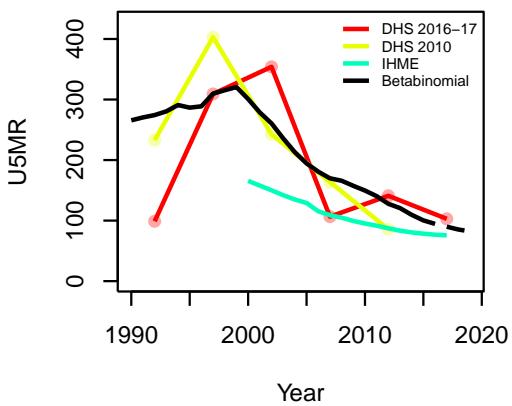
### Mugina, Cibitoke



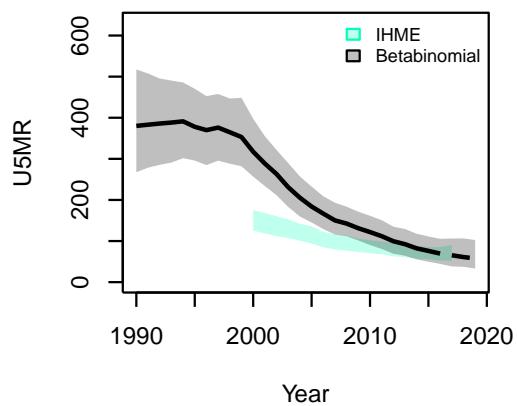
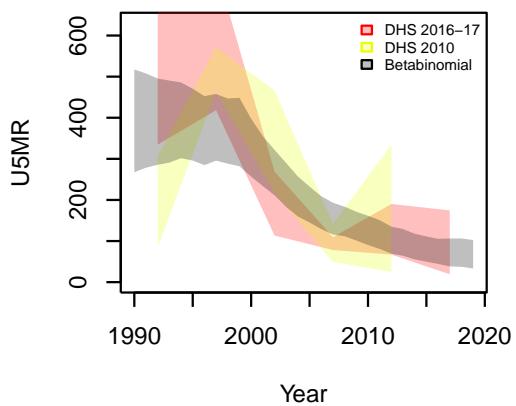
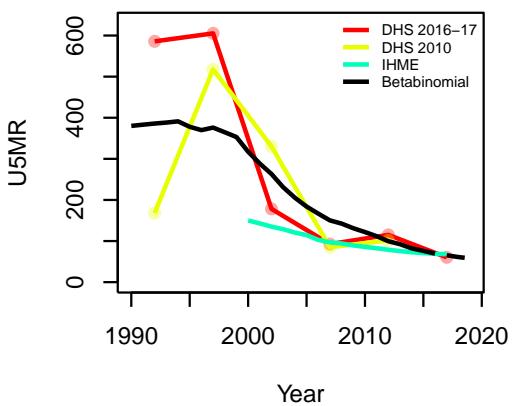
### Rugombo, Cibitoke



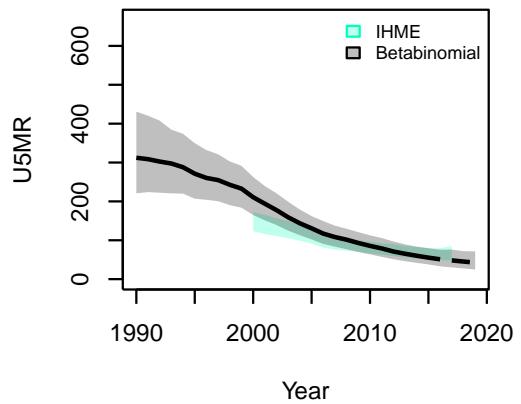
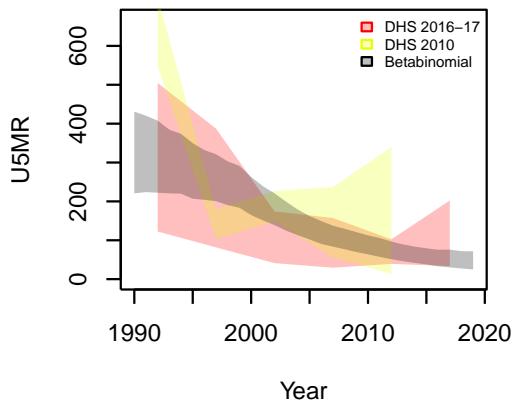
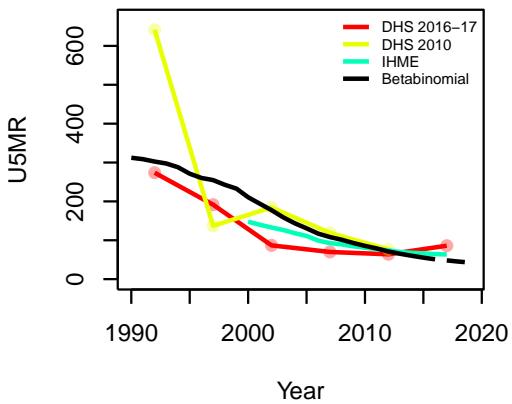
### Buganda, Cibitoke



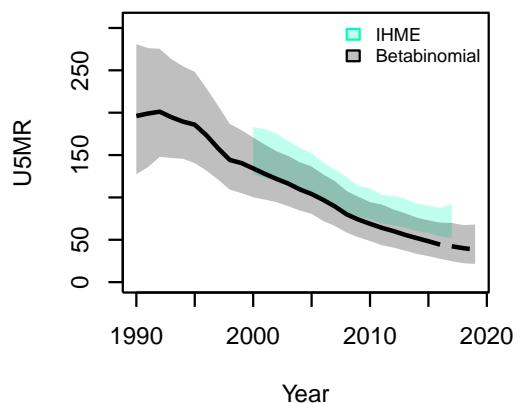
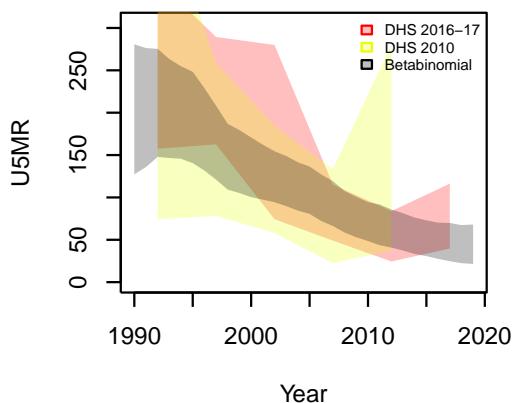
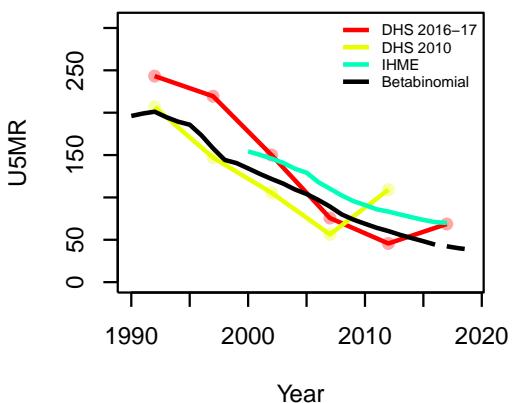
### Gihanga, Bubanza



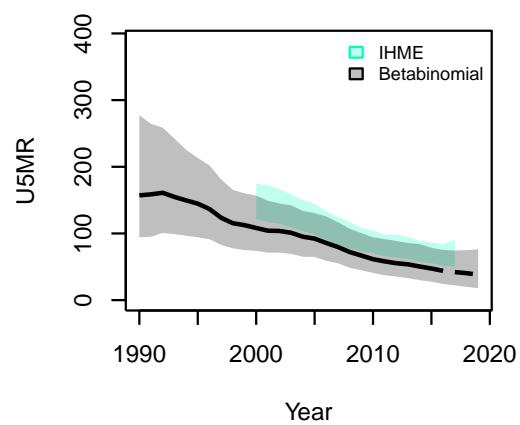
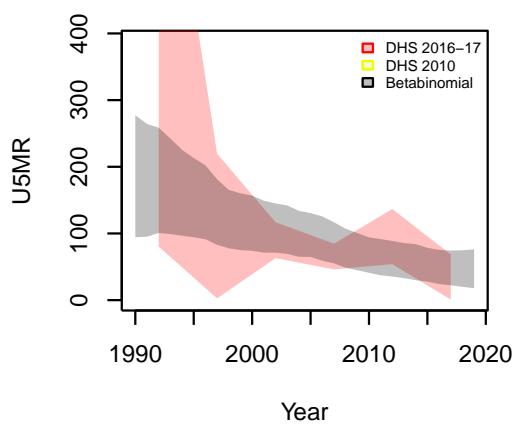
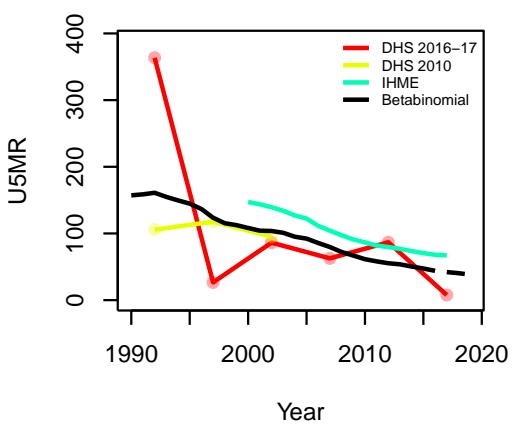
### Mutimbuzi, Bujumbura Rural



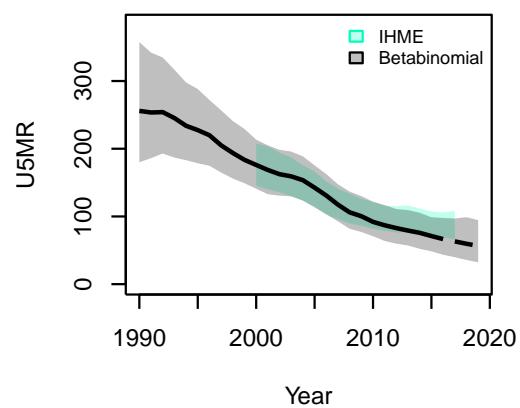
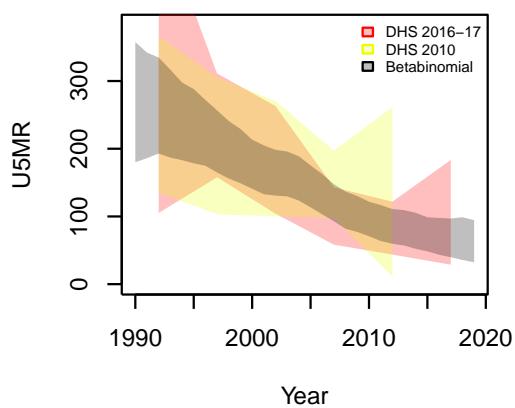
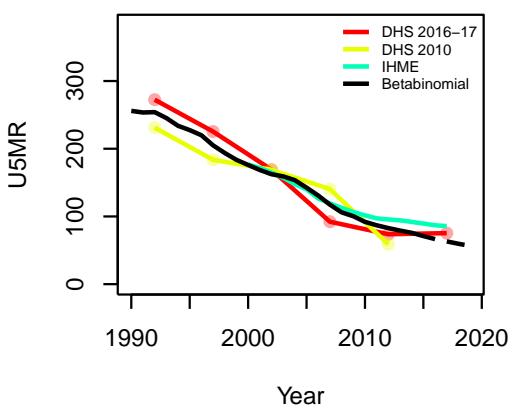
### Nyanza–Lac, Makamba



