



MEDBS datacall Report

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Catch table

Presence of duplicated records

Data included in the catch table were checked for the presence of duplicated records. The result of the check is here reported:

- No replicated records in Catch data

Attention: eventual duplicated records will be removed from catch data for the following analysis

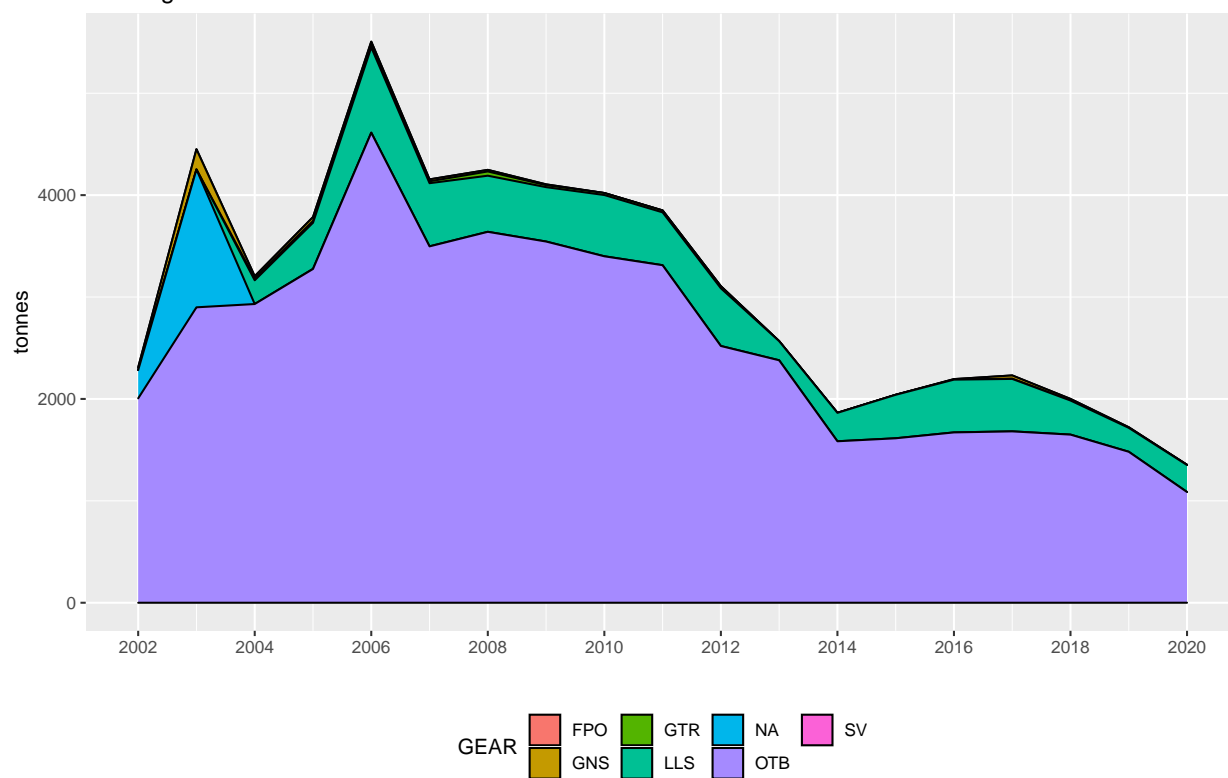
Coverage of catch data

GSA 18

HKE *Coverage of landing data for HKE in GSA 18*

COUNTRY	YEAR	AREA	SPECIES	LANDINGS
ITA	2002	GSA 18	HKE	2309.142
ITA	2003	GSA 18	HKE	4450.769
ITA	2004	GSA 18	HKE	3204.111
ITA	2005	GSA 18	HKE	3784.651
ITA	2006	GSA 18	HKE	5506.318
ITA	2007	GSA 18	HKE	4154.556
ITA	2008	GSA 18	HKE	4247.904
ITA	2009	GSA 18	HKE	4105.819
ITA	2010	GSA 18	HKE	4020.612
ITA	2011	GSA 18	HKE	3849.697
ITA	2012	GSA 18	HKE	3105.702
ITA	2013	GSA 18	HKE	2566.947
ITA	2014	GSA 18	HKE	1863.625
ITA	2015	GSA 18	HKE	2040.697
ITA	2016	GSA 18	HKE	2194.563
ITA	2017	GSA 18	HKE	2230.520
ITA	2018	GSA 18	HKE	2000.253
ITA	2019	GSA 18	HKE	1722.238
ITA	2020	GSA 18	HKE	1353.534

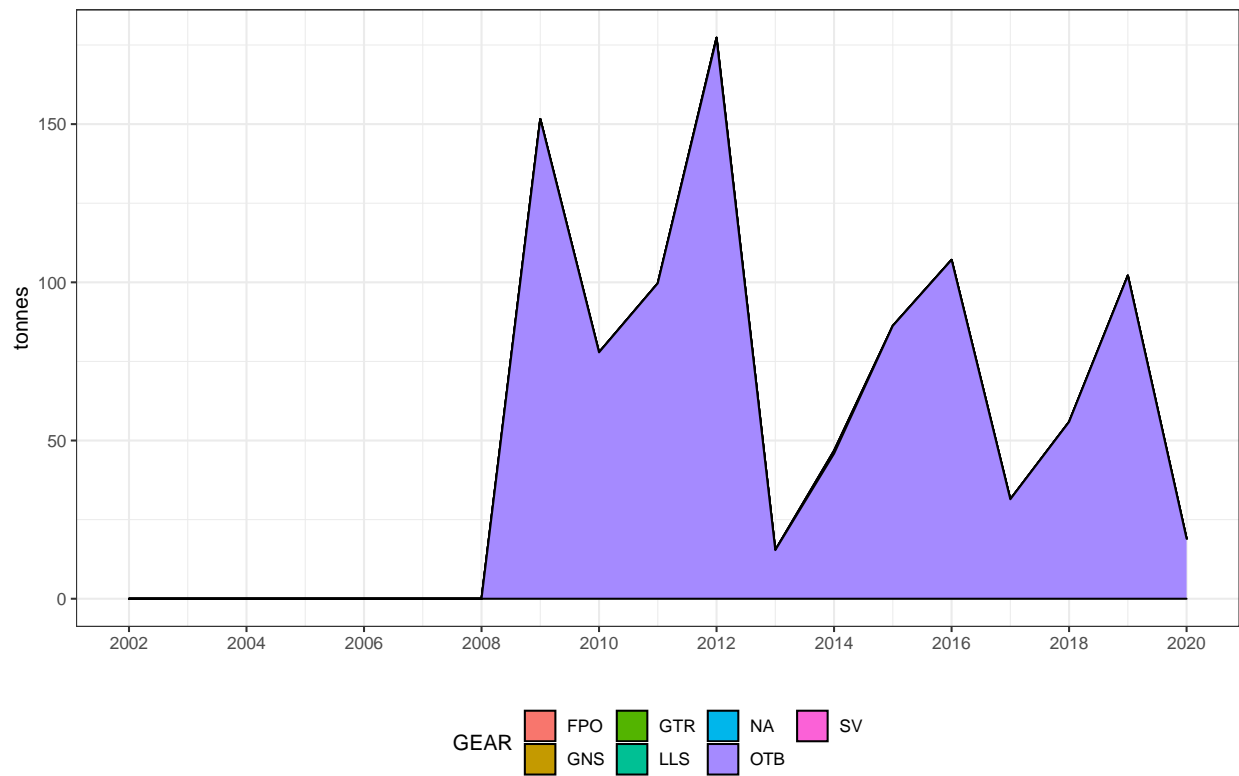
Landings in catch of HKE in ITA – GSA 18



Coverage of discard data for HKE in GSA 18

COUNTRY	YEAR	AREA	SPECIES	DISCARDS
ITA	2009	GSA 18	HKE	151.60242
ITA	2010	GSA 18	HKE	77.86157
ITA	2011	GSA 18	HKE	99.69113
ITA	2012	GSA 18	HKE	177.32864
ITA	2013	GSA 18	HKE	15.36081
ITA	2014	GSA 18	HKE	46.79378
ITA	2015	GSA 18	HKE	86.24911
ITA	2016	GSA 18	HKE	107.10148
ITA	2017	GSA 18	HKE	31.43257
ITA	2018	GSA 18	HKE	55.88577
ITA	2019	GSA 18	HKE	102.13291
ITA	2020	GSA 18	HKE	18.97022

Discards in catch of HKE in ITA – GSA 18

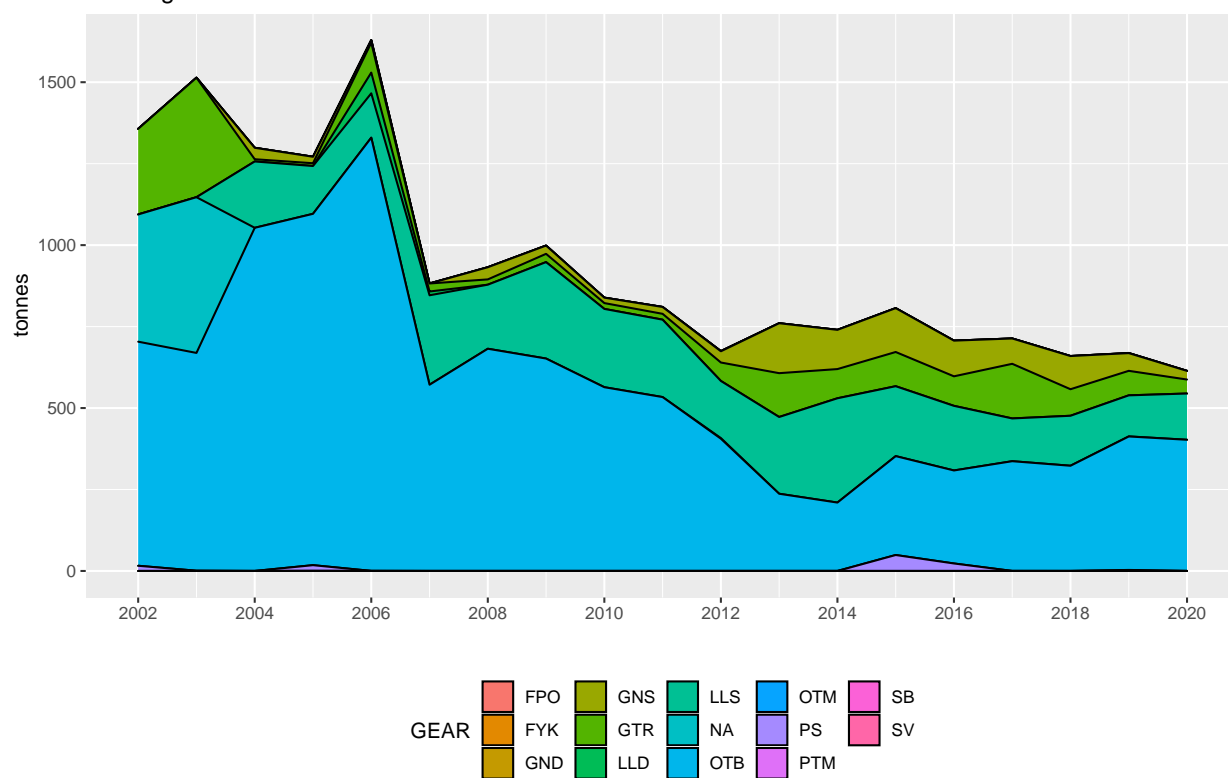


GSA 19

HKE Coverage of landing data for HKE in GSA 19

COUNTRY	YEAR	AREA	SPECIES	LANDINGS
ITA	2002	GSA 19	HKE	1356.8194
ITA	2003	GSA 19	HKE	1513.8160
ITA	2004	GSA 19	HKE	1298.7318
ITA	2005	GSA 19	HKE	1271.1942
ITA	2006	GSA 19	HKE	1629.1298
ITA	2007	GSA 19	HKE	882.3411
ITA	2008	GSA 19	HKE	932.1399
ITA	2009	GSA 19	HKE	998.6430
ITA	2010	GSA 19	HKE	838.7930
ITA	2011	GSA 19	HKE	810.2298
ITA	2012	GSA 19	HKE	674.8485
ITA	2013	GSA 19	HKE	760.3392
ITA	2014	GSA 19	HKE	739.9736
ITA	2015	GSA 19	HKE	806.5847
ITA	2016	GSA 19	HKE	706.8578
ITA	2017	GSA 19	HKE	713.5316
ITA	2018	GSA 19	HKE	659.6122
ITA	2019	GSA 19	HKE	669.1320
ITA	2020	GSA 19	HKE	614.1151

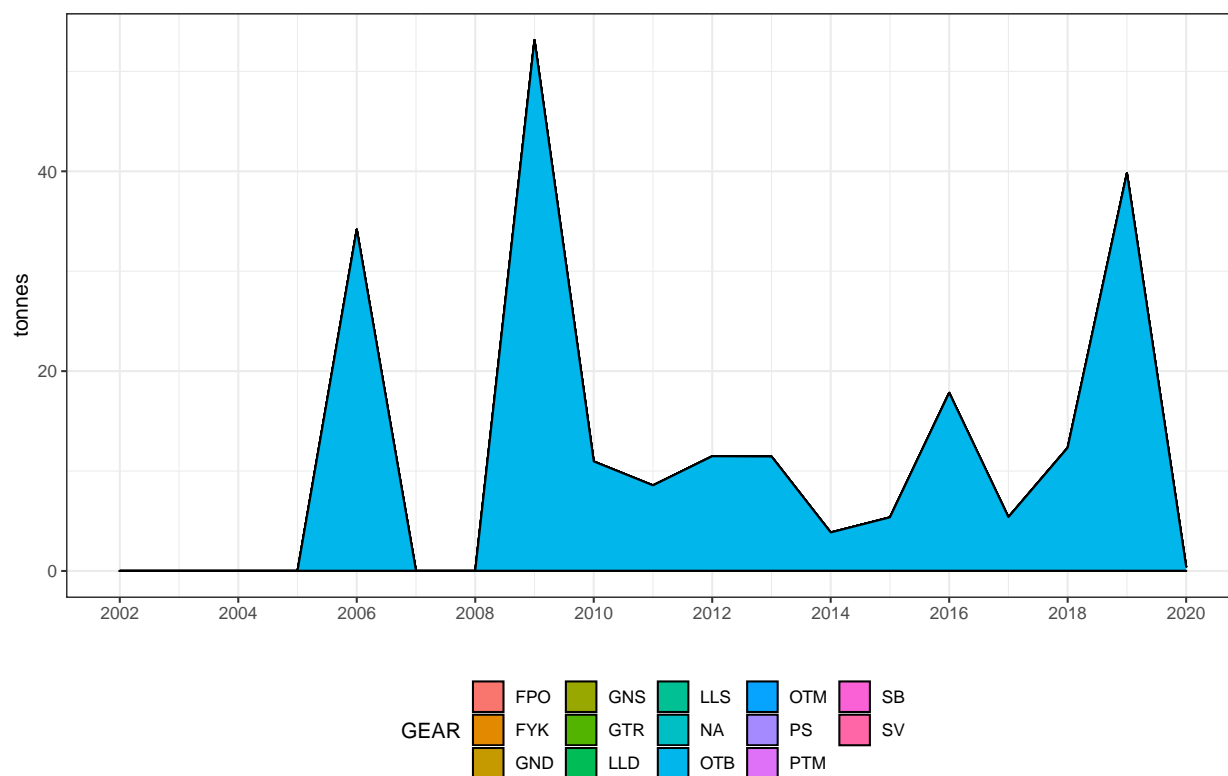
Landings in catch of HKE in ITA – GSA 19