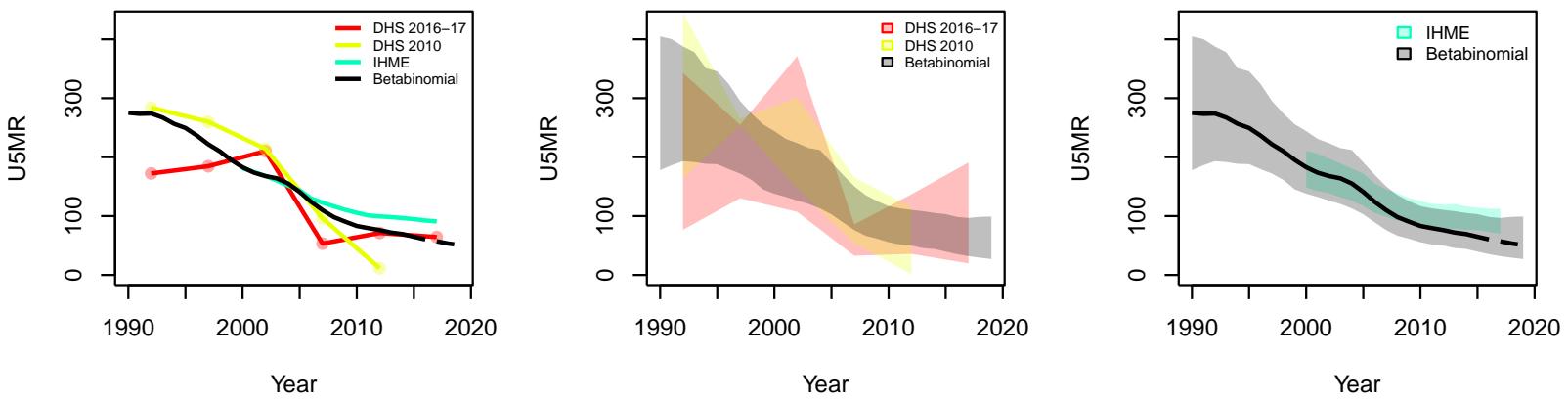
**Mabanda, Makamba**



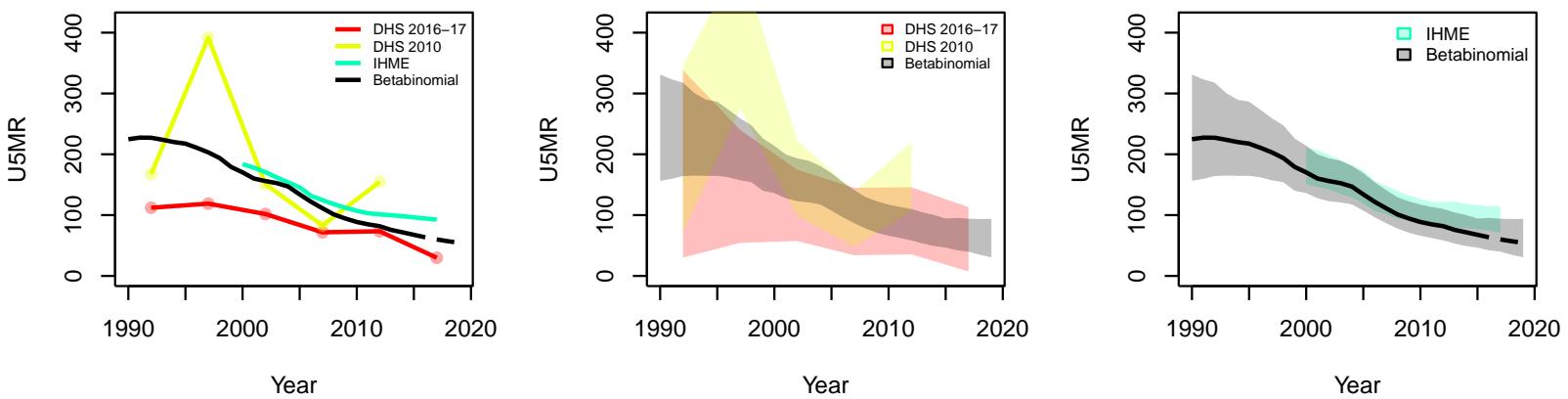
**Giharo, Rutana**



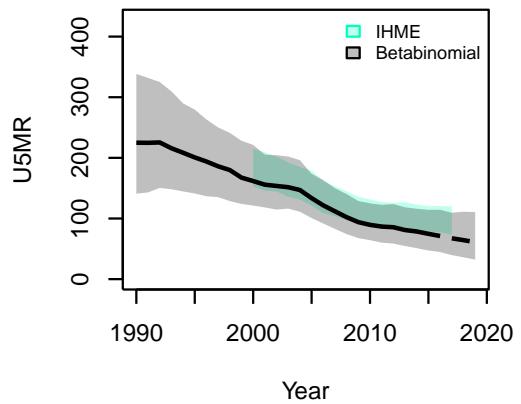
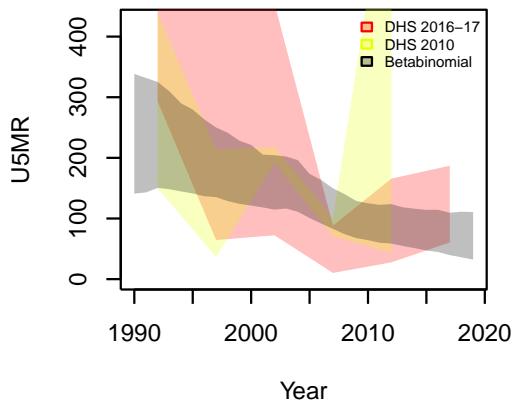
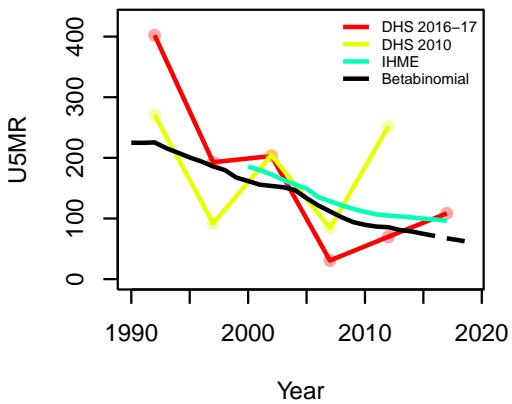
### Kinyinya, Ruyigi



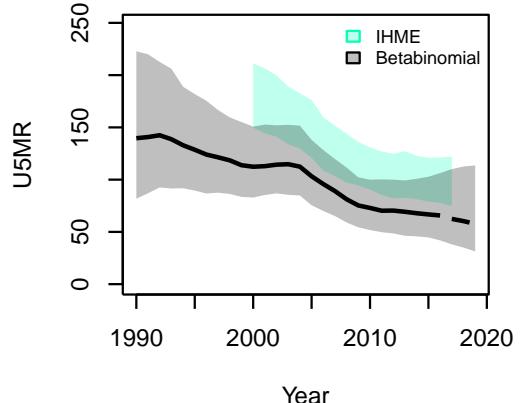
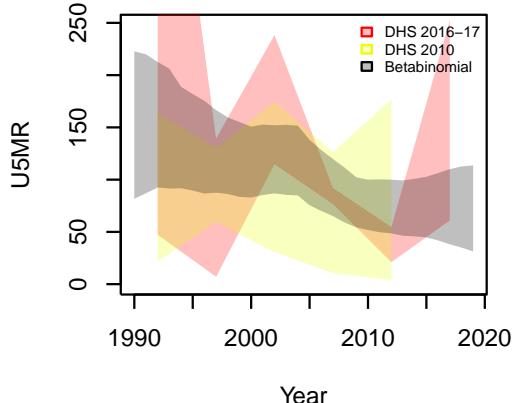
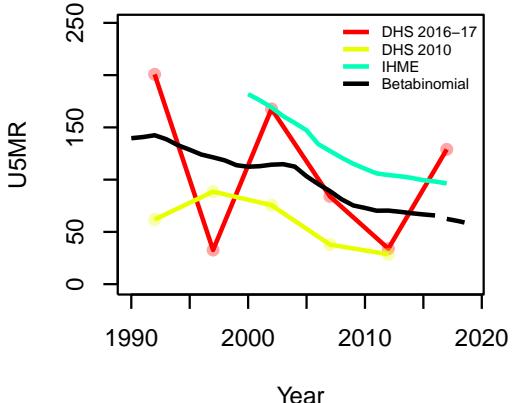
### Gisuru, Ruyigi



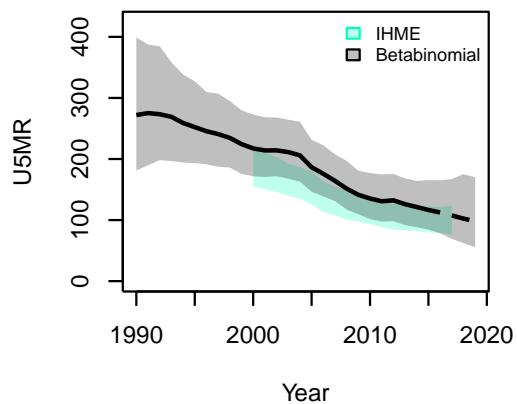
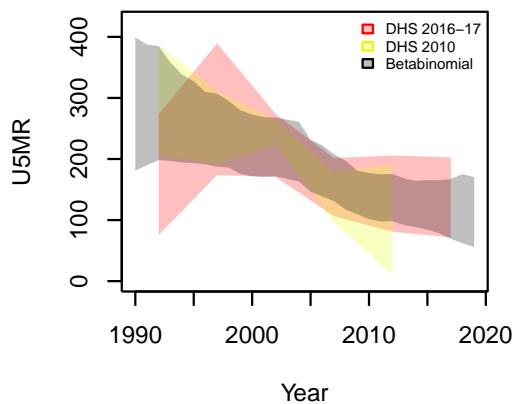
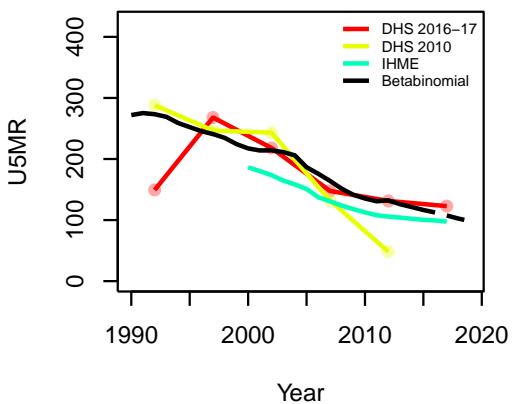
### Cendajuru, Cankuzo



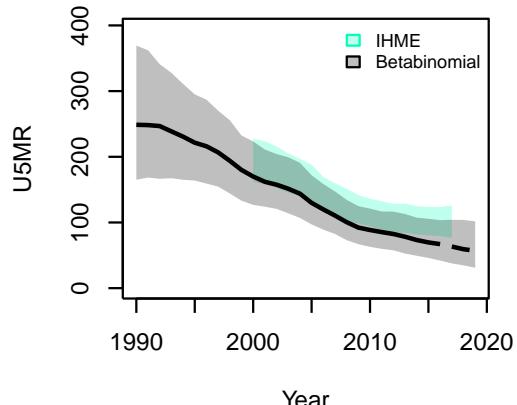
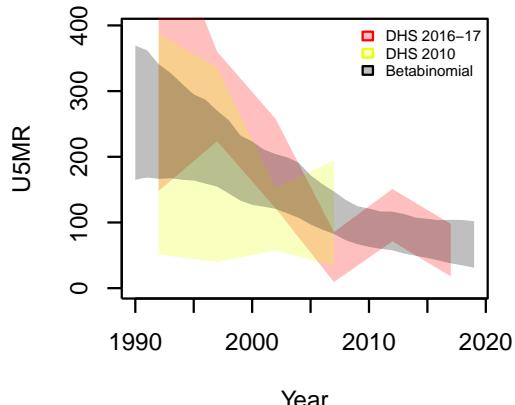
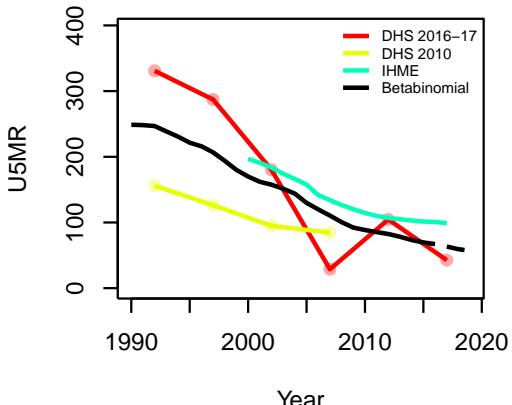
### Gisagara, Cankuzo



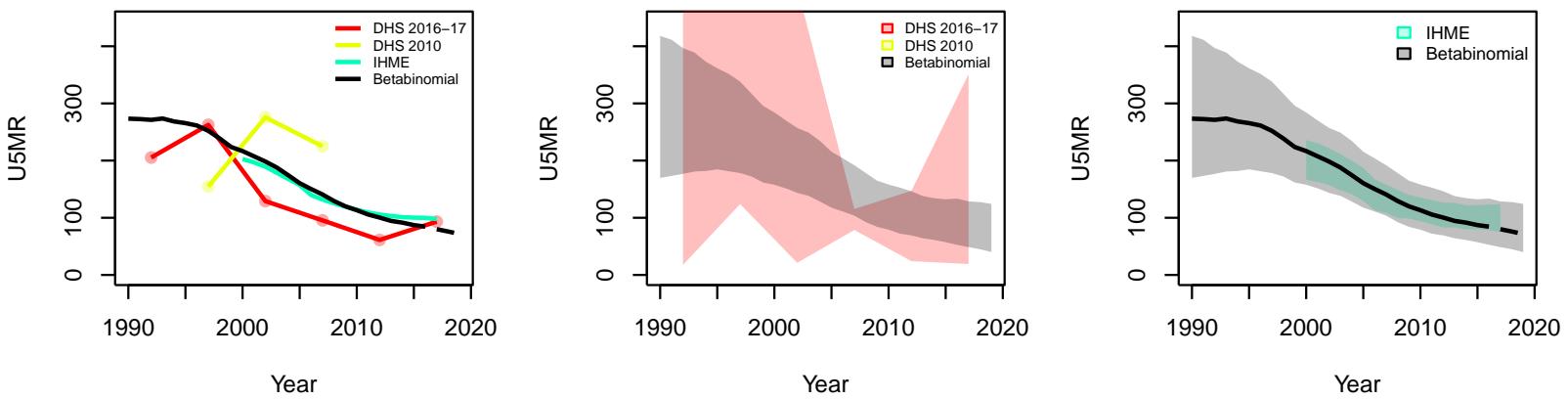
### Mishiha, Cankuzo



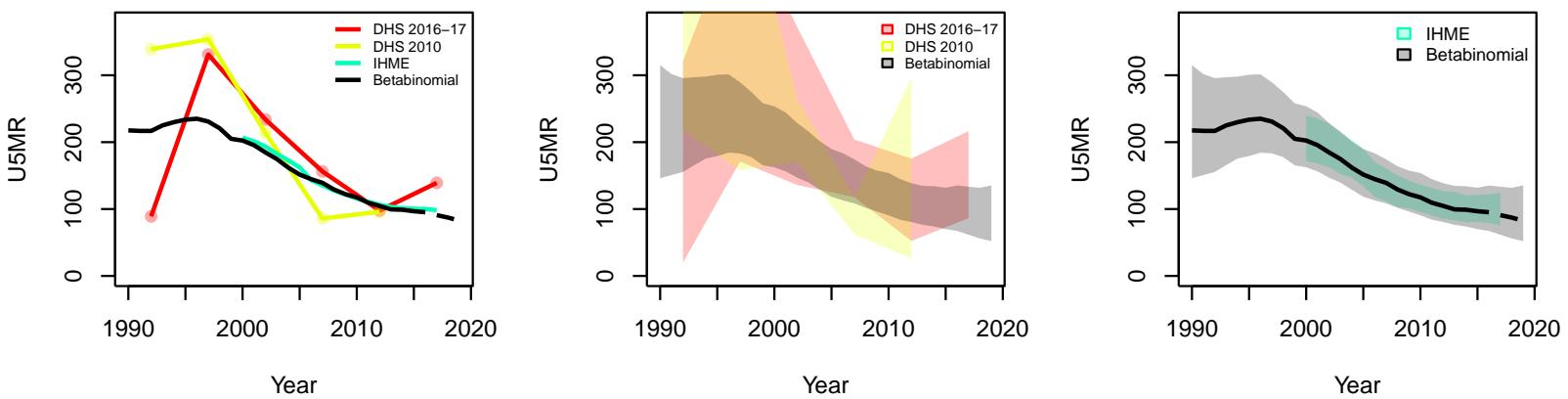
### Kigamba, Cankuzo



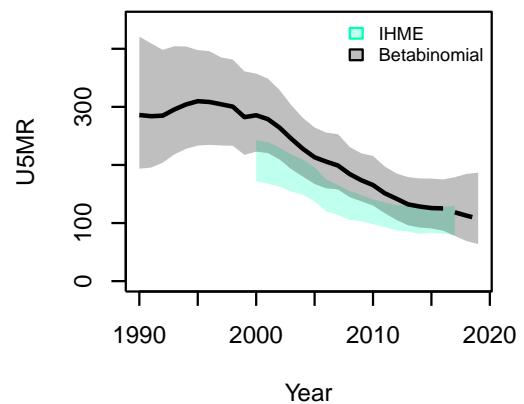
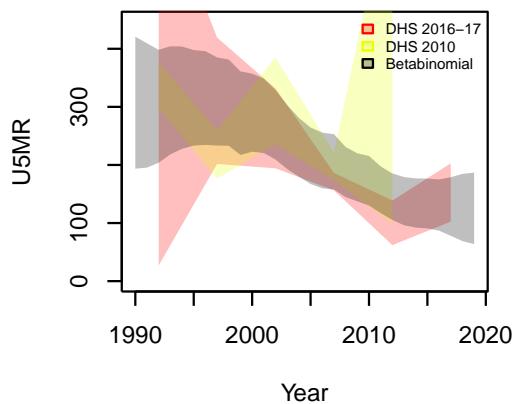
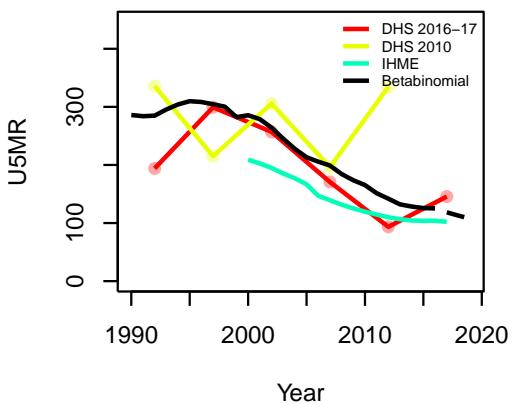
### Buhinyuza, Muyinga



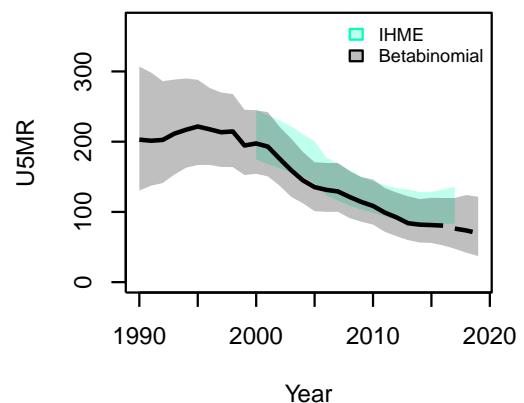
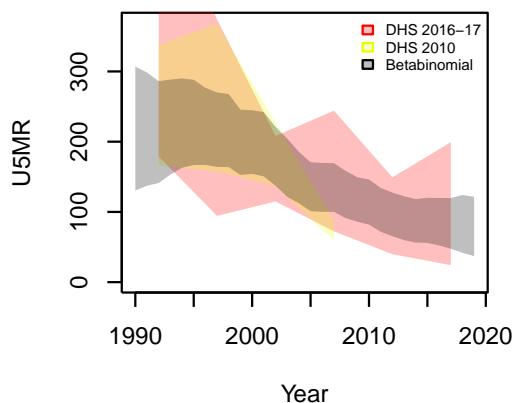
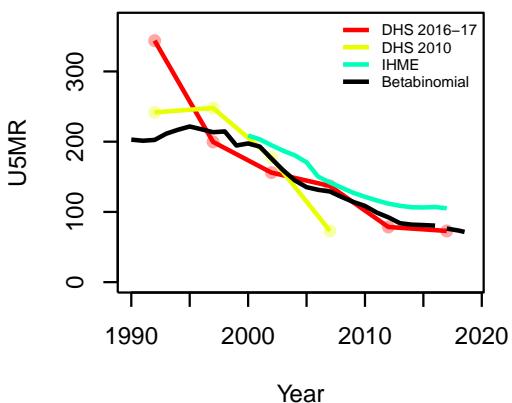
### Muyinga, Muyinga



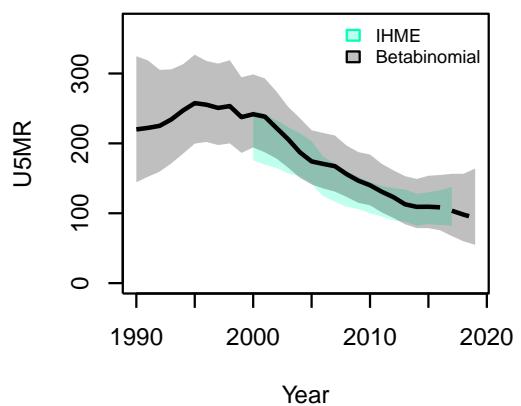
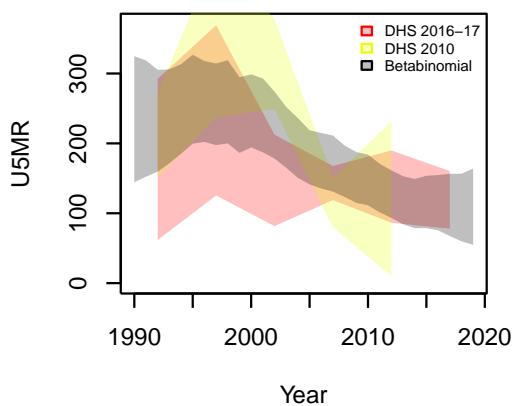
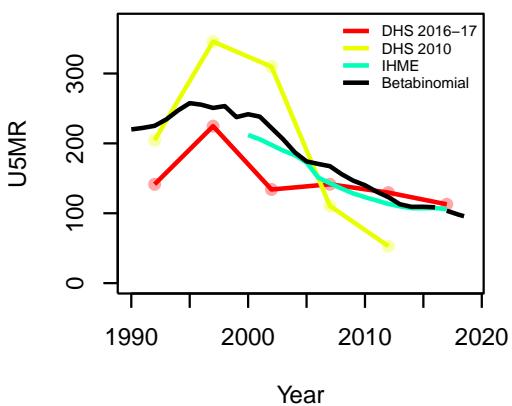
### Butihinda, Muyinga



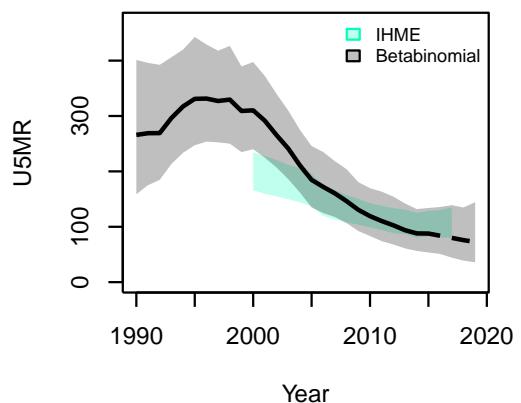
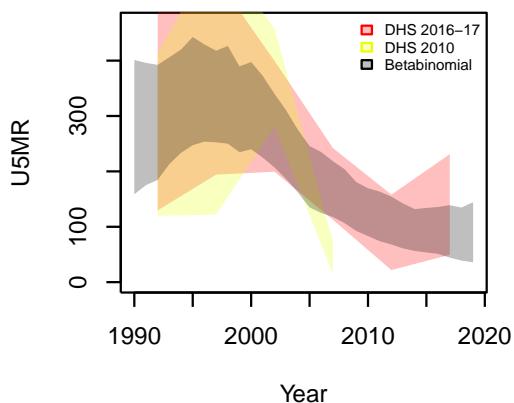
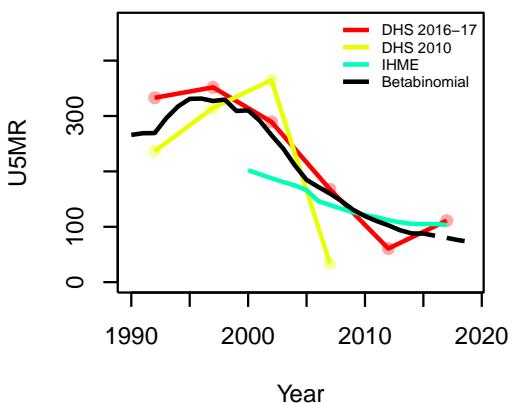
### Giteranyi, Muyinga