Coverage of discard data for HKE in GSA 19

COUNTRY	YEAR	AREA	SPECIES	DISCARDS
ITA	2006	GSA 19	HKE	34.17037
ITA	2009	GSA 19	HKE	53.12721
ITA	2010	GSA 19	HKE	10.95757
ITA	2011	GSA 19	HKE	8.56390
ITA	2012	GSA 19	HKE	11.47827
ITA	2013	GSA 19	HKE	11.45418
ITA	2014	GSA 19	HKE	3.85250
ITA	2015	GSA 19	HKE	5.36492
ITA	2016	GSA 19	HKE	17.82643
ITA	2017	GSA 19	HKE	5.38637
ITA	2018	GSA 19	HKE	12.32796
ITA	2019	GSA 19	HKE	39.79820
ITA	2020	GSA 19	HKE	0.41658

Discards in catch of HKE in ITA – GSA 19



Check of Sum of Products (SOP)

The result of the percentage difference of SOP and both landing and discard volumes are reported in the following table in case the value is greater than 5% (selected threshold value):

GSA 18

HKE Critical values of SOP for HKE in GSA 18

	YEAR	QUARTER	VESSEL_LENGTH	GEAR	MESH_SIZE_RANGE	FISHERY	check_LANDING	check_DISCARD
49673	2009	-1	NA	OTB	40D50	MDD		7.42
49740	2010	-1	NA	OTB	40D50	DEF		9.21
49770	2010	-1	NA	OTB	40D50	MDD		7.09
50026	2013	-1	NA	OTB	50D100	MDD		7.44
50419	2016	2	NA	OTB	50D100	DEF		6.97
50437	2016	3	NA	OTB	50D100	DEF		7.29
50508	2016	2	NA	OTB	50D100	MDD		8.82
50797	2017	2	NA	OTB	50D100	DEF		6.32
50876	2017	2	NA	OTB	50D100	MDD		8.46
51229	2018	1	NA	OTB	50D100	DEF		9.17
51280	2018	3	NA	OTB	50D100	DEF		6.92
51304	2018	4	NA	OTB	50D100	DEF		7.75
64937	2018	1	NA	OTB	50D100	MDD		7.44
65353	2019	1	NA	OTB	50D100	DEF		8.41
65376	2019	2	NA	OTB	50D100	DEF		5.08
65791	2020	2	NA	OTB	50D100	DEF		5.8
65793	2020	4	NA	OTB	50D100	DEF		6.68
65799	2020	2	NA	OTB	50D100	MDD		5.35
65800	2020	3	NA	OTB	50D100	MDD		5.29
65801	2020	4	NA	OTB	50D100	MDD		6.67

GSA 19

HKE Critical values of SOP for HKE in GSA 19

	YEAR	QUARTER	VESSEL_LENGTH	GEAR	MESH_SIZE_RANGE	FISHERY	check_LANDING	check_DISCARD
66600	2006	-1	NA	GNS	16D20	DEF	5.13	
66602	2006	-1	NA	OTB	40D50	NA		9.37
66853	2008	-1	NA	GTR	16D20	DEF	5.19	
67273	2011	-1	NA	OTB	50D100	DEF		5.11
67736	2014	-1	NA	OTB	50D100	NA		5.64
72985	2016	2	NA	OTB	50D100	NA		7.09
72986	2016	3	NA	OTB	50D100	NA		8.62
72987	2016	4	NA	OTB	50D100	NA		7.05
78347	2017	-1	NA	OTB	50D100	MDD		7.42
80999	2018	1	NA	OTB	50D100	DEF		9.85
81001	2018	3	NA	OTB	50D100	DEF		6.5
81002	2018	4	NA	OTB	50D100	DEF		8.97
81005	2018	2	NA	OTB	50D100	MDD		8.05
82566	2020	-1	NA	OTB	50D100	DEF		9.33

Landing table

Presence of duplicated records

Data included in the landing table were checked for the presence of duplicated records. The result of the check is here reported:

- No replicated records in Landings data

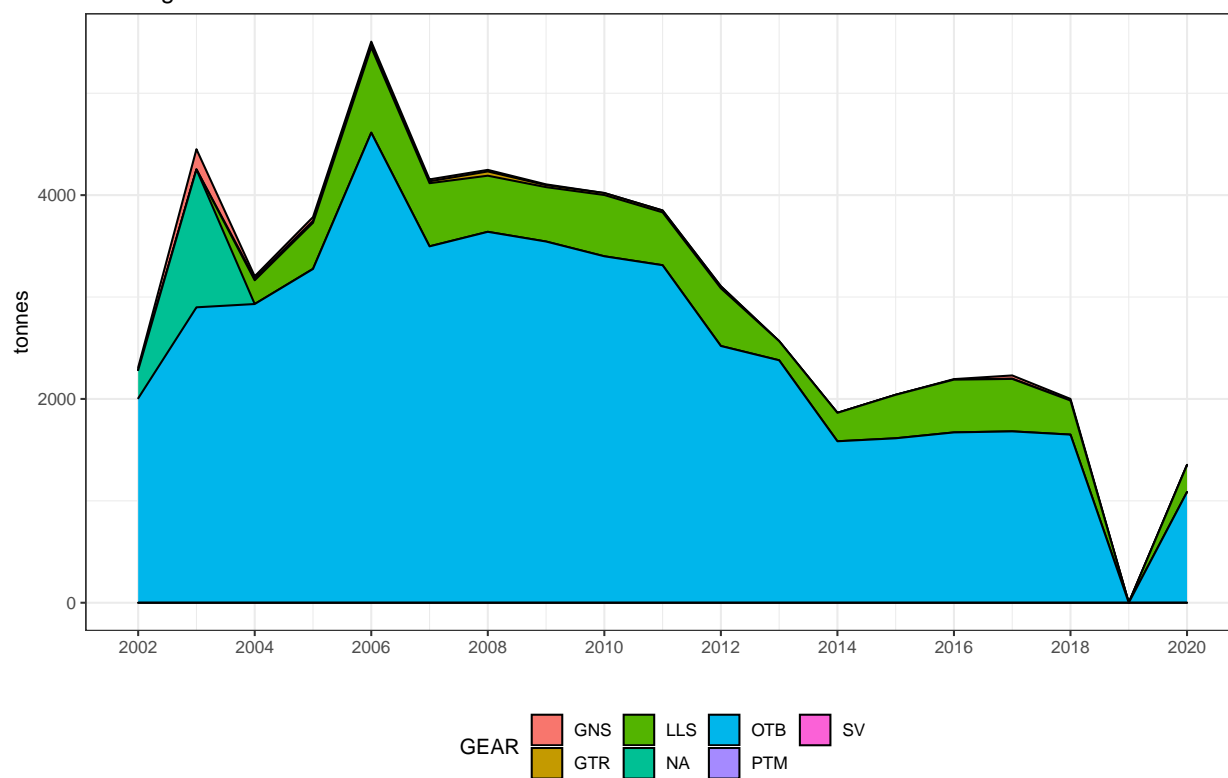
Coverage of landings data

GSA 18

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ITA	2017	GSA 18	HKE	2230.520
ITA	2018	GSA 18	HKE	2000.253
ITA	2019	GSA 18	HKE	0.000
ITA	2020	GSA 18	HKE	1353.534

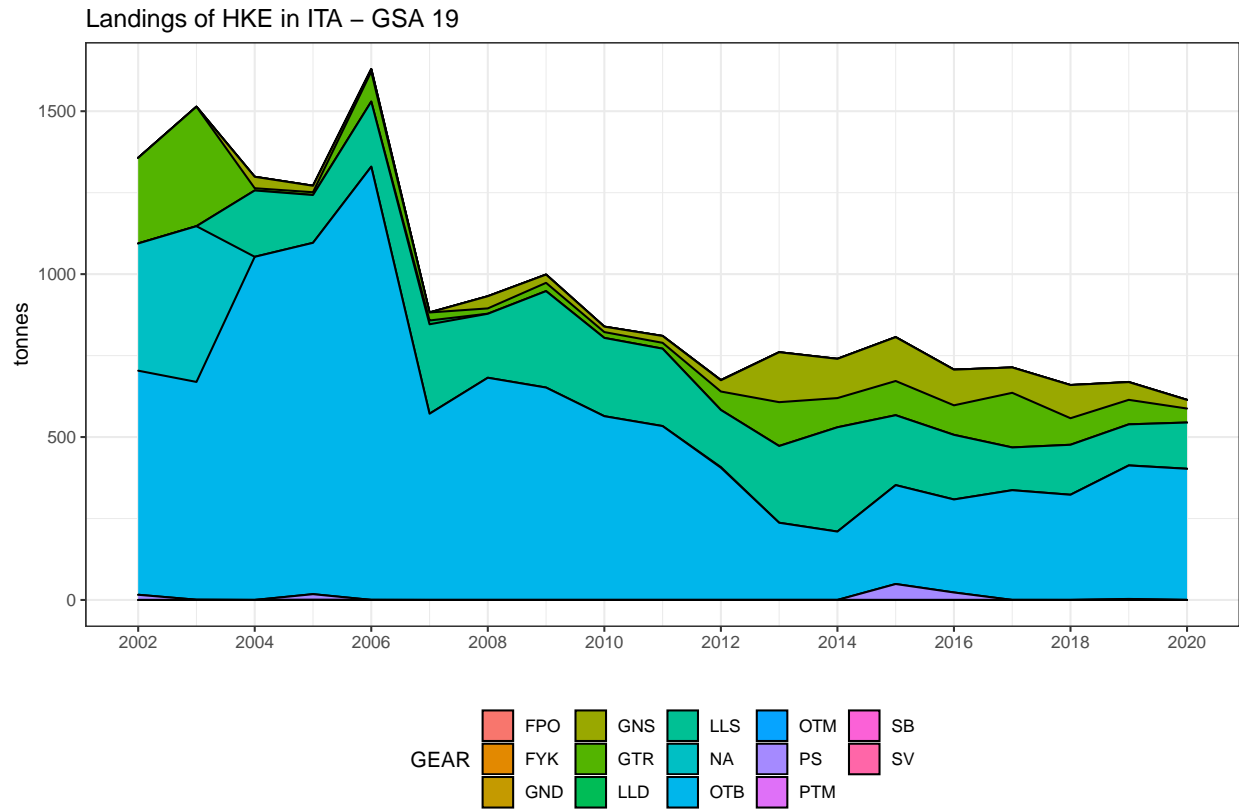
Landings of HKE in ITA – GSA 18



GSA 19

HKE Coverage of landing data for HKE in GSA 19

COUNTRY	YEAR	AREA	SPECIES	LANDINGS
ITA	2002	GSA 19	HKE	1356.8194
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ITA	2005	GSA 19	HKE	1271.1942
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ITA	2011	GSA 19	HKE	810.2298
ITA	2012	GSA 19	HKE	674.8485
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ITA	2014	GSA 19	HKE	739.9736
ITA	2015	GSA 19	HKE	806.5847
ITA	2016	GSA 19	HKE	706.8578
ITA	2017	GSA 19	HKE	713.5316
ITA	2018	GSA 19	HKE	659.6122
ITA	2019	GSA 19	HKE	669.1320
ITA	2020	GSA 19	HKE	614.1151



Checks on landing volumes

Comparison of landing volumes aggregated by quarter and fishery accounting for vessel length
GSA 18

HKE

- No landing volumes aggregated by quarter and fishery are reported with and without vessel codes at the same time for the selected combination: HKE - ITA - GSA 18

GSA 19

HKE

- No landing volumes aggregated by quarter and fishery are reported with and without vessel codes at the same time for the selected combination: HKE - ITA - GSA 19

Comparison of landing volumes aggregated by fishery accounting for time frame

GSA 18

HKE

- No landing volumes aggregated by fishery are reported for both the time frames (quarter/year) for the selected combination: HKE - ITA - GSA 18

GSA 19**HKE**

- No landing volumes aggregated by fishery are reported for both the time frames (quarter/year) for the selected combination: HKE - ITA - GSA 19

Growth parameters (GP) table

plots of the growth parameter

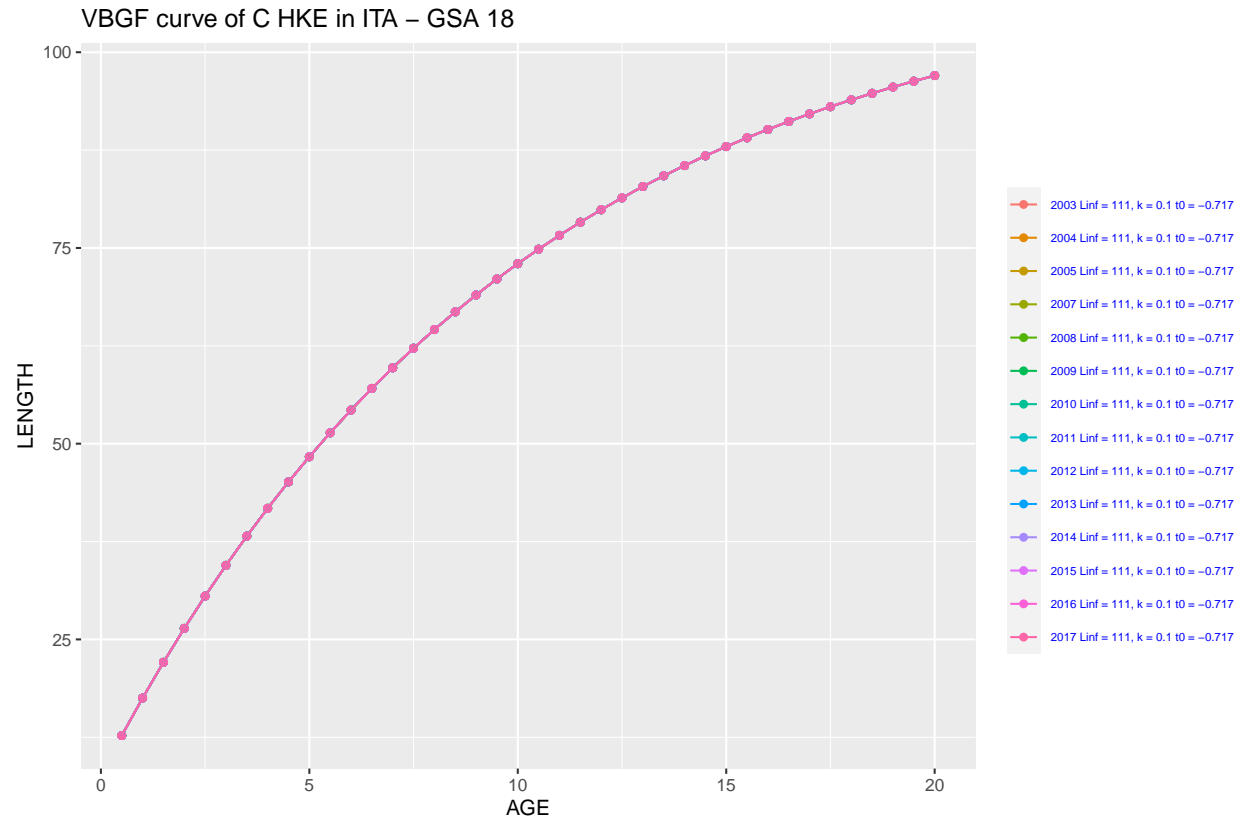
Date related to growth parameter are used to produce a summary table (counting available VBGF parameters by YEAR and SEX) and plots of growth curves for the selected combination of species and GSAs by sexes.