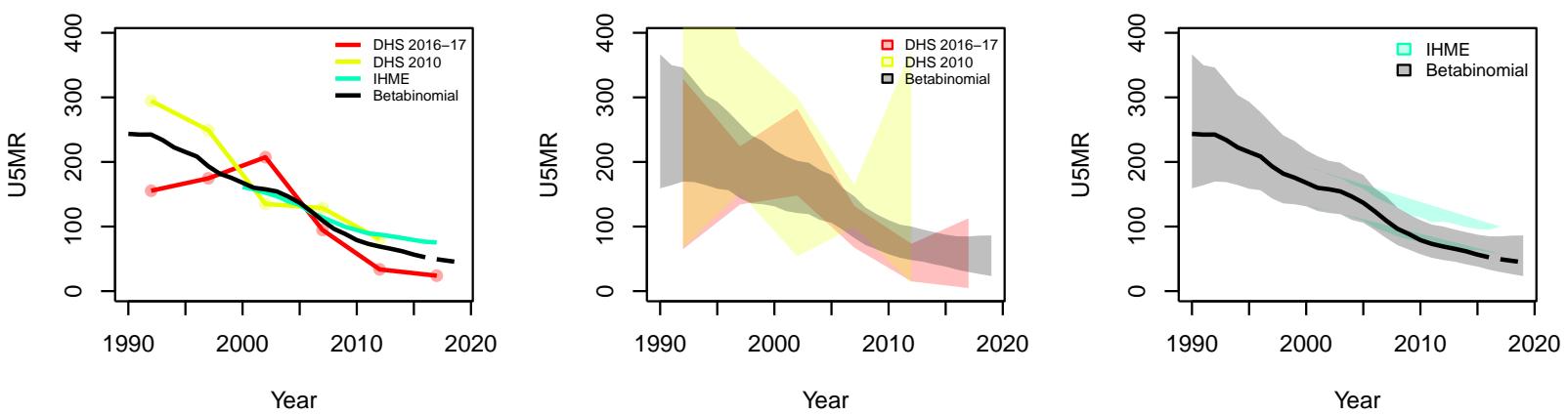
### Busoni, Kirundo



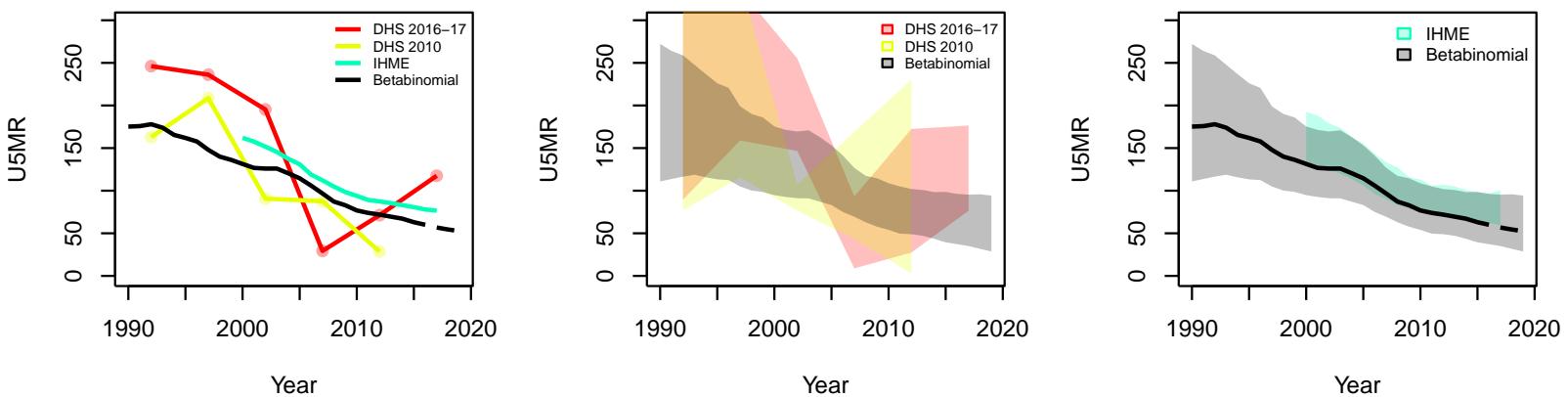
### Bugabira, Kirundo



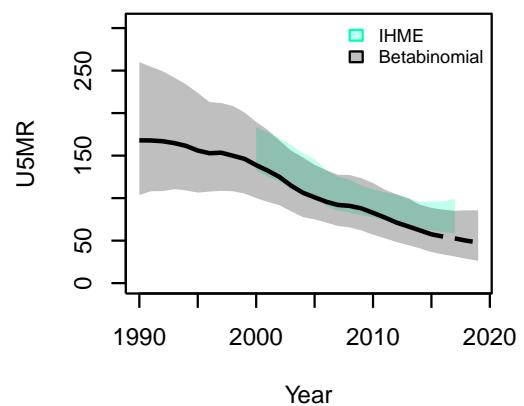
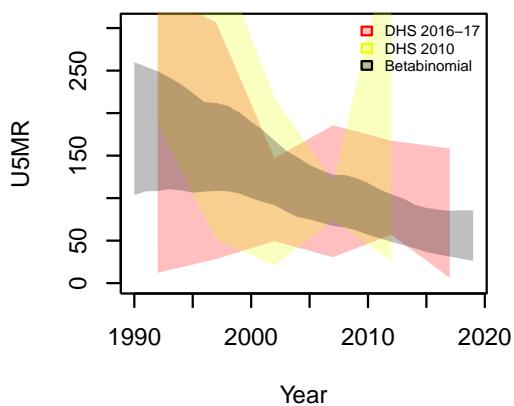
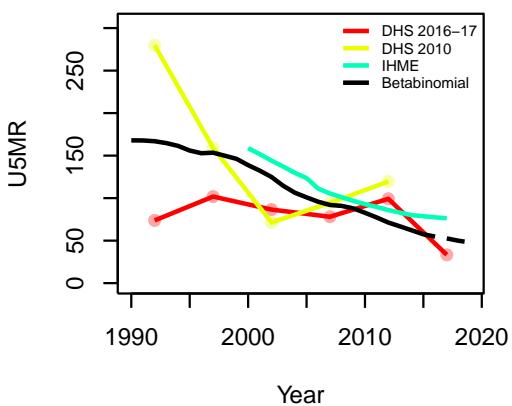
### Kayogoro, Makamba



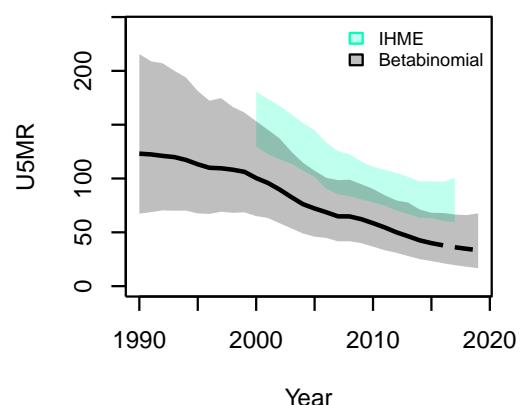
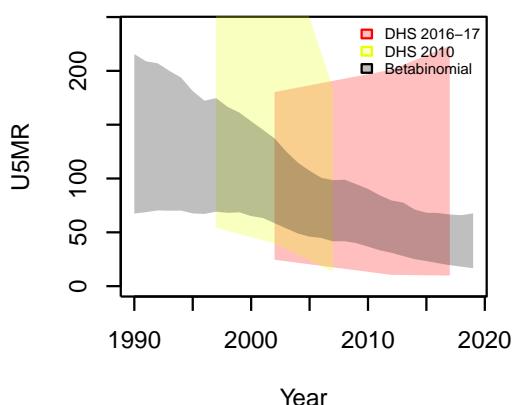
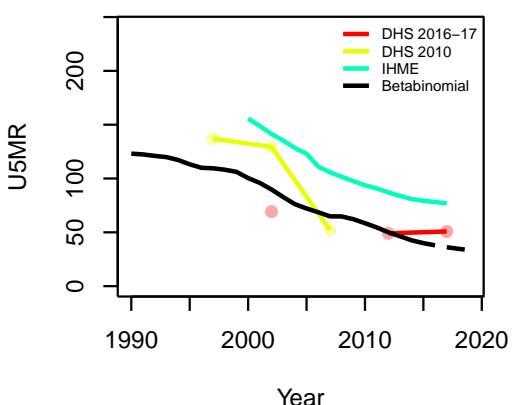
### Bukemba, Rutana