GSA 18

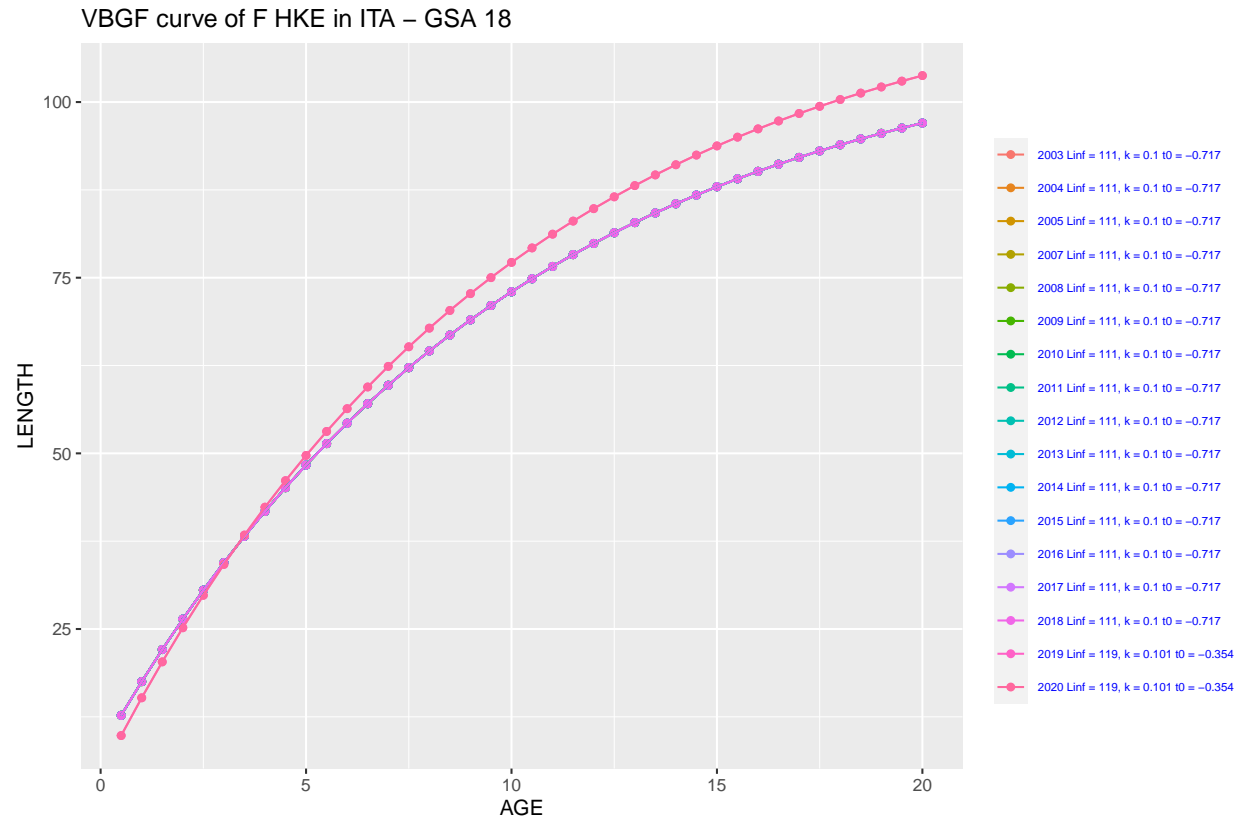
HKE *Summary table of VBGF parameters for HKE in GSA 18*

COUNTRY	YEAR	START_YEAR	END_YEAR	SPECIES	SEX	COUNT
ITA	GSA 18	2003	2003	HKE	C	1
ITA	GSA 18	2004	2004	HKE	C	1
ITA	GSA 18	2005	2005	HKE	C	1
ITA	GSA 18	2007	2007	HKE	C	1
ITA	GSA 18	2008	2008	HKE	C	1
ITA	GSA 18	2009	2009	HKE	C	1
ITA	GSA 18	2010	2010	HKE	C	1
ITA	GSA 18	2011	2011	HKE	C	1
ITA	GSA 18	2012	2012	HKE	C	1
ITA	GSA 18	2013	2013	HKE	C	1
ITA	GSA 18	2014	2014	HKE	C	1
ITA	GSA 18	2015	2015	HKE	C	1
ITA	GSA 18	2016	2016	HKE	C	1
ITA	GSA 18	2017	2017	HKE	C	1
ITA	GSA 18	2003	2003	HKE	F	1
ITA	GSA 18	2004	2004	HKE	F	1
ITA	GSA 18	2005	2005	HKE	F	1
ITA	GSA 18	2007	2007	HKE	F	1
ITA	GSA 18	2008	2008	HKE	F	1
ITA	GSA 18	2009	2009	HKE	F	1
ITA	GSA 18	2010	2010	HKE	F	1
ITA	GSA 18	2011	2011	HKE	F	1
ITA	GSA 18	2012	2012	HKE	F	1
ITA	GSA 18	2013	2013	HKE	F	1
ITA	GSA 18	2014	2014	HKE	F	1
ITA	GSA 18	2015	2015	HKE	F	1
ITA	GSA 18	2016	2016	HKE	F	1
ITA	GSA 18	2017	2017	HKE	F	1
ITA	GSA 18	2018	2018	HKE	F	1
ITA	GSA 18	2019	2019	HKE	F	1
ITA	GSA 18	2020	2020	HKE	F	1
ITA	GSA 18	2003	2003	HKE	M	1
ITA	GSA 18	2004	2004	HKE	M	1
ITA	GSA 18	2005	2005	HKE	M	1
ITA	GSA 18	2007	2007	HKE	M	1
ITA	GSA 18	2008	2008	HKE	M	1
ITA	GSA 18	2009	2009	HKE	M	1
ITA	GSA 18	2010	2010	HKE	M	1
ITA	GSA 18	2011	2011	HKE	M	1
ITA	GSA 18	2012	2012	HKE	M	1
ITA	GSA 18	2013	2013	HKE	M	1
ITA	GSA 18	2014	2014	HKE	M	1
ITA	GSA 18	2015	2015	HKE	M	1
ITA	GSA 18	2016	2016	HKE	M	1
ITA	GSA 18	2017	2017	HKE	M	1
ITA	GSA 18	2018	2018	HKE	M	1
ITA	GSA 18	2019	2019	HKE	M	1
ITA	GSA 18	2020	2020	HKE	M	1

Plot of the VBGF parameter for HKE - ITA - GSA 18 - C

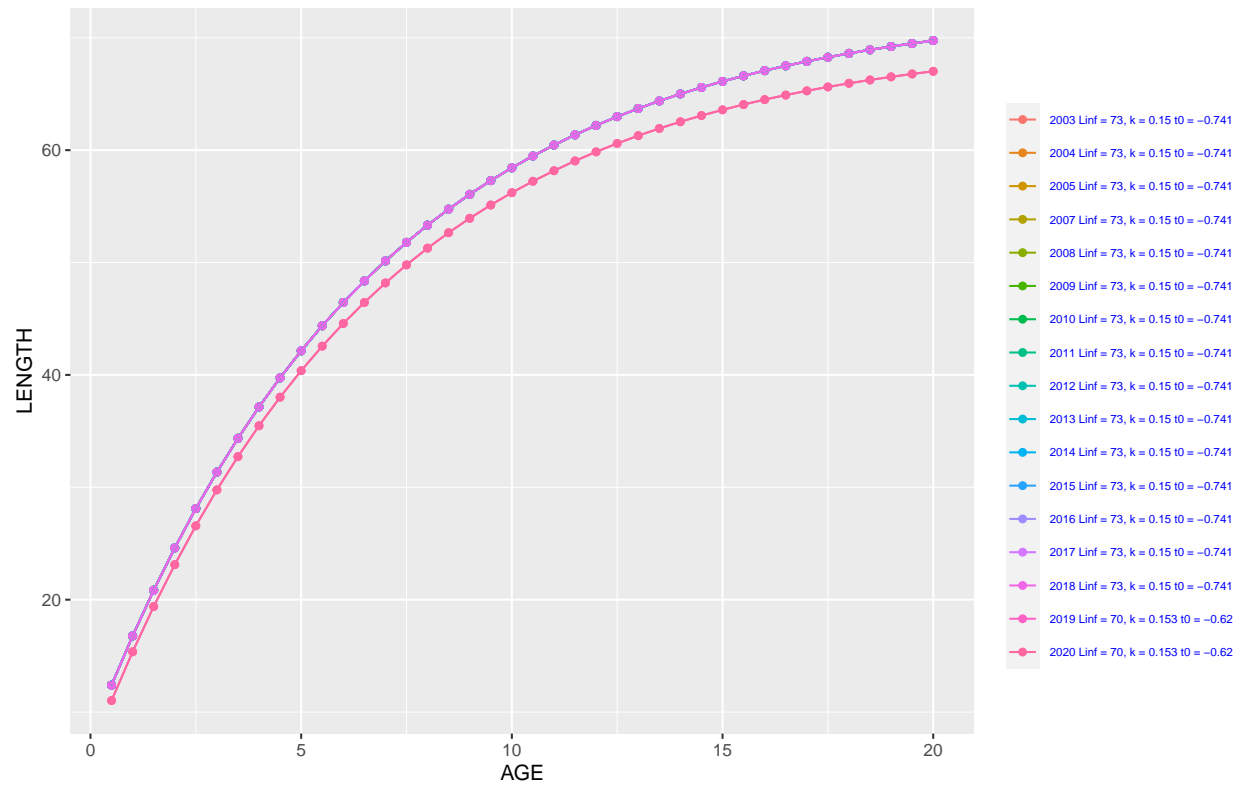


Plot of the VBGF parameter for HKE - ITA - GSA 18 - F



Plot of the VBGF parameter for HKE - ITA - GSA 18 - M

VBGF curve of M HKE in ITA – GSA 18

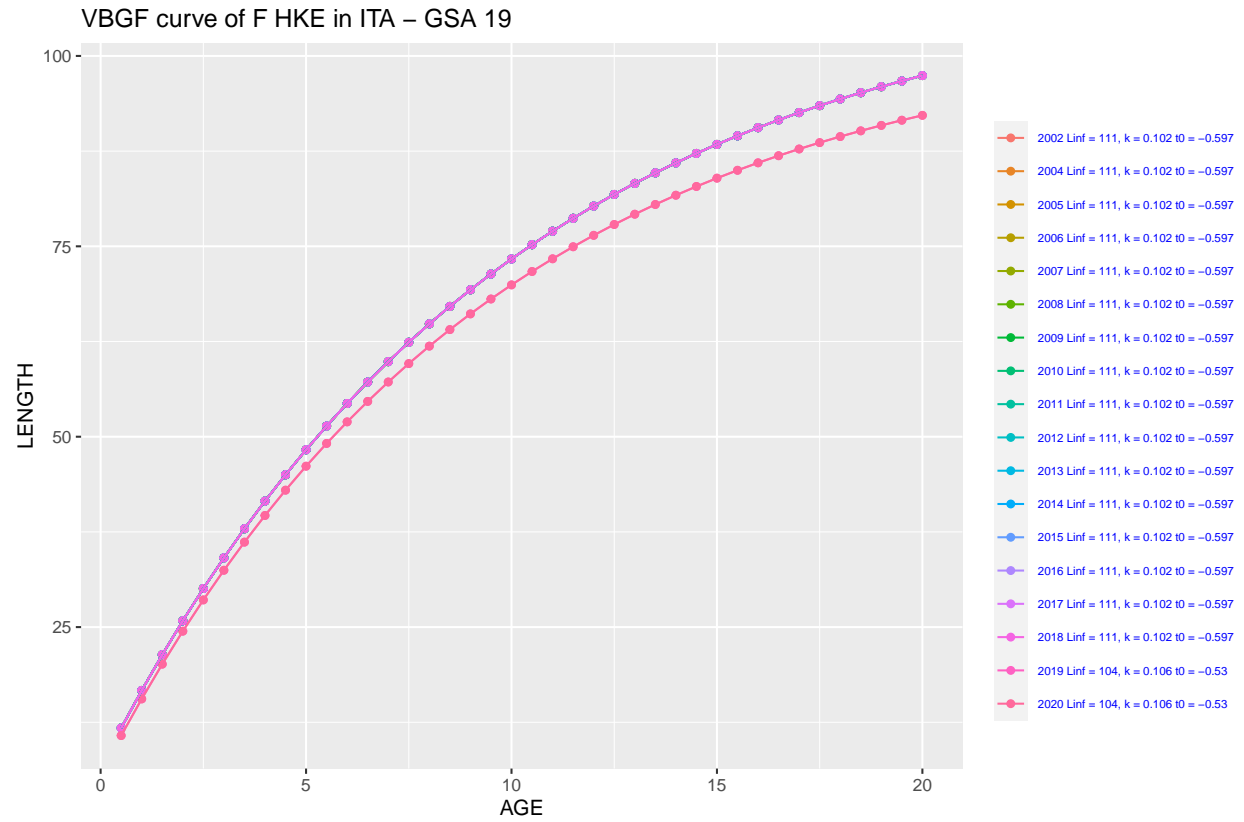


GSA 19

HKE *Summary table of VBGF parameters for HKE in GSA 19*

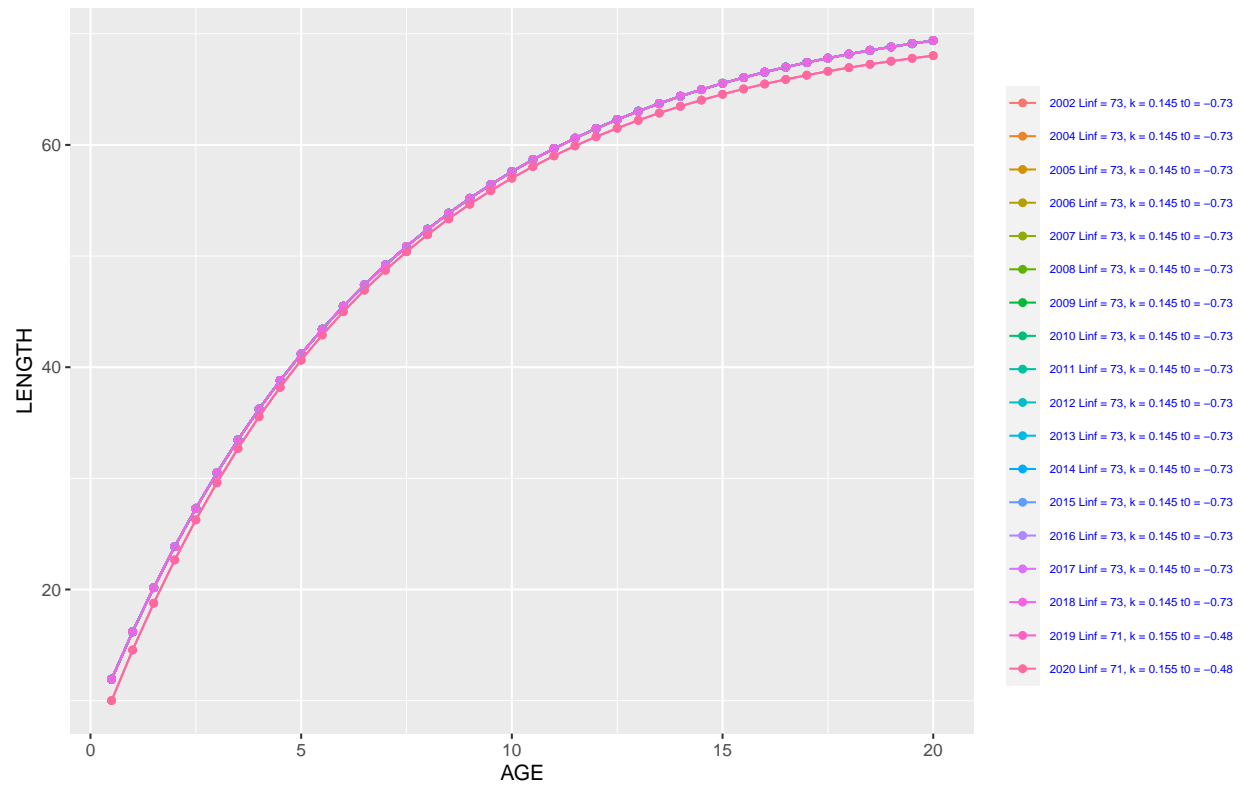
COUNTRY	YEAR	START_YEAR	END_YEAR	SPECIES	SEX	COUNT
ITA	GSA 19	2002	2003	HKE	F	1
ITA	GSA 19	2004	2004	HKE	F	1
ITA	GSA 19	2005	2005	HKE	F	1
ITA	GSA 19	2006	2006	HKE	F	1
ITA	GSA 19	2007	2007	HKE	F	1
ITA	GSA 19	2008	2008	HKE	F	1
ITA	GSA 19	2009	2009	HKE	F	1
ITA	GSA 19	2010	2010	HKE	F	1
ITA	GSA 19	2011	2011	HKE	F	1
ITA	GSA 19	2012	2012	HKE	F	1
ITA	GSA 19	2013	2013	HKE	F	1
ITA	GSA 19	2014	2014	HKE	F	1
ITA	GSA 19	2015	2015	HKE	F	1
ITA	GSA 19	2016	2016	HKE	F	1
ITA	GSA 19	2017	2017	HKE	F	1
ITA	GSA 19	2018	2018	HKE	F	1
ITA	GSA 19	2019	2019	HKE	F	1
ITA	GSA 19	2020	2020	HKE	F	1
ITA	GSA 19	2002	2003	HKE	M	1
ITA	GSA 19	2004	2004	HKE	M	1
ITA	GSA 19	2005	2005	HKE	M	1
ITA	GSA 19	2006	2006	HKE	M	1
ITA	GSA 19	2007	2007	HKE	M	1
ITA	GSA 19	2008	2008	HKE	M	1
ITA	GSA 19	2009	2009	HKE	M	1
ITA	GSA 19	2010	2010	HKE	M	1
ITA	GSA 19	2011	2011	HKE	M	1
ITA	GSA 19	2012	2012	HKE	M	1
ITA	GSA 19	2013	2013	HKE	M	1
ITA	GSA 19	2014	2014	HKE	M	1
ITA	GSA 19	2015	2015	HKE	M	1
ITA	GSA 19	2016	2016	HKE	M	1
ITA	GSA 19	2017	2017	HKE	M	1
ITA	GSA 19	2018	2018	HKE	M	1
ITA	GSA 19	2019	2019	HKE	M	1
ITA	GSA 19	2020	2020	HKE	M	1

Plot of the VBGF parameter for HKE - ITA - GSA 19 - F



Plot of the VBGF parameter for HKE - ITA - GSA 19 - M

VBGF curve of M HKE in ITA – GSA 19



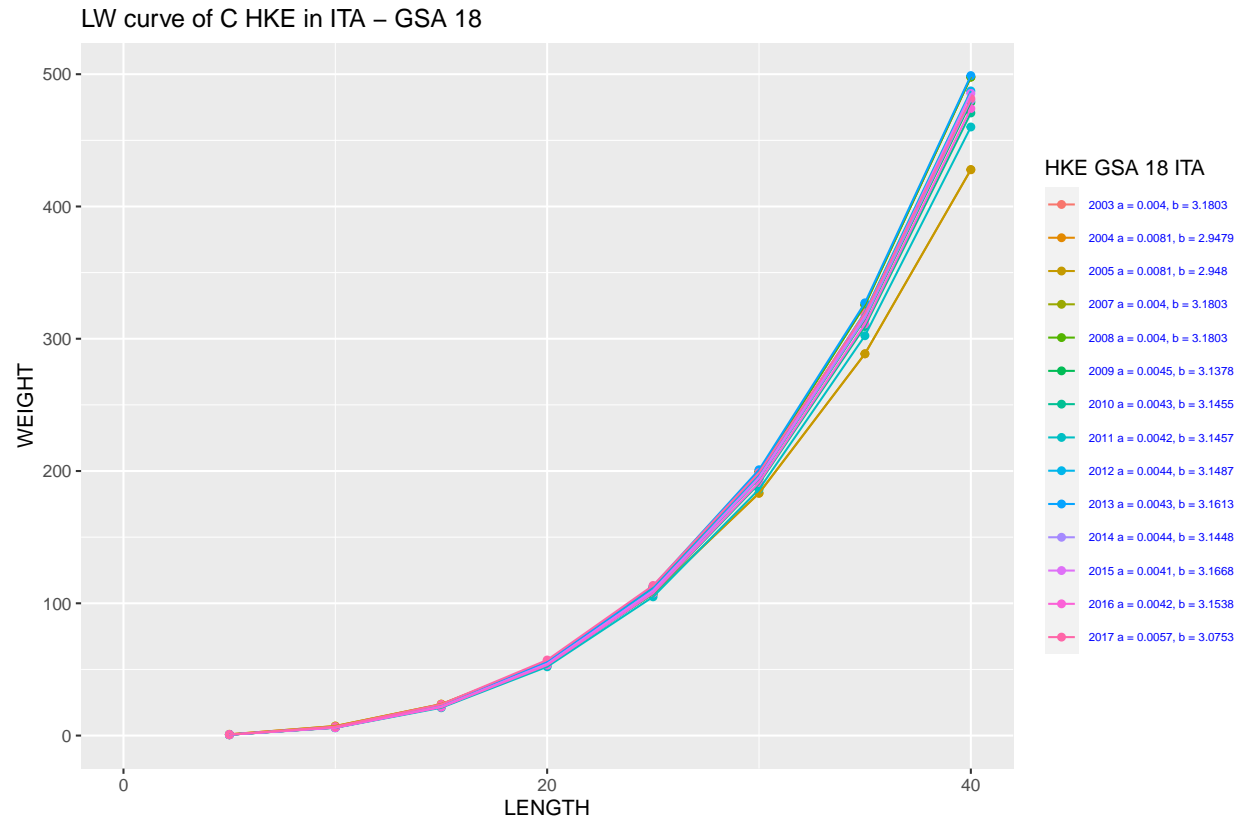
Plots of length-weight (LW) functions

GSA 18

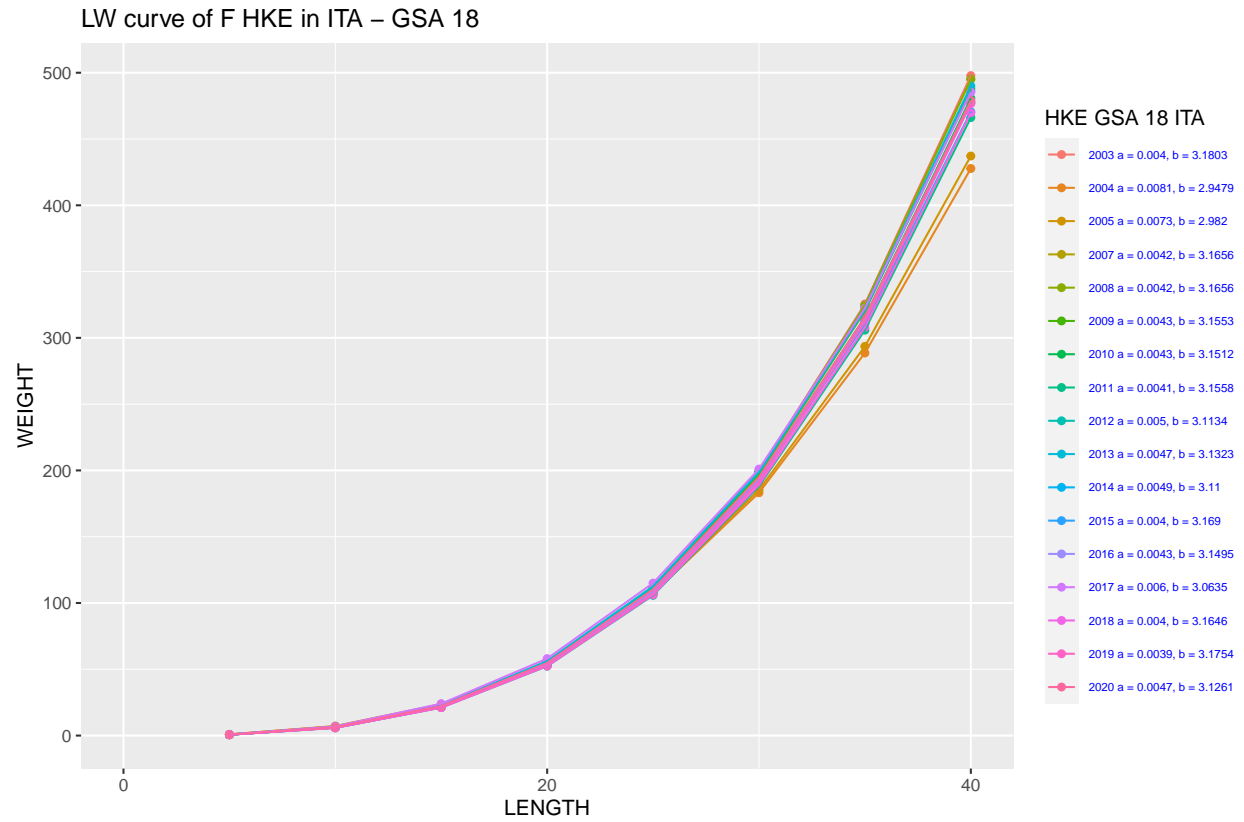
HKE *Summary table of length-weight parameters for HKE in GSA 18*

COUNTRY	AREA	START_YEAR	END_YEAR	SPECIES	SEX	NA
ITA	GSA 18	2003	2003	HKE	C	1
ITA	GSA 18	2004	2004	HKE	C	1
ITA	GSA 18	2005	2005	HKE	C	1
ITA	GSA 18	2007	2007	HKE	C	1
ITA	GSA 18	2008	2008	HKE	C	1
ITA	GSA 18	2009	2009	HKE	C	1
ITA	GSA 18	2010	2010	HKE	C	1
ITA	GSA 18	2011	2011	HKE	C	1
ITA	GSA 18	2012	2012	HKE	C	1
ITA	GSA 18	2013	2013	HKE	C	1
ITA	GSA 18	2014	2014	HKE	C	1
ITA	GSA 18	2015	2015	HKE	C	1
ITA	GSA 18	2016	2016	HKE	C	1
ITA	GSA 18	2017	2017	HKE	C	1
ITA	GSA 18	2003	2003	HKE	F	1
ITA	GSA 18	2004	2004	HKE	F	1
ITA	GSA 18	2005	2005	HKE	F	1
ITA	GSA 18	2007	2007	HKE	F	1
ITA	GSA 18	2008	2008	HKE	F	1
ITA	GSA 18	2009	2009	HKE	F	1
ITA	GSA 18	2010	2010	HKE	F	1
ITA	GSA 18	2011	2011	HKE	F	1
ITA	GSA 18	2012	2012	HKE	F	1
ITA	GSA 18	2013	2013	HKE	F	1
ITA	GSA 18	2014	2014	HKE	F	1
ITA	GSA 18	2015	2015	HKE	F	1
ITA	GSA 18	2016	2016	HKE	F	1
ITA	GSA 18	2017	2017	HKE	F	1
ITA	GSA 18	2018	2018	HKE	F	1
ITA	GSA 18	2019	2019	HKE	F	1
ITA	GSA 18	2020	2020	HKE	F	1
ITA	GSA 18	2003	2003	HKE	M	1
ITA	GSA 18	2004	2004	HKE	M	1
ITA	GSA 18	2005	2005	HKE	M	1
ITA	GSA 18	2007	2007	HKE	M	1
ITA	GSA 18	2008	2008	HKE	M	1
ITA	GSA 18	2009	2009	HKE	M	1
ITA	GSA 18	2010	2010	HKE	M	1
ITA	GSA 18	2011	2011	HKE	M	1
ITA	GSA 18	2012	2012	HKE	M	1
ITA	GSA 18	2013	2013	HKE	M	1
ITA	GSA 18	2014	2014	HKE	M	1
ITA	GSA 18	2015	2015	HKE	M	1
ITA	GSA 18	2016	2016	HKE	M	1
ITA	GSA 18	2017	2017	HKE	M	1
ITA	GSA 18	2018	2018	HKE	M	1
ITA	GSA 18	2019	2019	HKE	M	1
ITA	GSA 18	2020	2020	HKE	M	1