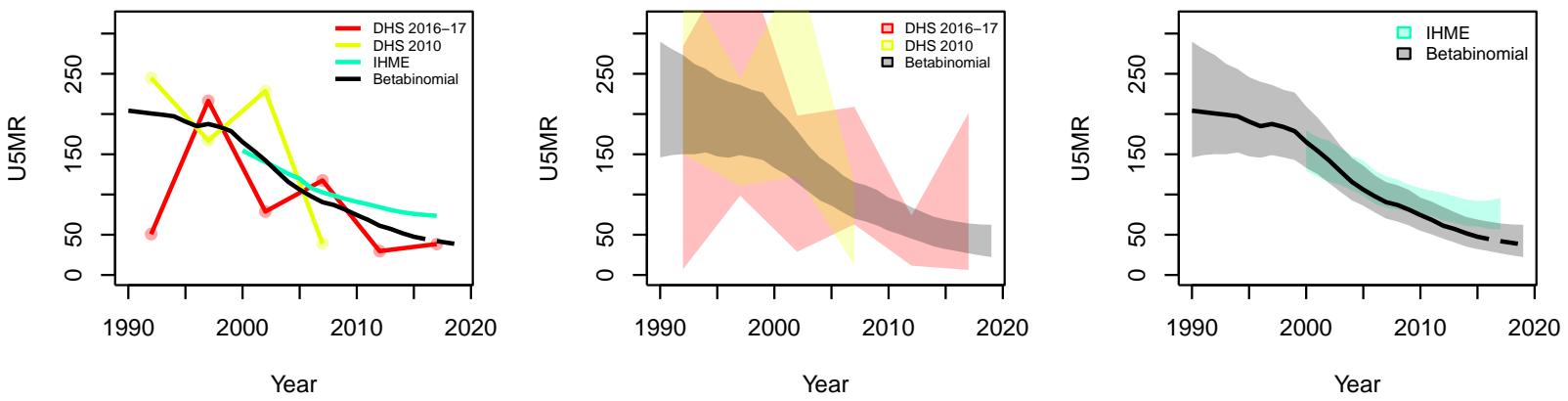
### Matongo, Kayanza



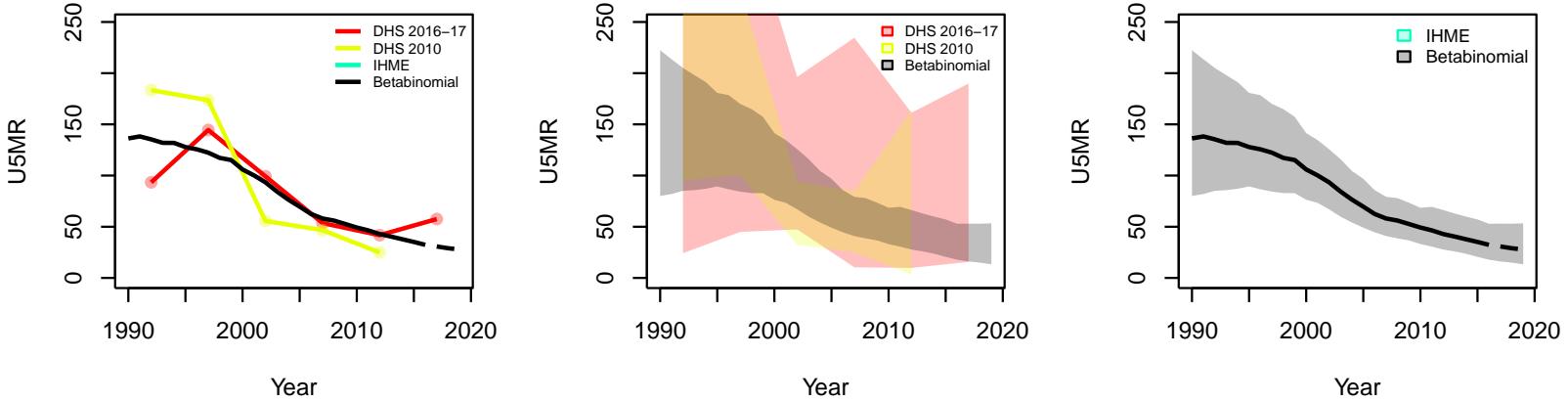
### Muruta, Kayanza



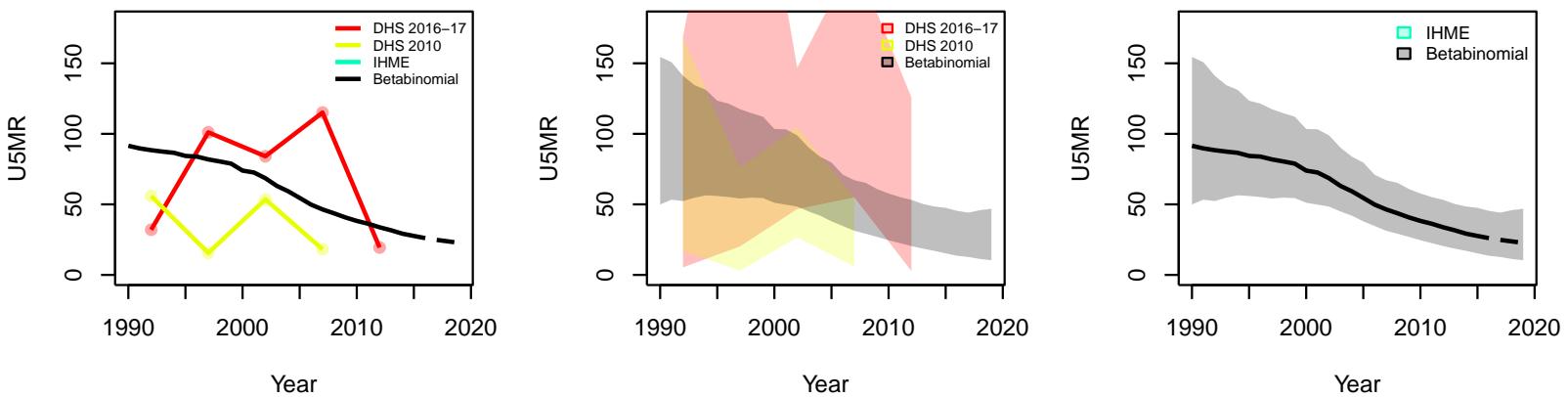
### Musigati, Bubanza



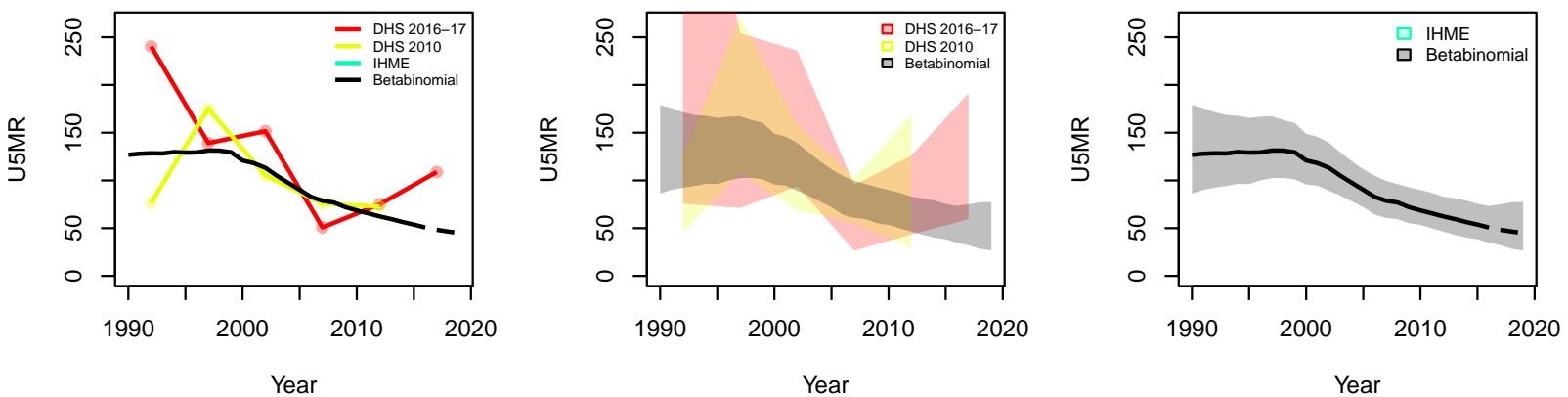
### Muha, Bujumbura Mairie



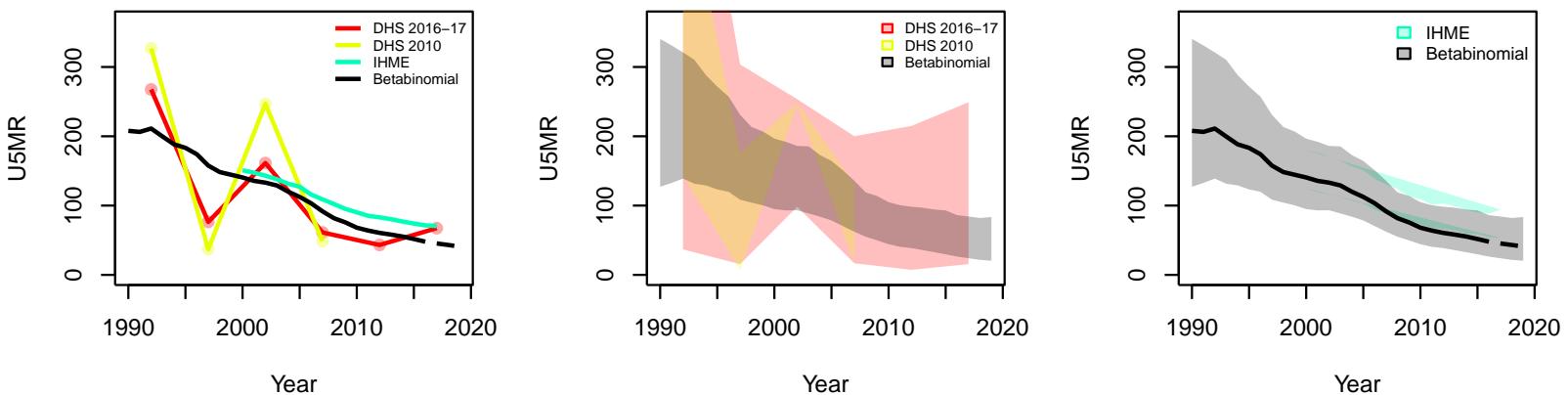
### Mukaza, Bujumbura Mairie



### Ntahangwa, Bujumbura Mairie



### Kibago, Makamba



## 4 National Figures and Results

	Median	Interval	Median-Bench	Interval
0	30.90	(29,33)	30.30	(28.6,32.1)
1-11	3.70	(3.4,3.9)	3.60	(3.4,3.8)
12-23	1.60	(1.5,1.7)	1.50	(1.4,1.7)
24-35	1.20	(1.1,1.3)	1.10	(1,1.2)
36-47	1.10	(1,1.2)	1.10	(1,1.2)
48-59	0.60	(0.6,0.7)	0.60	(0.6,0.7)

Table 4: Monthly hazards in terms of 1000 children by age band for national, unstratified model for Burundi.

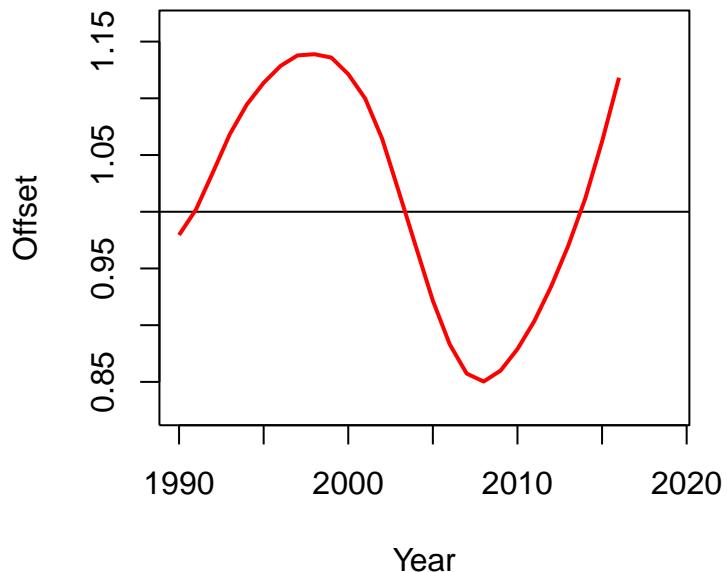


Figure 7: Benchmark offsets:  $BENCH(t) = U5MR^*(t)/U5MR(t)$  where  $U5MR^*(t)$  is modeled estimate and  $U5MR(t)$  is UN-IGME estimate.

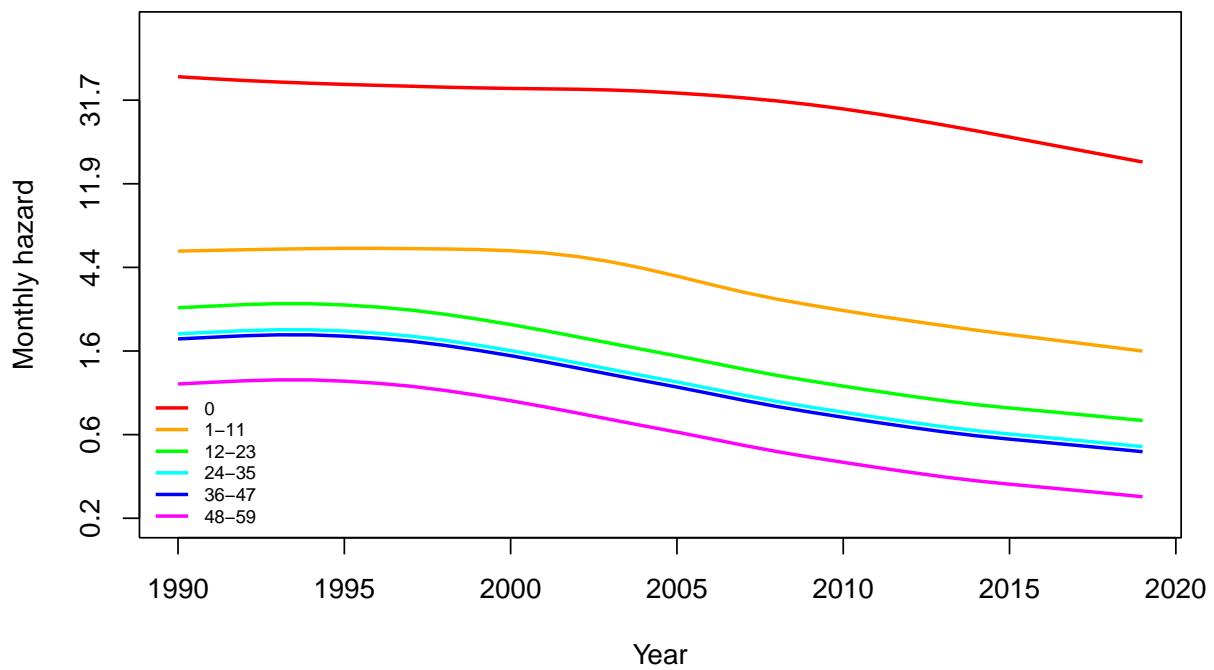


Figure 8: Monthly hazards of death in terms of U5MR (number deaths per 1000 children) by agebands.

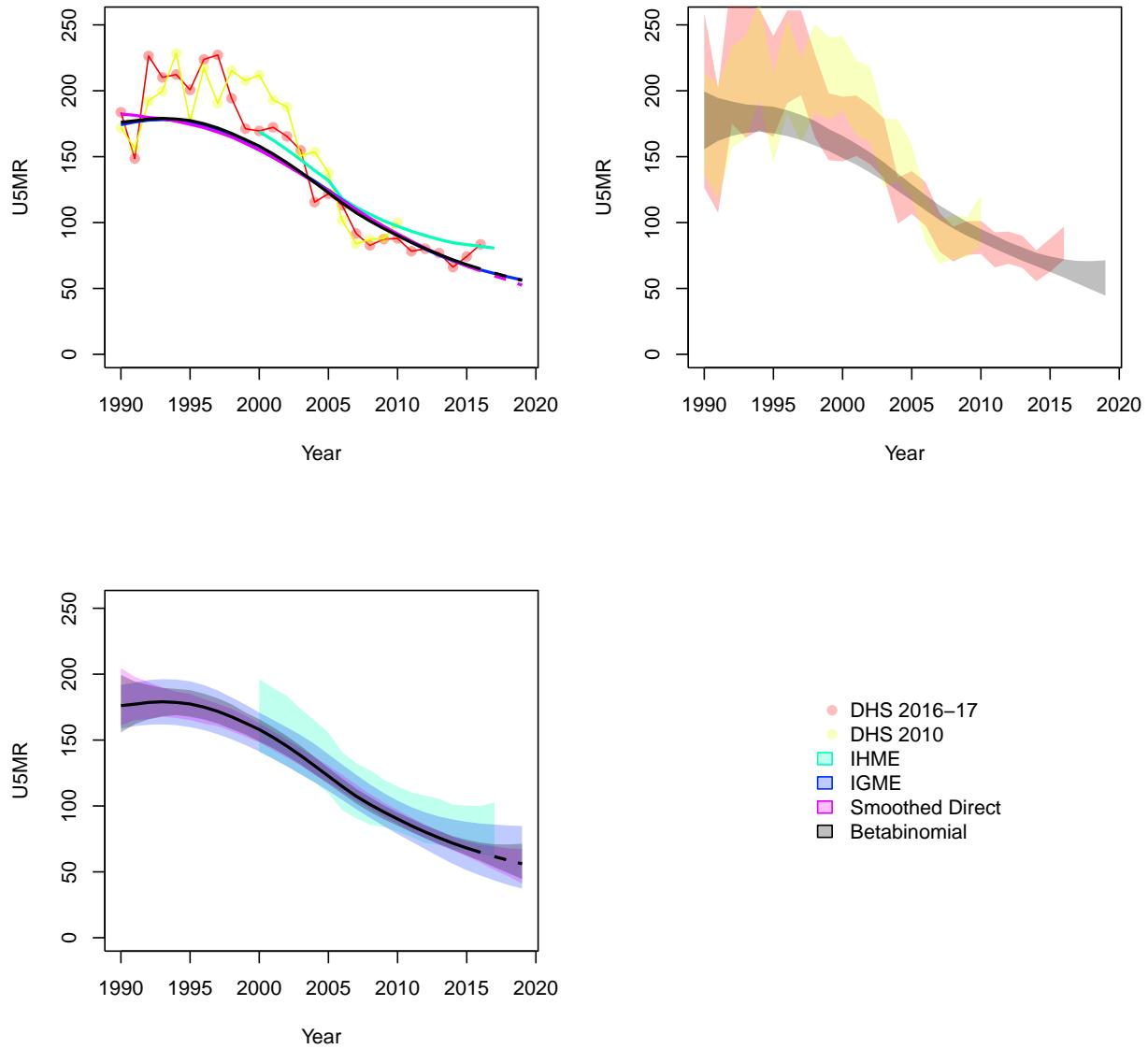
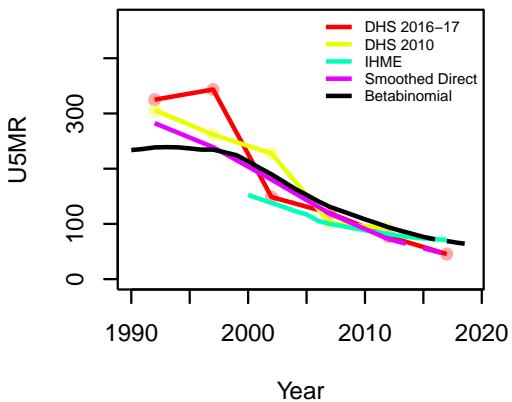