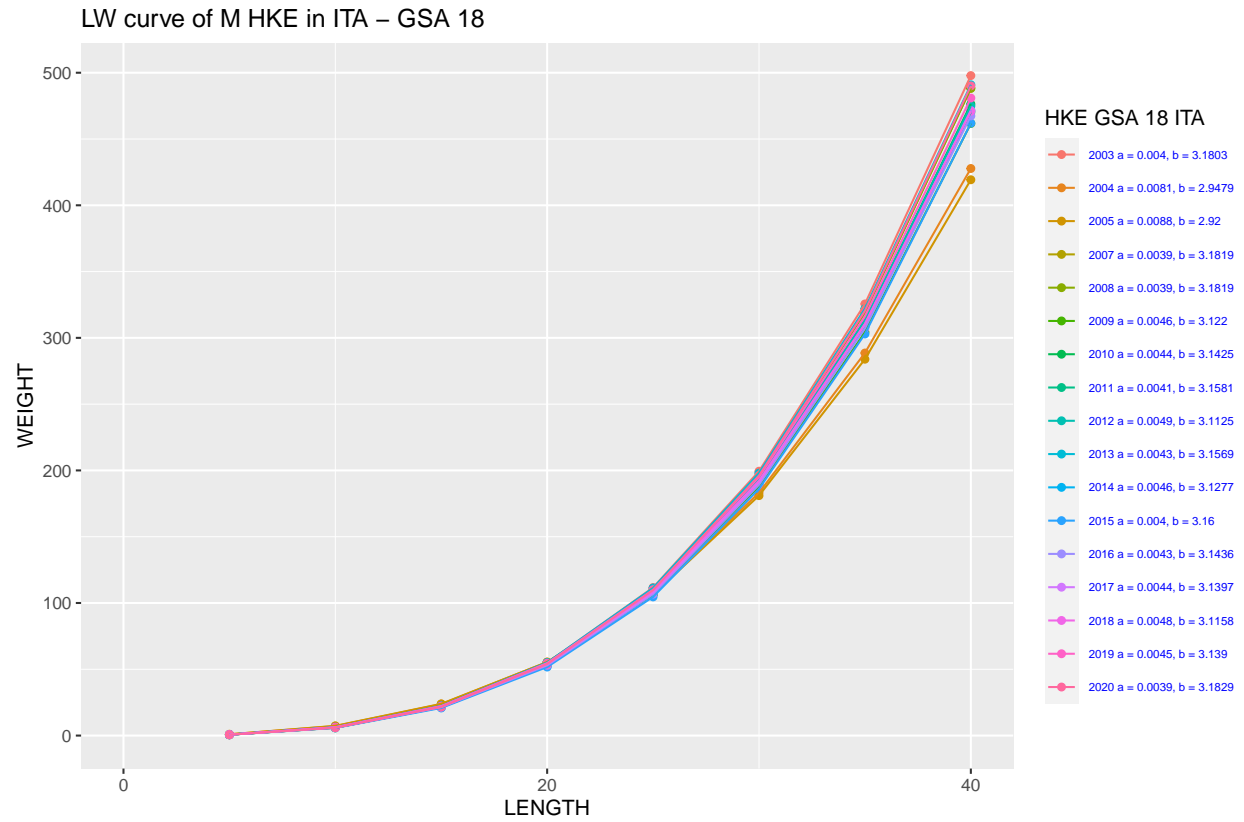
Plot of the length-weight parameters for HKE - ITA - GSA 18 - C



Plot of the length-weight parameters for HKE - ITA - GSA 18 - F



Plot of the length-weight parameters for HKE - ITA - GSA 18 - M

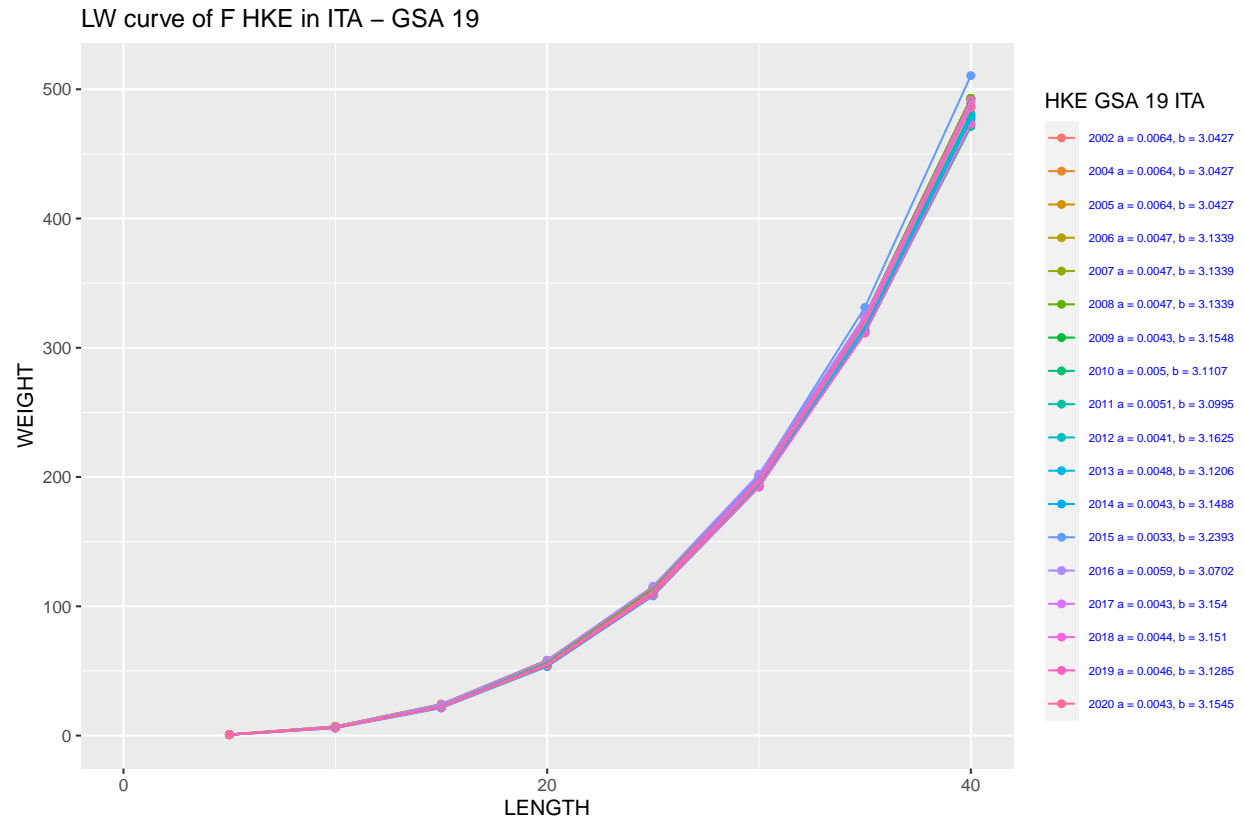


GSA 19

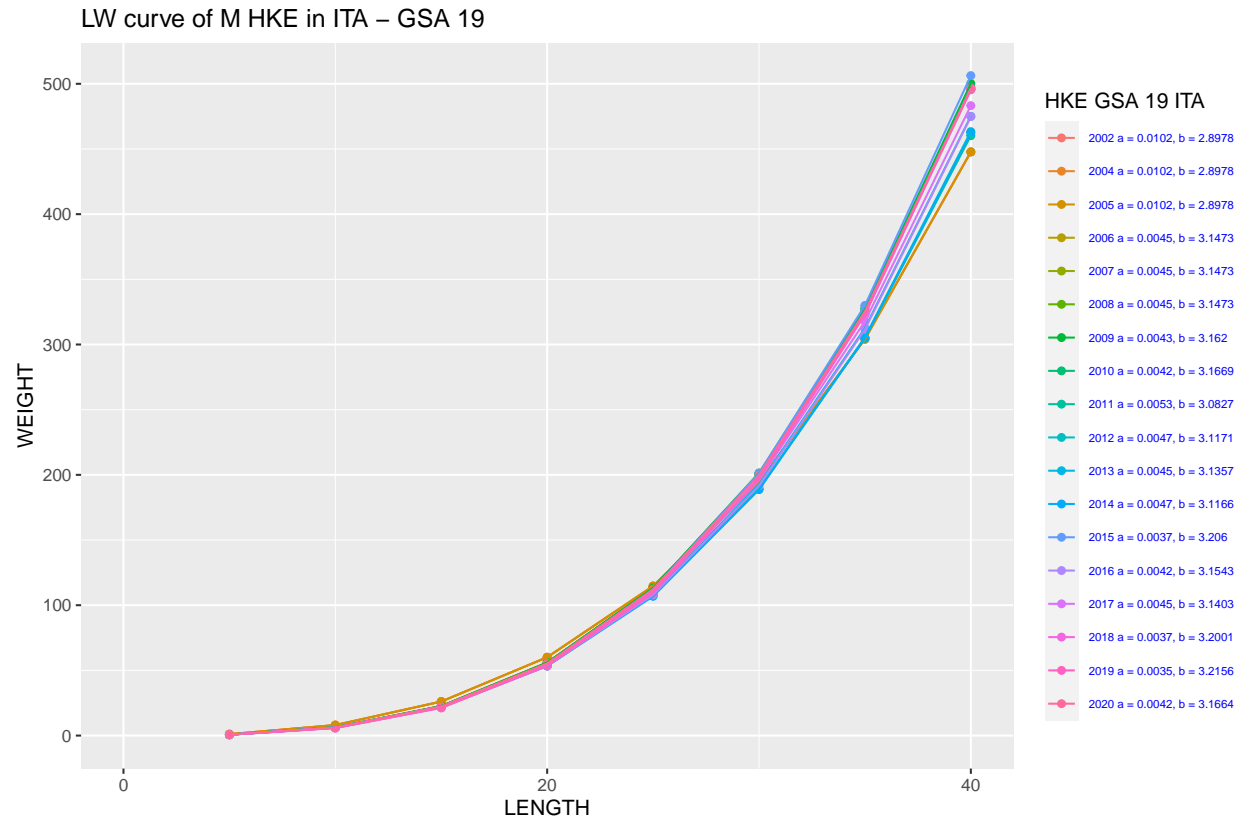
HKE *Summary table of length-weight parameters for HKE in GSA 19*

COUNTRY	AREA	START_YEAR	END_YEAR	SPECIES	SEX	NA
ITA	GSA 19	2002	2003	HKE	F	1
ITA	GSA 19	2004	2004	HKE	F	1
ITA	GSA 19	2005	2005	HKE	F	1
ITA	GSA 19	2006	2006	HKE	F	1
ITA	GSA 19	2007	2007	HKE	F	1
ITA	GSA 19	2008	2008	HKE	F	1
ITA	GSA 19	2009	2009	HKE	F	1
ITA	GSA 19	2010	2010	HKE	F	1
ITA	GSA 19	2011	2011	HKE	F	1
ITA	GSA 19	2012	2012	HKE	F	1
ITA	GSA 19	2013	2013	HKE	F	1
ITA	GSA 19	2014	2014	HKE	F	1
ITA	GSA 19	2015	2015	HKE	F	1
ITA	GSA 19	2016	2016	HKE	F	1
ITA	GSA 19	2017	2017	HKE	F	1
ITA	GSA 19	2018	2018	HKE	F	1
ITA	GSA 19	2019	2019	HKE	F	1
ITA	GSA 19	2020	2020	HKE	F	1
ITA	GSA 19	2002	2003	HKE	M	1
ITA	GSA 19	2004	2004	HKE	M	1
ITA	GSA 19	2005	2005	HKE	M	1
ITA	GSA 19	2006	2006	HKE	M	1
ITA	GSA 19	2007	2007	HKE	M	1
ITA	GSA 19	2008	2008	HKE	M	1
ITA	GSA 19	2009	2009	HKE	M	1
ITA	GSA 19	2010	2010	HKE	M	1
ITA	GSA 19	2011	2011	HKE	M	1
ITA	GSA 19	2012	2012	HKE	M	1
ITA	GSA 19	2013	2013	HKE	M	1
ITA	GSA 19	2014	2014	HKE	M	1
ITA	GSA 19	2015	2015	HKE	M	1
ITA	GSA 19	2016	2016	HKE	M	1
ITA	GSA 19	2017	2017	HKE	M	1
ITA	GSA 19	2018	2018	HKE	M	1
ITA	GSA 19	2019	2019	HKE	M	1
ITA	GSA 19	2020	2020	HKE	M	1