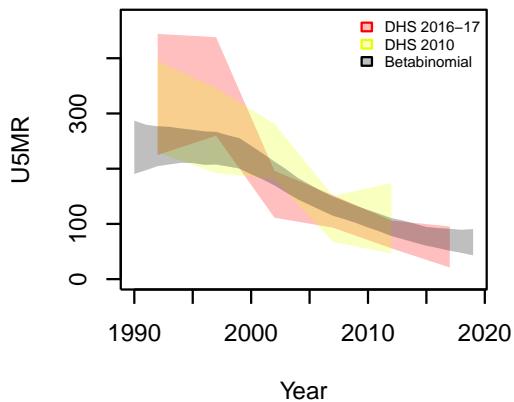
Figure 9: Benchmarked U5MR rates per 1000 live births. Top: DHS direct estimates with national trends from IHME GBD, UN-IGME, Smoothed Direct and Betabinomial estimates. Middle: 95% uncertainty intervals for DHS data. Bottom: IHME GBD, UN-IGME, Smoothed Direct and Betabinomial estimates with for the unstratified model. 95% uncertainty intervals

## 5 Admin 1 Figures

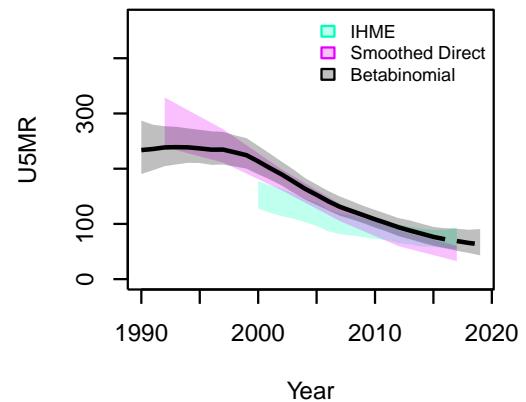
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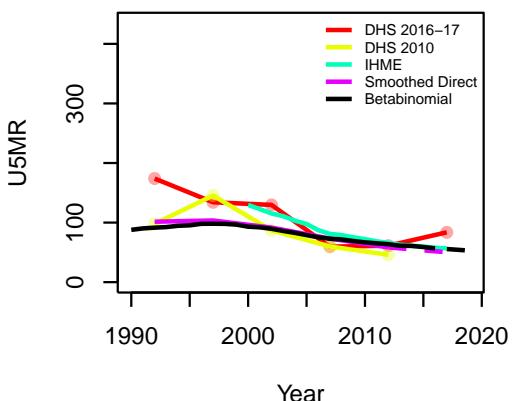
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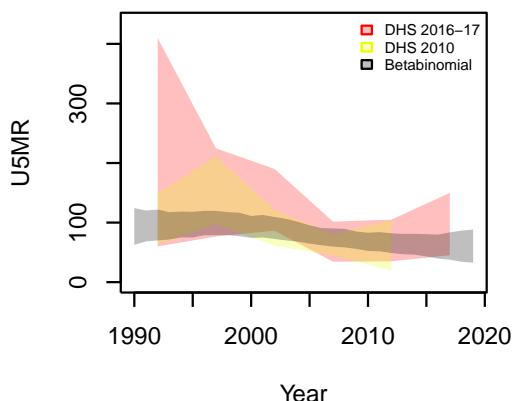
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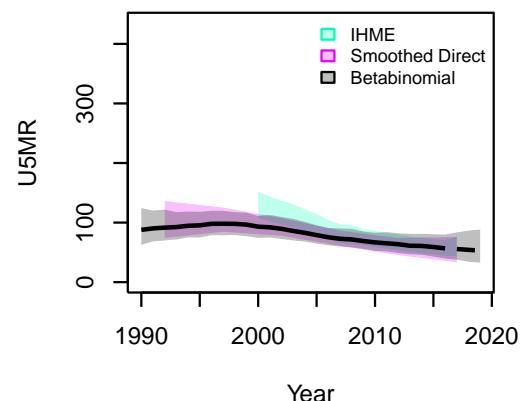
### Bujumbura Mairie