Plot of the length-weight parameters for HKE - ITA - GSA 19 - F



Plot of the length-weight parameters for HKE - ITA - GSA 19 - M



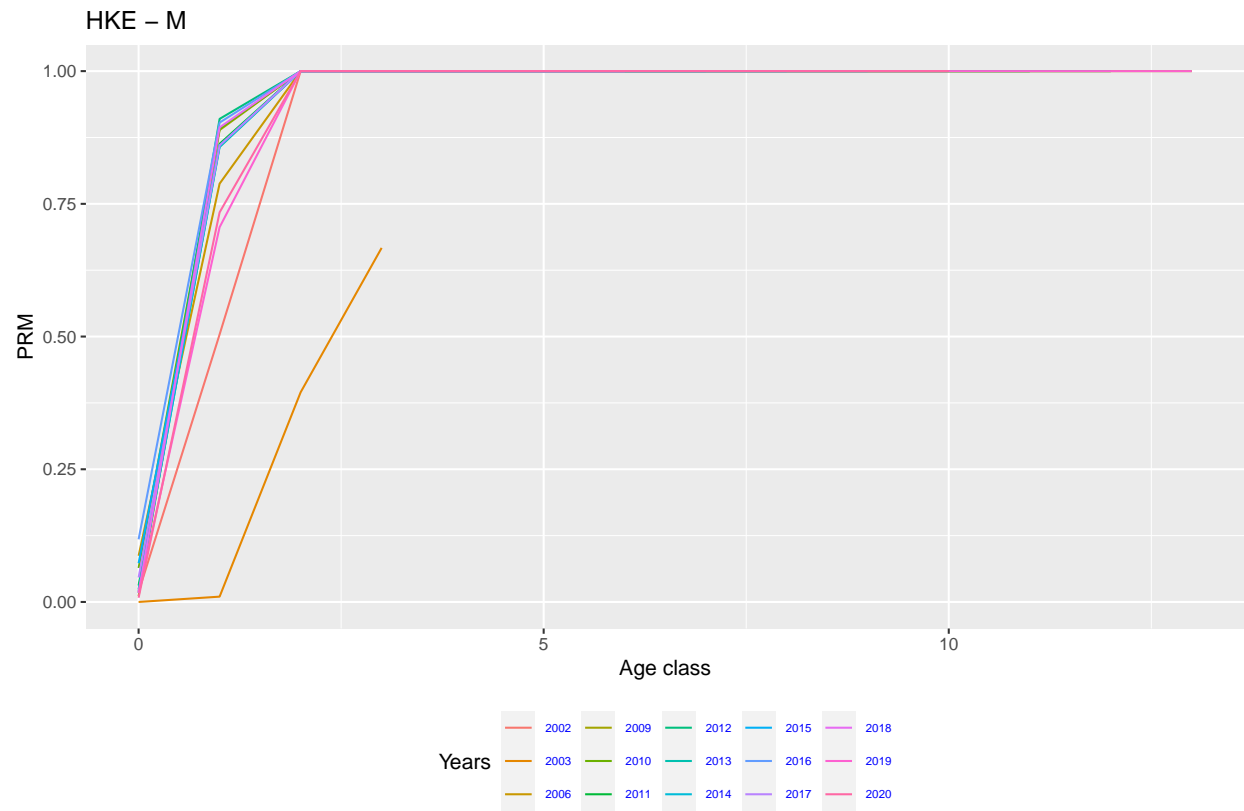
Plots of Maturity at Age (MA) data

GSA 18

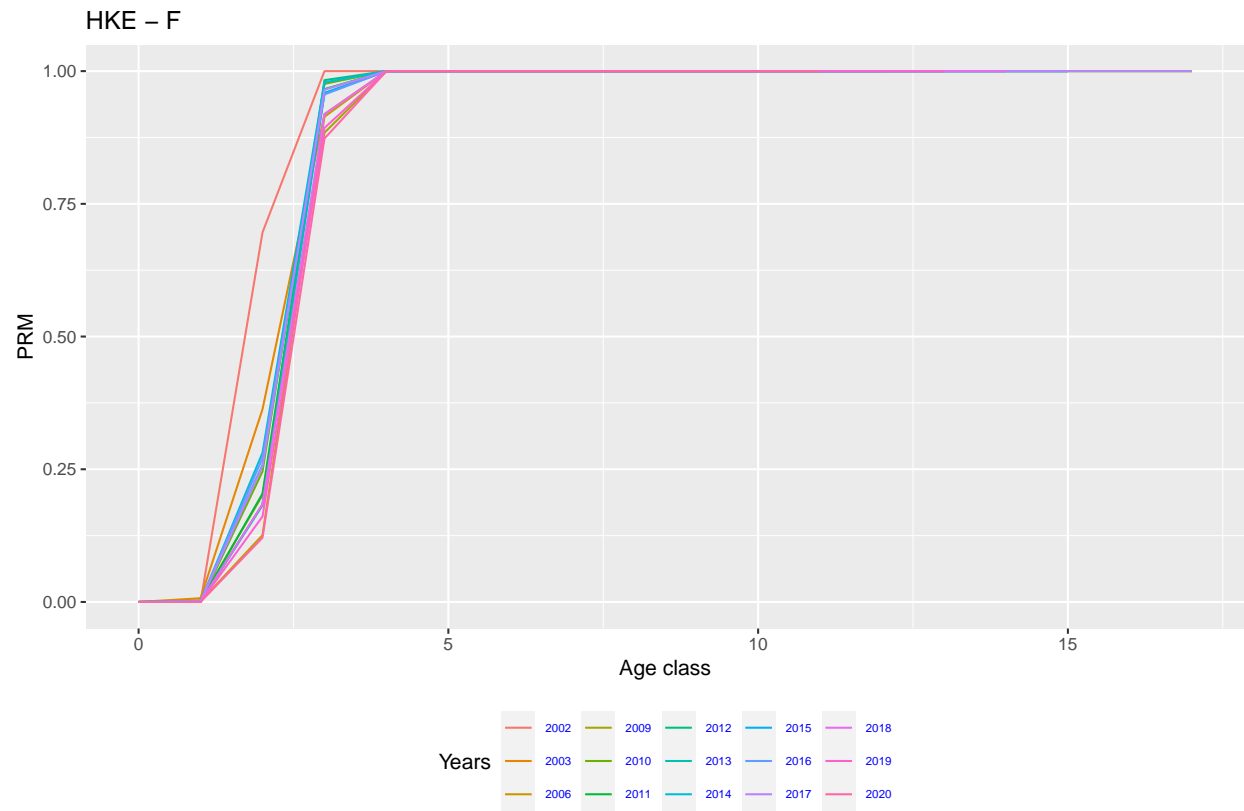
HKE *Summary table of percentage of matures at age for HKE in GSA 18*

COUNTRY	YEAR	START_YEAR	END_YEAR	SPECIES	SEX	COUNT
ITA	GSA 18	2002	2002	HKE	F	9
ITA	GSA 18	2003	2005	HKE	F	6
ITA	GSA 18	2006	2008	HKE	F	14
ITA	GSA 18	2009	2009	HKE	F	15
ITA	GSA 18	2010	2010	HKE	F	16
ITA	GSA 18	2011	2011	HKE	F	15
ITA	GSA 18	2012	2012	HKE	F	14
ITA	GSA 18	2013	2013	HKE	F	13
ITA	GSA 18	2014	2014	HKE	F	15
ITA	GSA 18	2015	2015	HKE	F	13
ITA	GSA 18	2016	2016	HKE	F	15
ITA	GSA 18	2017	2017	HKE	F	18
ITA	GSA 18	2018	2018	HKE	F	15
ITA	GSA 18	2019	2019	HKE	F	13
ITA	GSA 18	2020	2020	HKE	F	12
ITA	GSA 18	2002	2002	HKE	M	5
ITA	GSA 18	2003	2005	HKE	M	4
ITA	GSA 18	2006	2008	HKE	M	12
ITA	GSA 18	2009	2009	HKE	M	12
ITA	GSA 18	2010	2010	HKE	M	11
ITA	GSA 18	2011	2011	HKE	M	12
ITA	GSA 18	2012	2012	HKE	M	10
ITA	GSA 18	2013	2013	HKE	M	7
ITA	GSA 18	2014	2014	HKE	M	9
ITA	GSA 18	2015	2015	HKE	M	10
ITA	GSA 18	2016	2016	HKE	M	10
ITA	GSA 18	2017	2017	HKE	M	7
ITA	GSA 18	2018	2018	HKE	M	7
ITA	GSA 18	2019	2019	HKE	M	9
ITA	GSA 18	2020	2020	HKE	M	8

Plot of the percercentage of matures at age for HKE - ITA - GSA 18 - M



Plot of the percentage of matures at age for HKE - ITA - GSA 18 - F

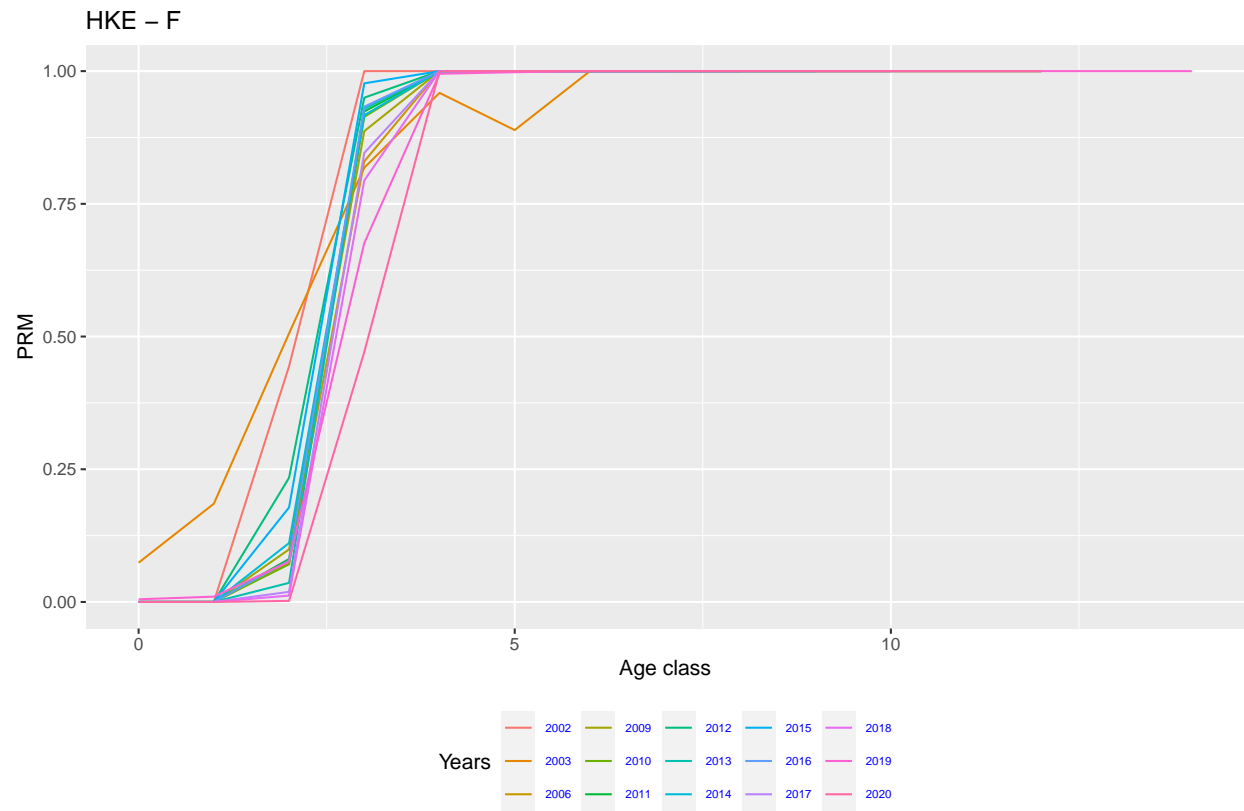


GSA 19

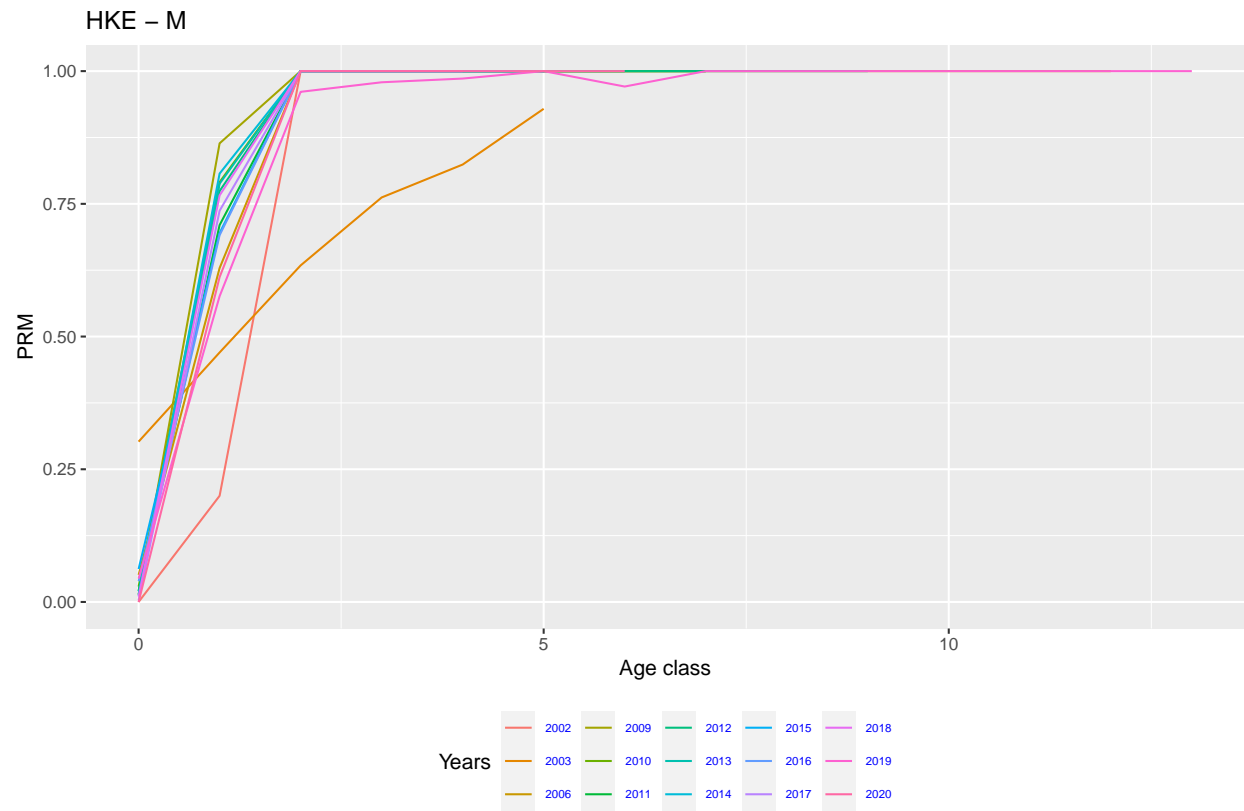
HKE *Summary table of percentage of matures at age for HKE in GSA 19*

COUNTRY	YEAR	START_YEAR	END_YEAR	SPECIES	SEX	COUNT
ITA	GSA 19	2002	2002	HKE	F	9
ITA	GSA 19	2003	2005	HKE	F	7
ITA	GSA 19	2006	2008	HKE	F	12
ITA	GSA 19	2009	2009	HKE	F	10
ITA	GSA 19	2010	2010	HKE	F	11
ITA	GSA 19	2011	2011	HKE	F	10
ITA	GSA 19	2012	2012	HKE	F	8
ITA	GSA 19	2013	2013	HKE	F	9
ITA	GSA 19	2014	2014	HKE	F	13
ITA	GSA 19	2015	2015	HKE	F	10
ITA	GSA 19	2016	2016	HKE	F	10
ITA	GSA 19	2017	2017	HKE	F	9
ITA	GSA 19	2018	2018	HKE	F	8
ITA	GSA 19	2019	2019	HKE	F	15
ITA	GSA 19	2020	2020	HKE	F	9
ITA	GSA 19	2002	2002	HKE	M	8
ITA	GSA 19	2003	2005	HKE	M	6
ITA	GSA 19	2006	2008	HKE	M	10
ITA	GSA 19	2009	2009	HKE	M	7
ITA	GSA 19	2010	2010	HKE	M	8
ITA	GSA 19	2011	2011	HKE	M	8
ITA	GSA 19	2012	2012	HKE	M	9
ITA	GSA 19	2013	2013	HKE	M	7
ITA	GSA 19	2014	2014	HKE	M	6
ITA	GSA 19	2015	2015	HKE	M	6
ITA	GSA 19	2016	2016	HKE	M	6
ITA	GSA 19	2017	2017	HKE	M	5
ITA	GSA 19	2018	2018	HKE	M	5
ITA	GSA 19	2019	2019	HKE	M	11
ITA	GSA 19	2020	2020	HKE	M	7