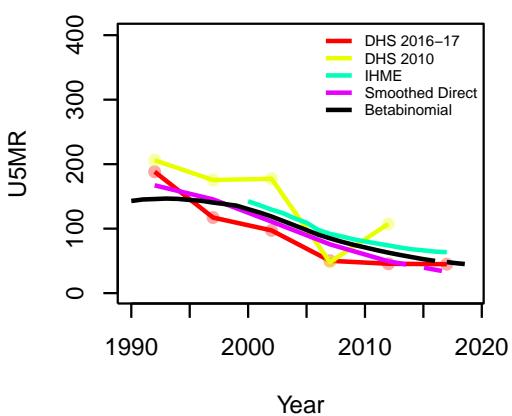
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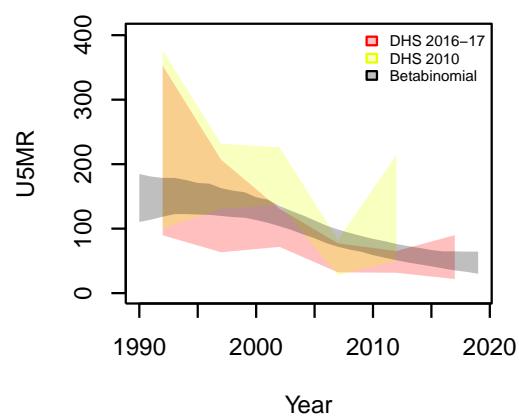
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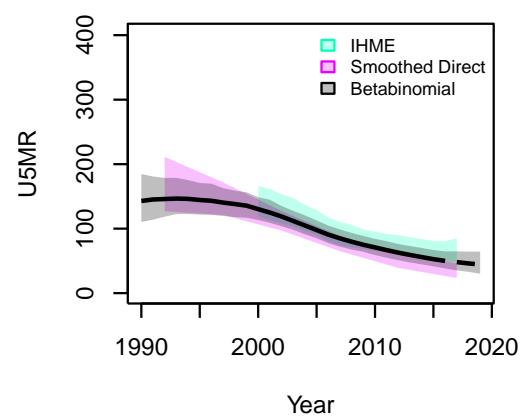
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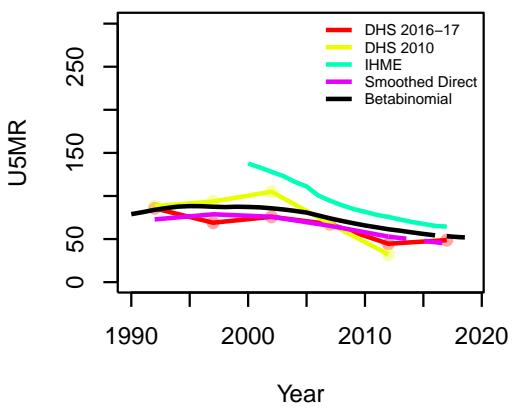
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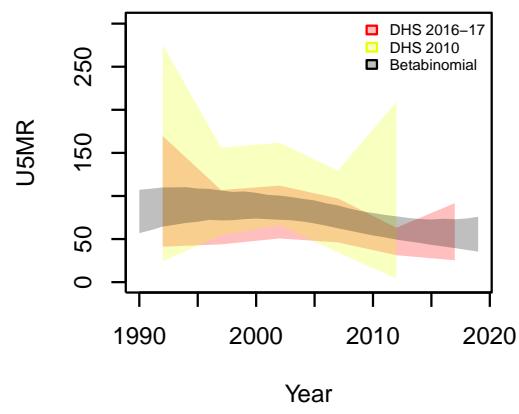
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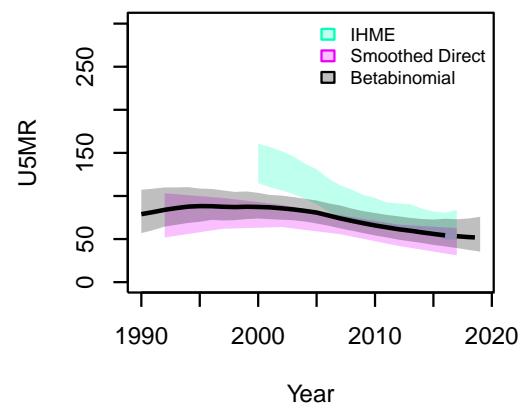
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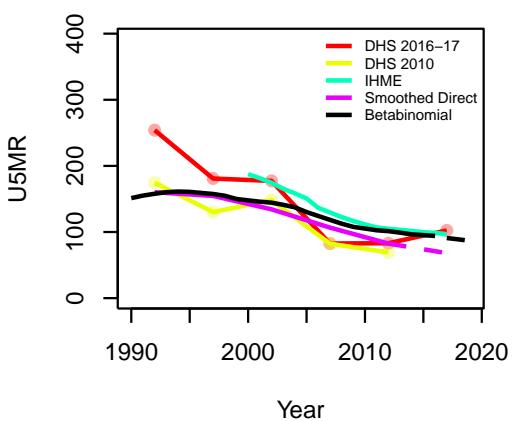
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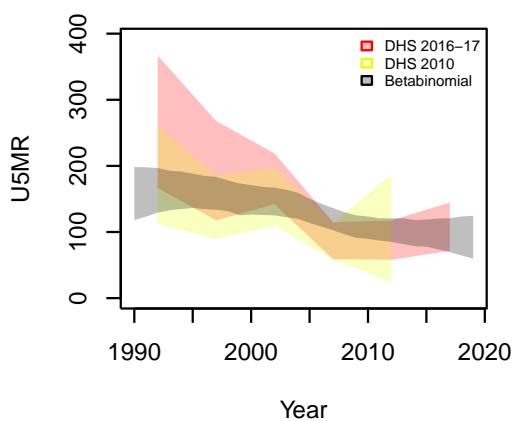
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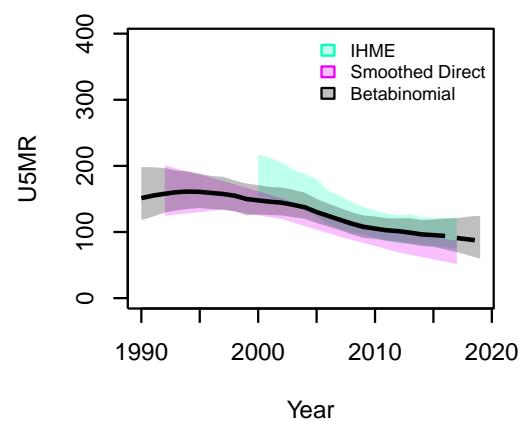
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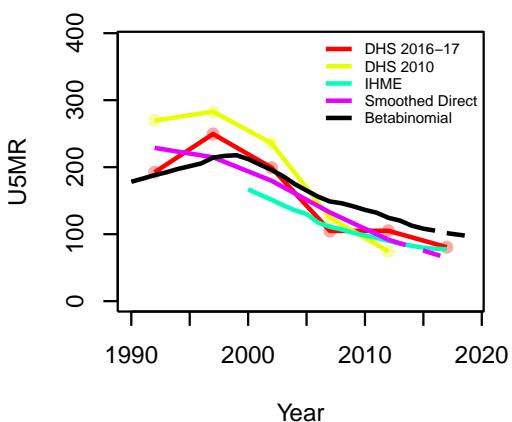
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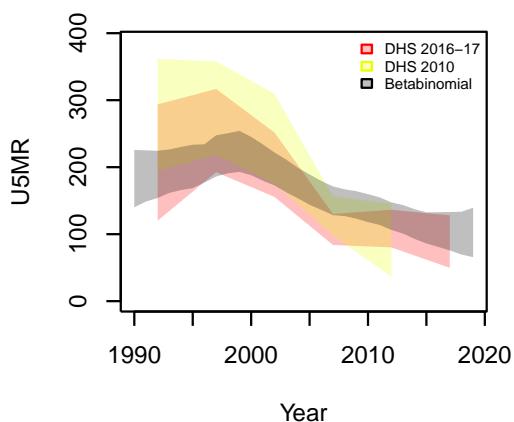
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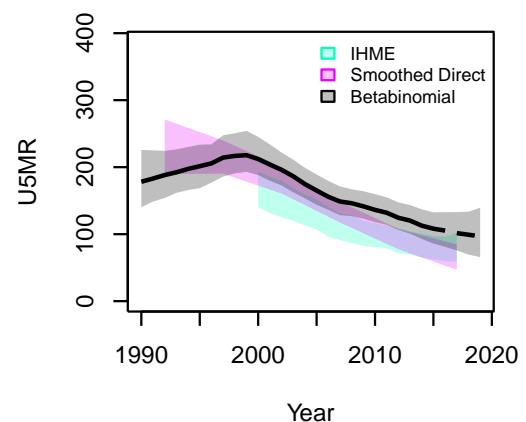
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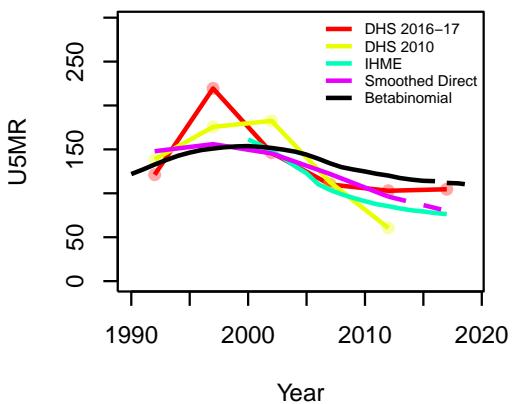
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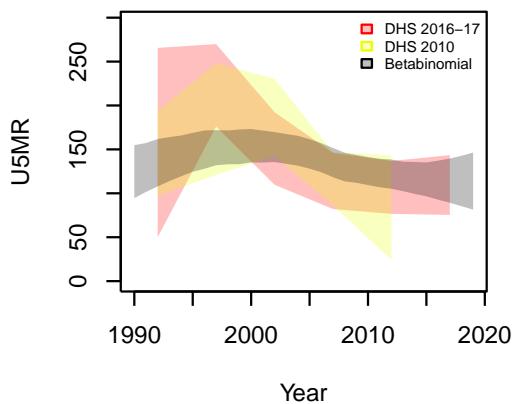
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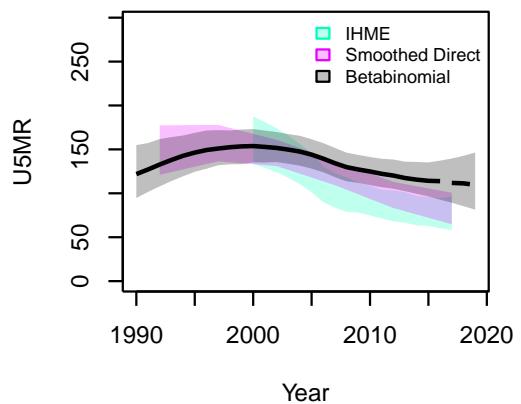
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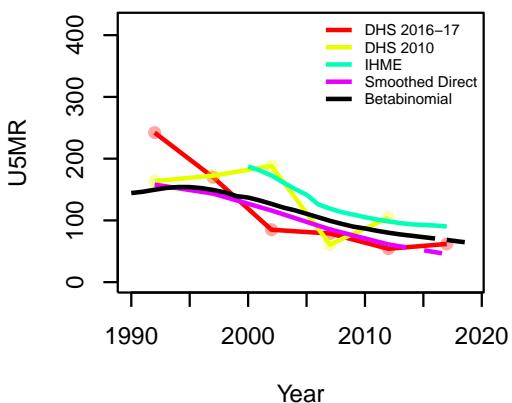
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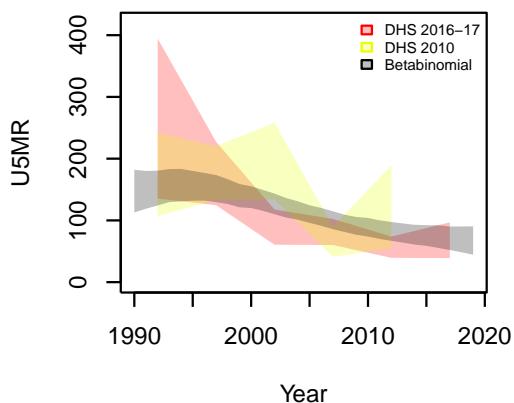
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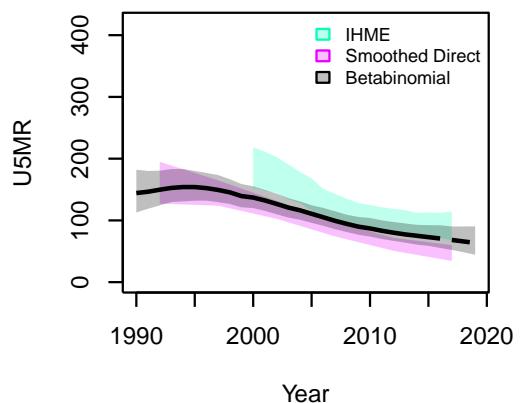
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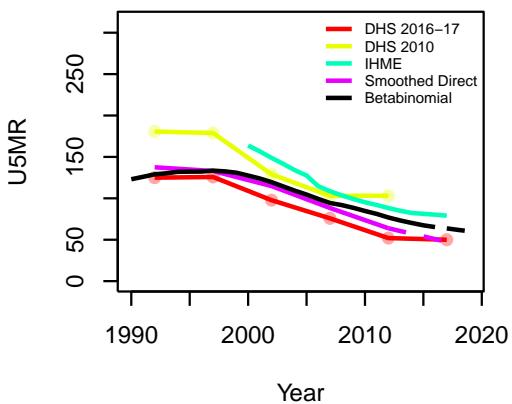
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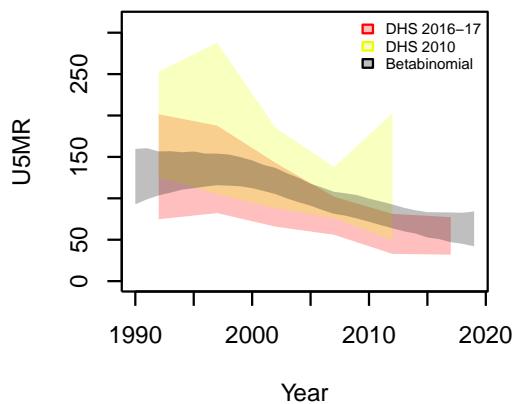
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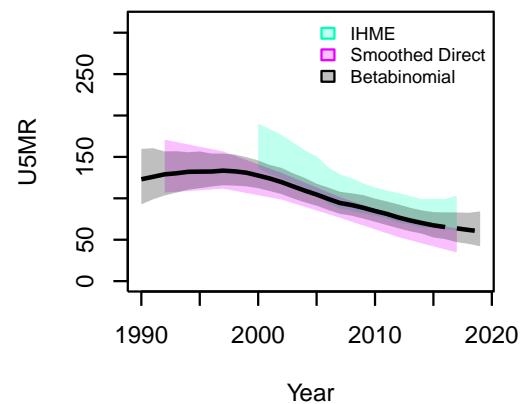
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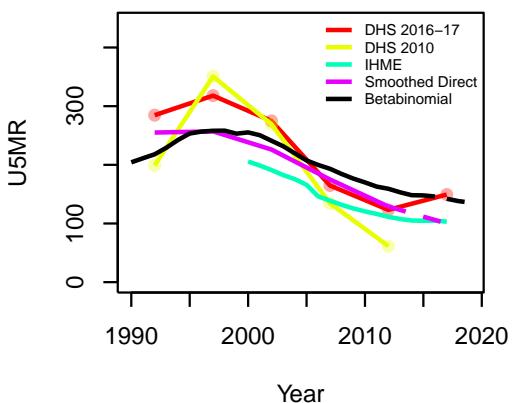
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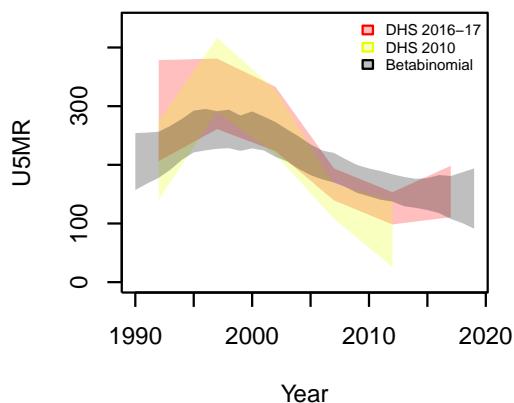
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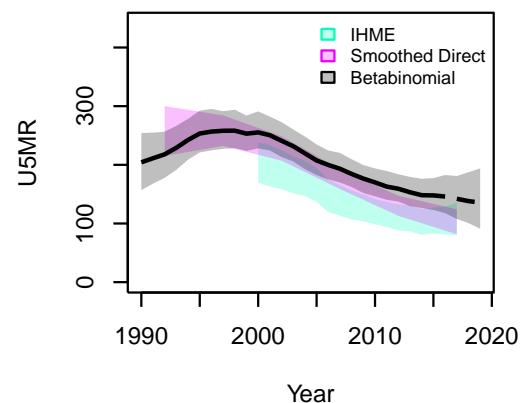
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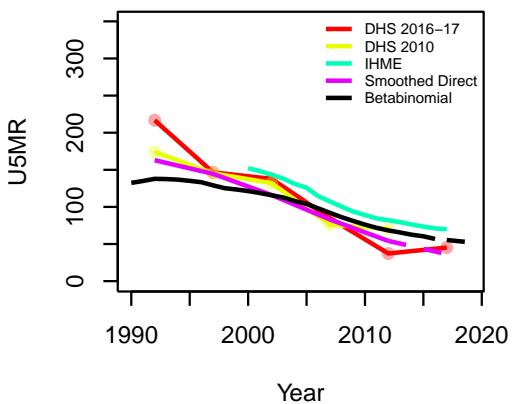
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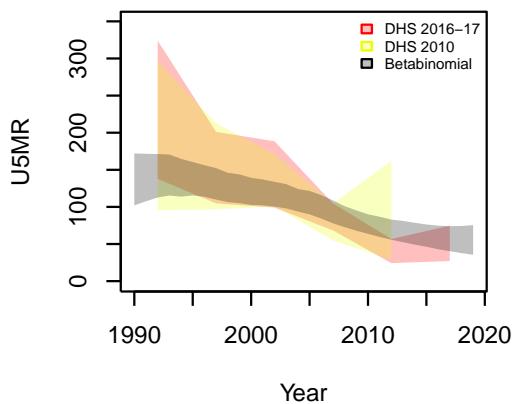
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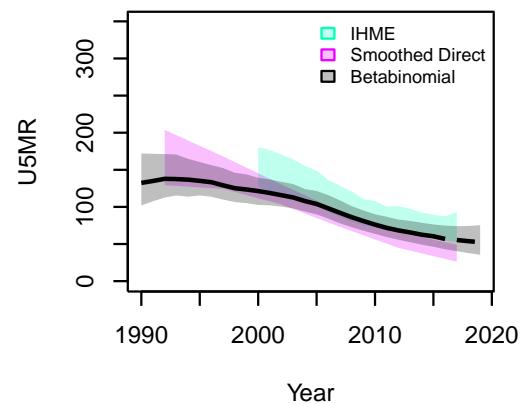
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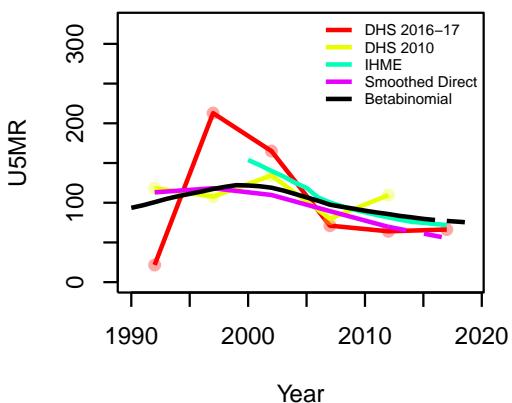
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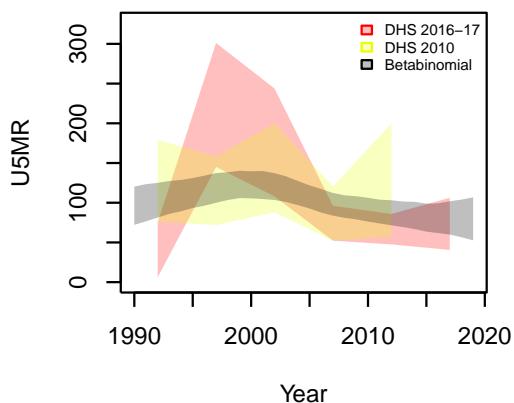
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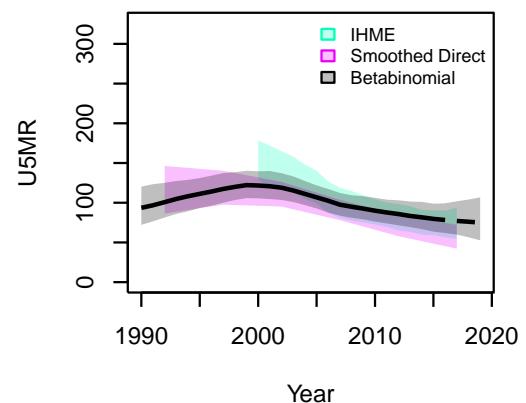
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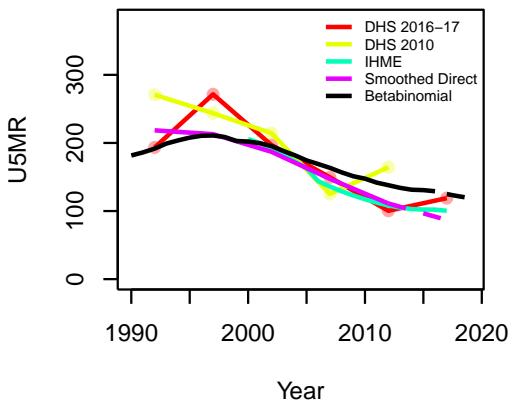
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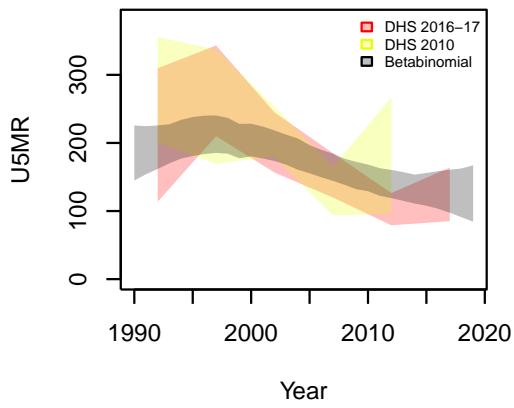
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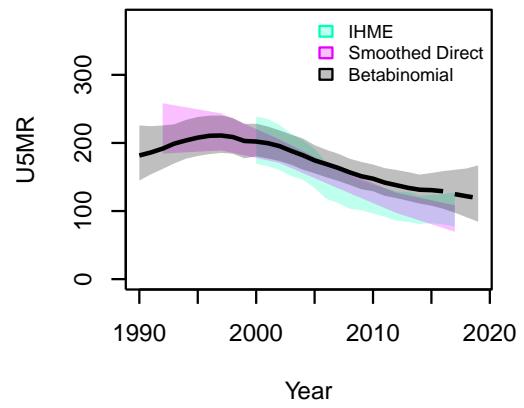
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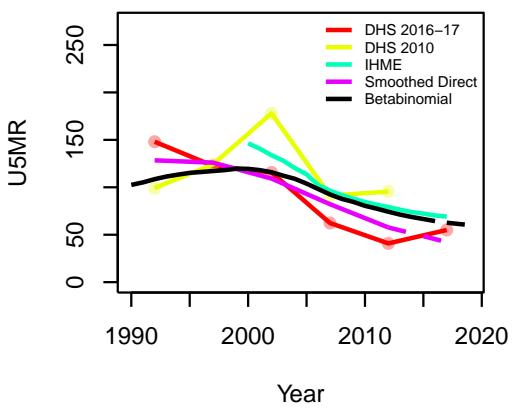
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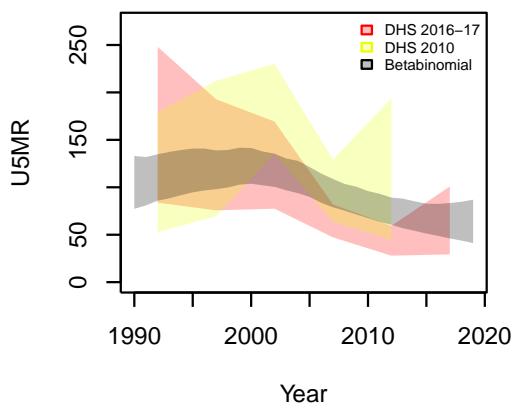
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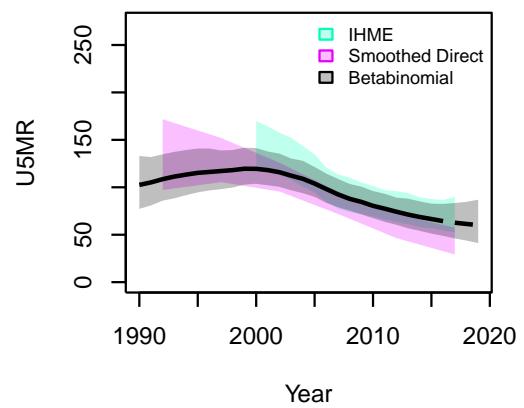
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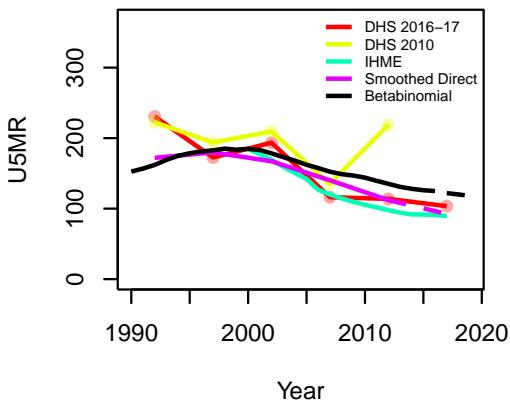
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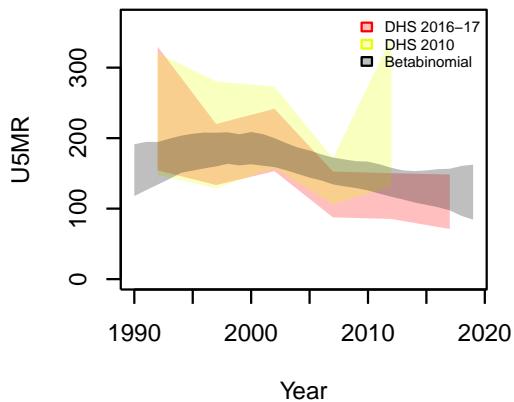
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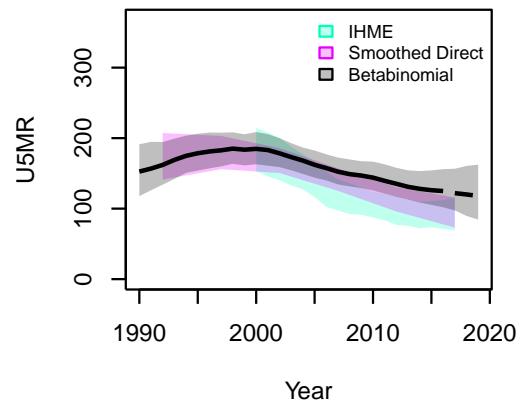
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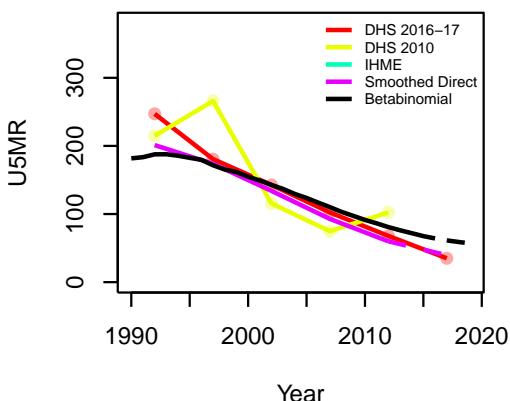
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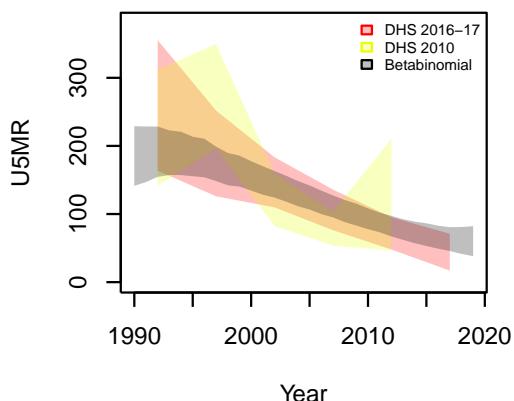
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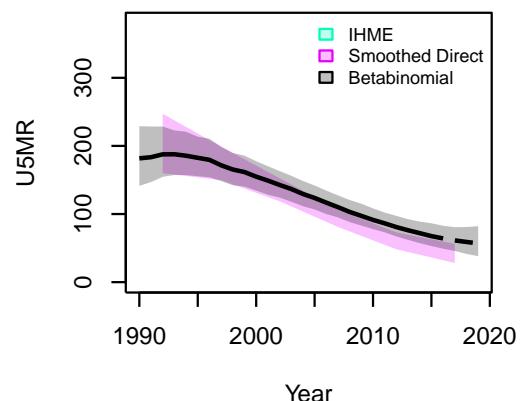
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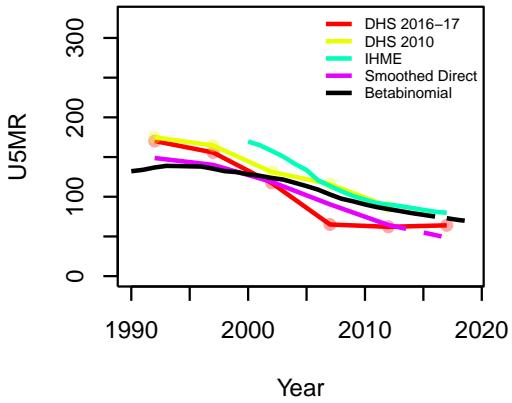
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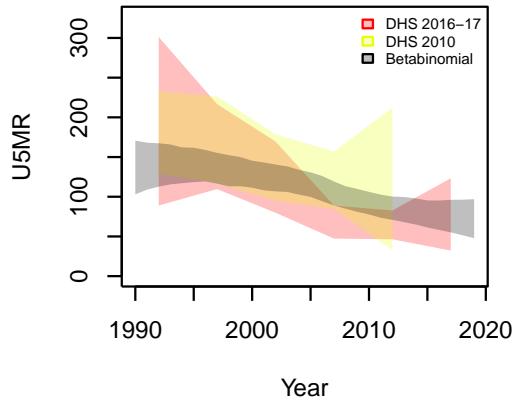
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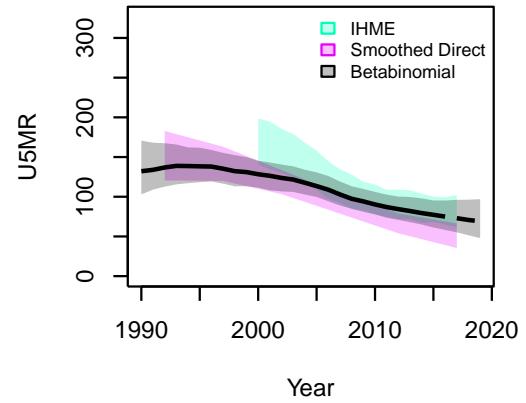
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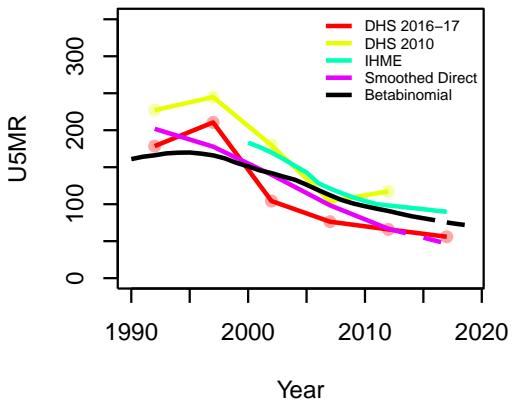
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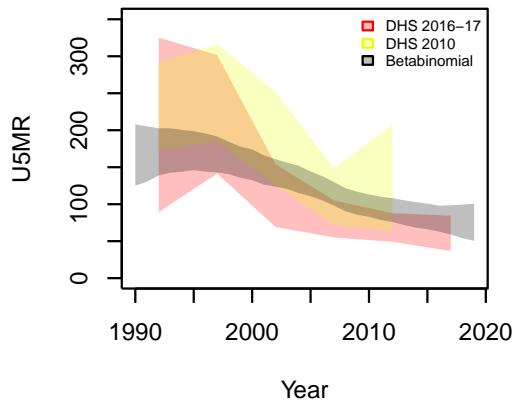
### Rutana



### Ruyigi



### Ruyigi



### Ruyigi