Plot of the percentage of matures at age for HKE - ITA - GSA 19 - F

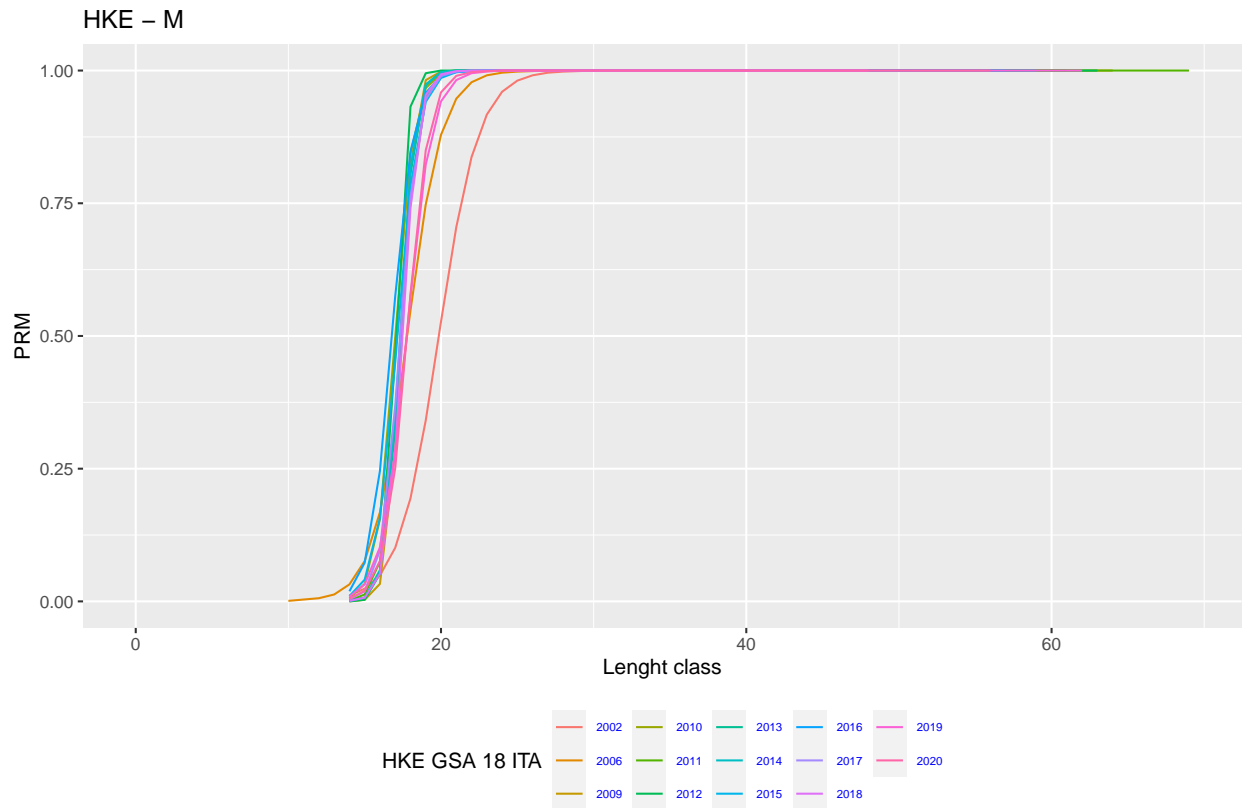


Plot of the percentage of matures at age for HKE - ITA - GSA 19 - M

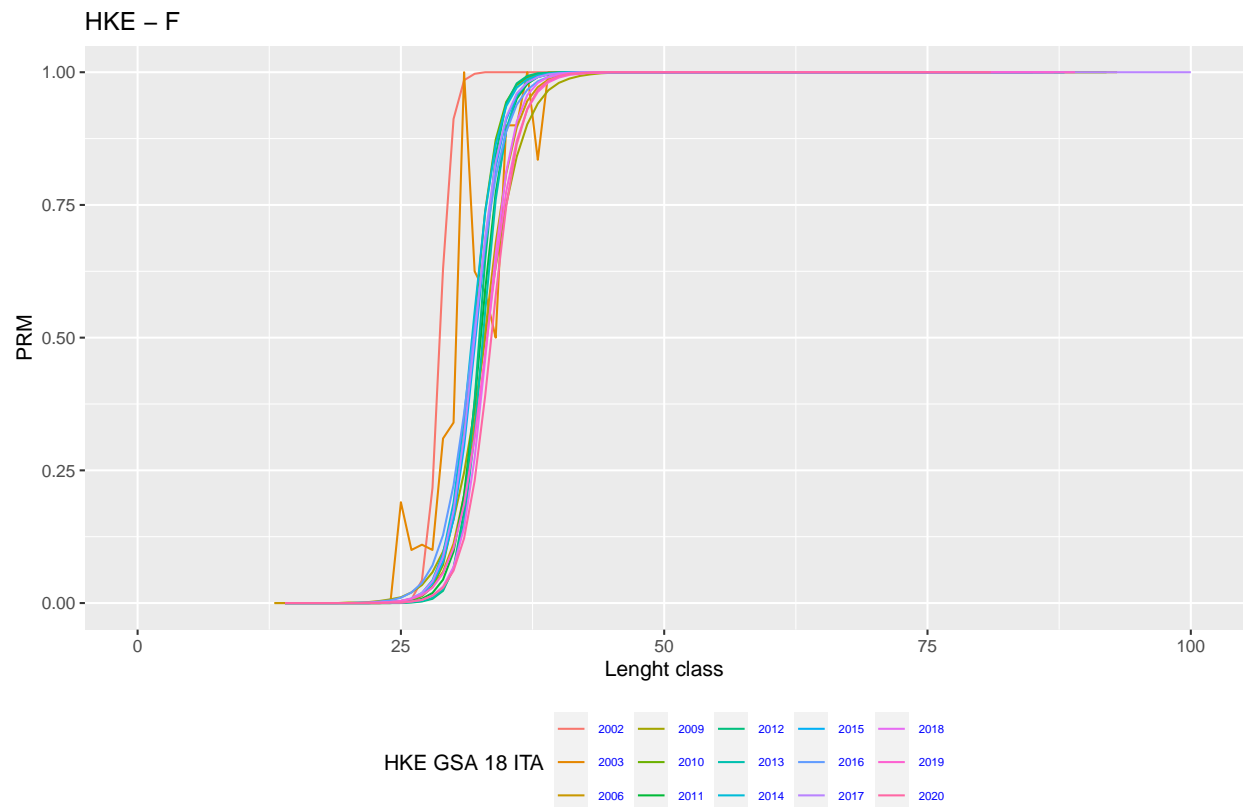


Plots of Maturity at Length (ML) data

GSA 18



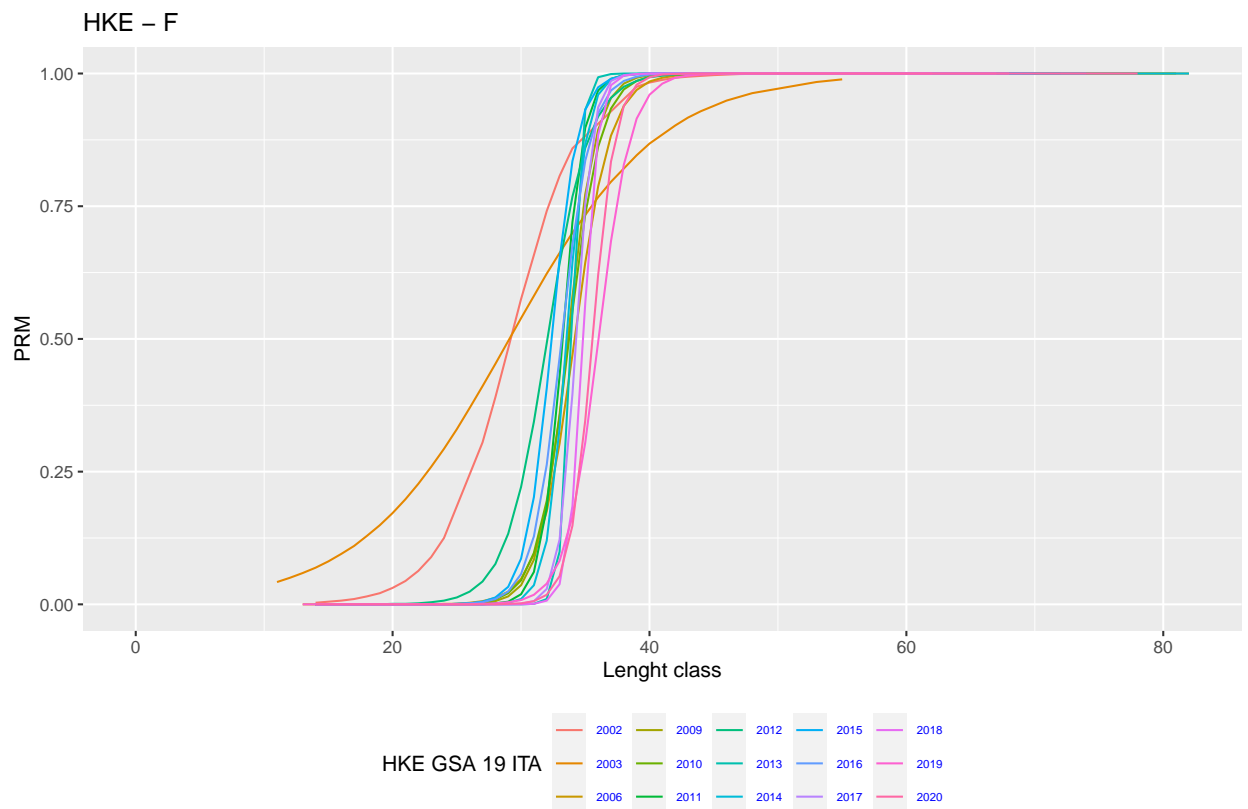
HKE



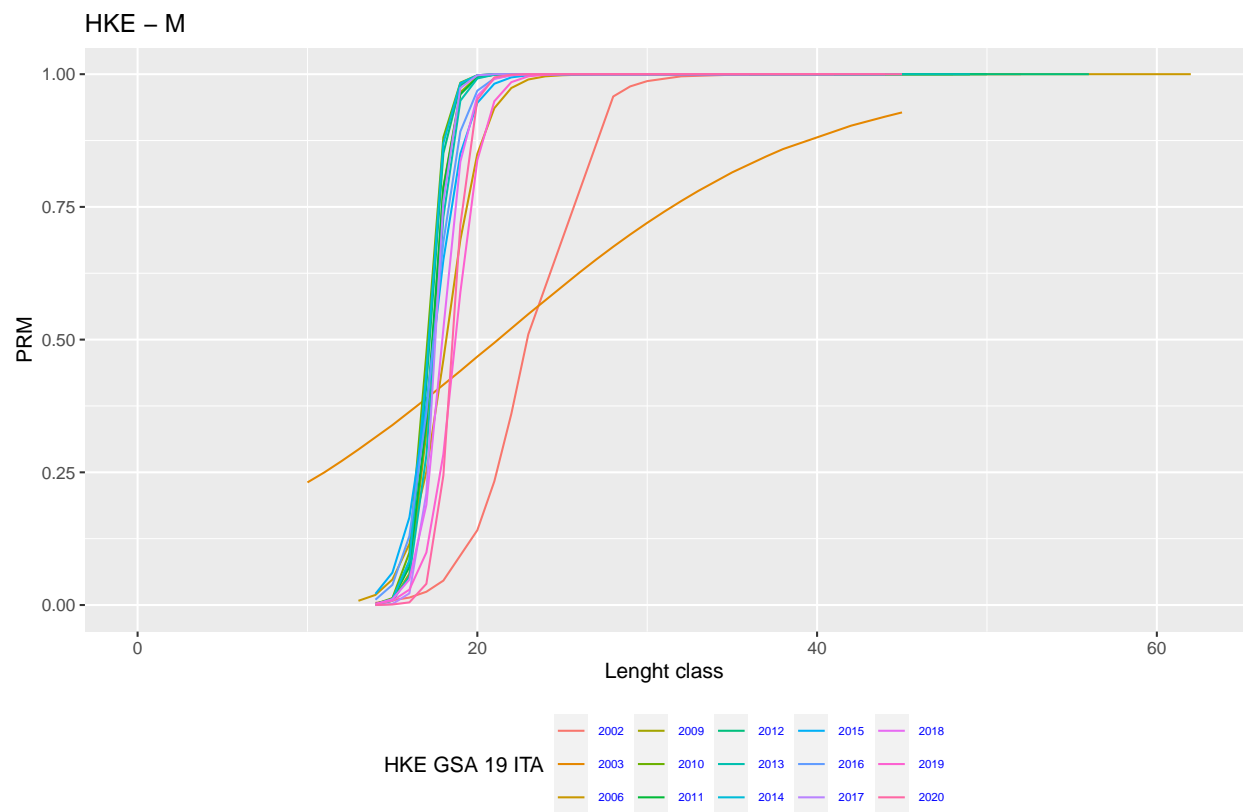
Summary table of percentage of matures at length for HKE in GSA 18

COUNTRY	YEAR	START_YEAR	END_YEAR	SPECIES	SEX	COUNT
ITA	GSA 18	2002	2002	HKE	F	45
ITA	GSA 18	2003	2005	HKE	F	34
ITA	GSA 18	2006	2008	HKE	F	68
ITA	GSA 18	2009	2009	HKE	F	68
ITA	GSA 18	2010	2010	HKE	F	71
ITA	GSA 18	2011	2011	HKE	F	70
ITA	GSA 18	2012	2012	HKE	F	69
ITA	GSA 18	2013	2013	HKE	F	66
ITA	GSA 18	2014	2014	HKE	F	70
ITA	GSA 18	2015	2015	HKE	F	66
ITA	GSA 18	2016	2016	HKE	F	66
ITA	GSA 18	2017	2017	HKE	F	69
ITA	GSA 18	2018	2018	HKE	F	71
ITA	GSA 18	2019	2019	HKE	F	65
ITA	GSA 18	2020	2020	HKE	F	68
ITA	GSA 18	2002	2002	HKE	M	25
ITA	GSA 18	2006	2008	HKE	M	48
ITA	GSA 18	2009	2009	HKE	M	41
ITA	GSA 18	2010	2010	HKE	M	40
ITA	GSA 18	2011	2011	HKE	M	45
ITA	GSA 18	2012	2012	HKE	M	36
ITA	GSA 18	2013	2013	HKE	M	31
ITA	GSA 18	2014	2014	HKE	M	35
ITA	GSA 18	2015	2015	HKE	M	36
ITA	GSA 18	2016	2016	HKE	M	32
ITA	GSA 18	2017	2017	HKE	M	33
ITA	GSA 18	2018	2018	HKE	M	33
ITA	GSA 18	2019	2019	HKE	M	31
ITA	GSA 18	2020	2020	HKE	M	33

GSA 19



HKE



Summary table of percentage of matures at length for HKE in GSA 19

COUNTRY	YEAR	START_YEAR	END_YEAR	SPECIES	SEX	COUNT
ITA	GSA 19	2002	2002	HKE	F	34
ITA	GSA 19	2003	2005	HKE	F	36
ITA	GSA 19	2006	2008	HKE	F	65
ITA	GSA 19	2009	2009	HKE	F	53
ITA	GSA 19	2010	2010	HKE	F	53
ITA	GSA 19	2011	2011	HKE	F	55
ITA	GSA 19	2012	2012	HKE	F	47
ITA	GSA 19	2013	2013	HKE	F	49
ITA	GSA 19	2014	2014	HKE	F	55
ITA	GSA 19	2015	2015	HKE	F	50
ITA	GSA 19	2016	2016	HKE	F	49
ITA	GSA 19	2017	2017	HKE	F	41
ITA	GSA 19	2018	2018	HKE	F	48
ITA	GSA 19	2019	2019	HKE	F	51
ITA	GSA 19	2020	2020	HKE	F	44
ITA	GSA 19	2002	2002	HKE	M	18
ITA	GSA 19	2003	2005	HKE	M	30
ITA	GSA 19	2006	2008	HKE	M	38
ITA	GSA 19	2009	2009	HKE	M	33
ITA	GSA 19	2010	2010	HKE	M	32
ITA	GSA 19	2011	2011	HKE	M	32
ITA	GSA 19	2012	2012	HKE	M	37
ITA	GSA 19	2013	2013	HKE	M	32
ITA	GSA 19	2014	2014	HKE	M	28
ITA	GSA 19	2015	2015	HKE	M	24
ITA	GSA 19	2016	2016	HKE	M	25
ITA	GSA 19	2017	2017	HKE	M	22
ITA	GSA 19	2018	2018	HKE	M	27
ITA	GSA 19	2019	2019	HKE	M	26
ITA	GSA 19	2020	2020	HKE	M	29

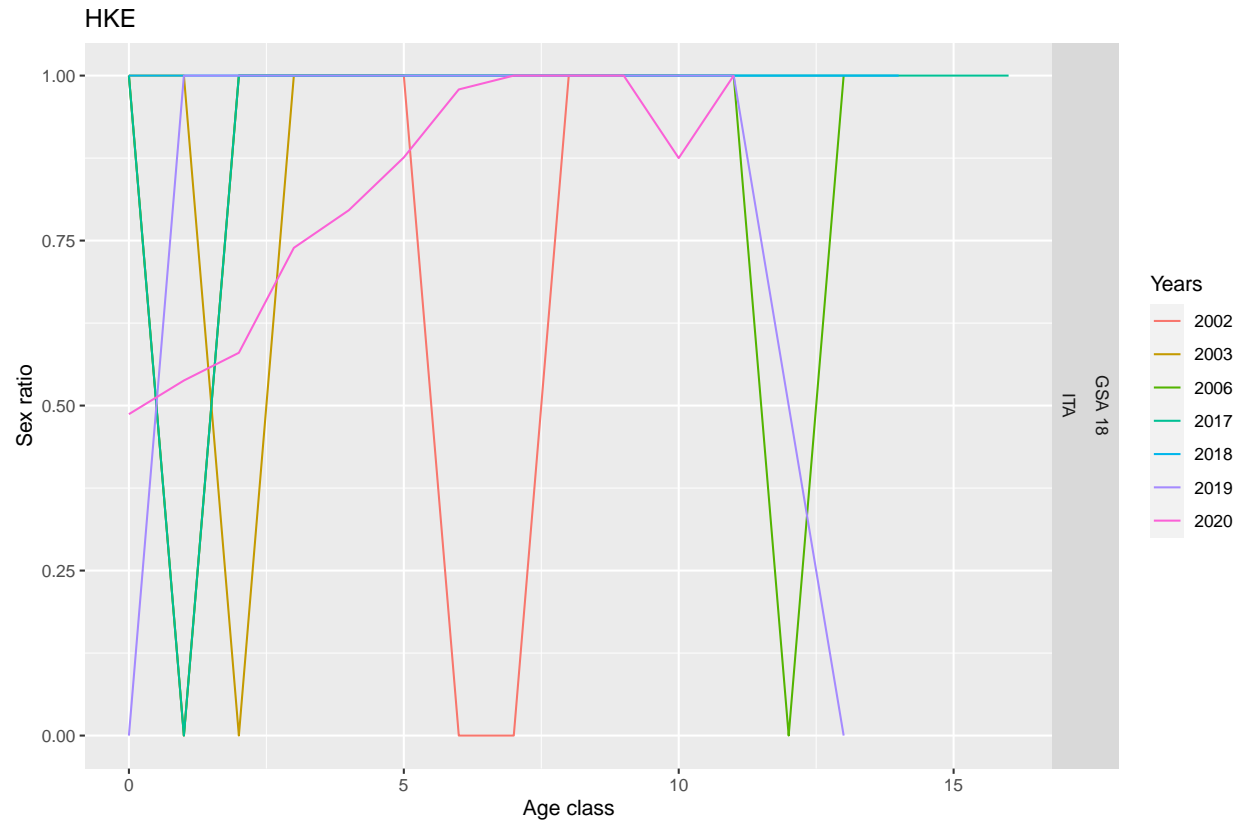
Plots of Sex Ratio at age (SRA) data

GSA 18

HKE *Summary table of sex ratio at age for HKE in GSA 18*

COUNTRY	YEAR	START_YEAR	END_YEAR	SPECIES
ITA	GSA 18	2002	2002	HKE
ITA	GSA 18	2003	2005	HKE
ITA	GSA 18	2006	2008	HKE
ITA	GSA 18	2017	2017	HKE
ITA	GSA 18	2018	2018	HKE
ITA	GSA 18	2019	2019	HKE
ITA	GSA 18	2020	2020	HKE

Plot of sex ratio at age for HKE - ITA - GSA 18 - M

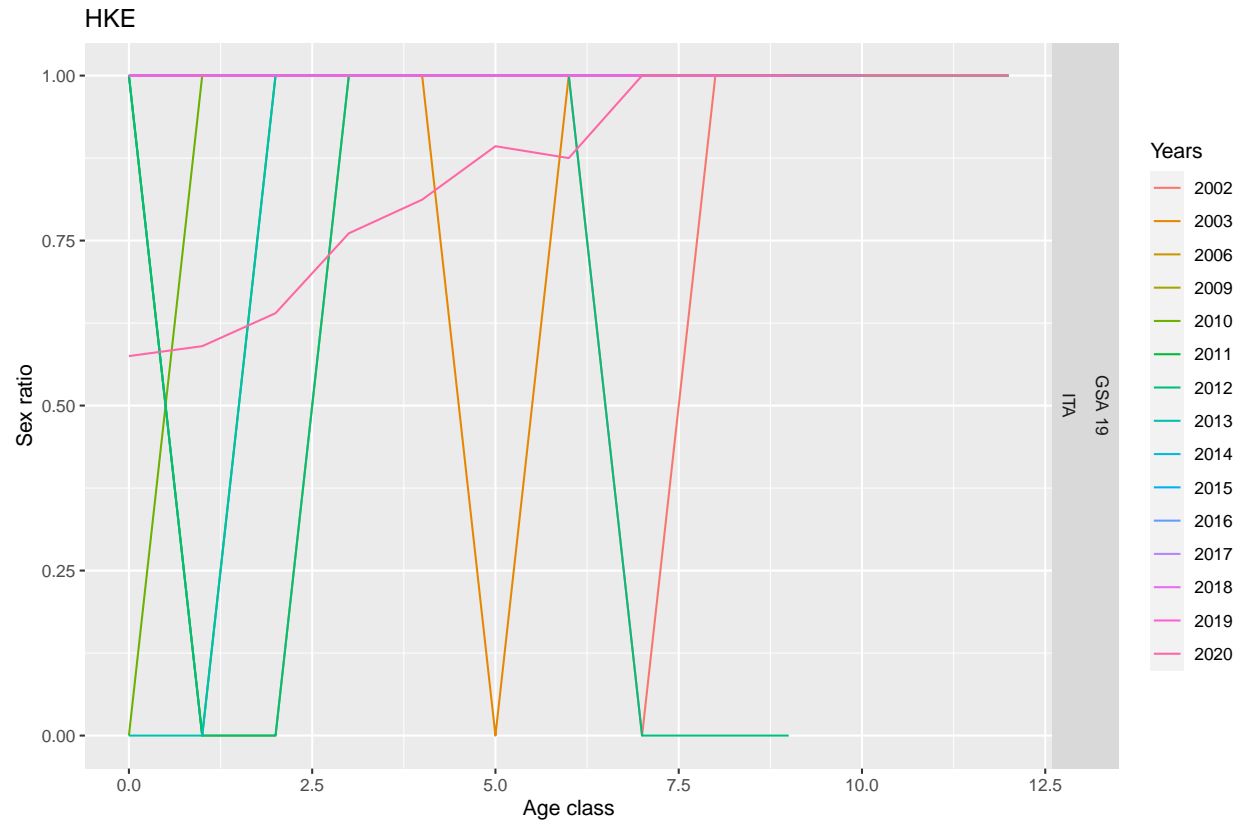


GSA 19

HKE Summary table of sex ratio at age for HKE in GSA 19

COUNTRY	YEAR	START_YEAR	END_YEAR	SPECIES
ITA	GSA 19	2002	2002	HKE
ITA	GSA 19	2003	2005	HKE
ITA	GSA 19	2006	2008	HKE
ITA	GSA 19	2009	2009	HKE
ITA	GSA 19	2010	2010	HKE
ITA	GSA 19	2011	2011	HKE
ITA	GSA 19	2012	2012	HKE
ITA	GSA 19	2013	2013	HKE
ITA	GSA 19	2014	2014	HKE
ITA	GSA 19	2015	2015	HKE
ITA	GSA 19	2016	2016	HKE
ITA	GSA 19	2017	2017	HKE
ITA	GSA 19	2018	2018	HKE
ITA	GSA 19	2019	2019	HKE
ITA	GSA 19	2020	2020	HKE

Plot of sex ratio at age for HKE - ITA - GSA 19 - M



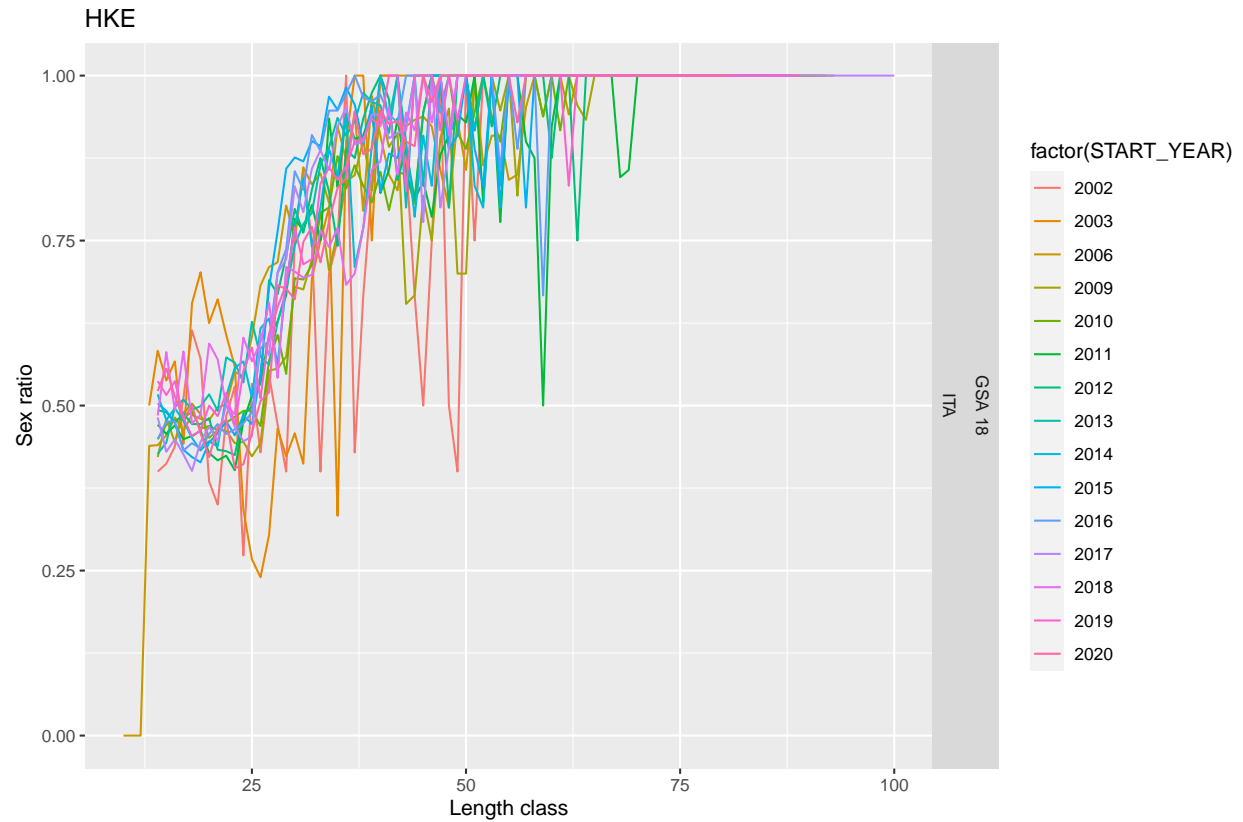
Plots of Sex Ratio at length (SRL) data

GSA 18

HKE Summary table of sex ratio at length for HKE in GSA 18

COUNTRY	GSA	START_YEAR	END_YEAR	SPECIES	COUNT
ITA	GSA 18	2002	2002	HKE	45
ITA	GSA 18	2003	2005	HKE	34
ITA	GSA 18	2006	2008	HKE	70
ITA	GSA 18	2009	2009	HKE	68
ITA	GSA 18	2010	2010	HKE	71
ITA	GSA 18	2011	2011	HKE	70
ITA	GSA 18	2012	2012	HKE	69
ITA	GSA 18	2013	2013	HKE	66
ITA	GSA 18	2014	2014	HKE	70
ITA	GSA 18	2015	2015	HKE	66
ITA	GSA 18	2016	2016	HKE	66
ITA	GSA 18	2017	2017	HKE	69
ITA	GSA 18	2018	2018	HKE	71
ITA	GSA 18	2019	2019	HKE	65
ITA	GSA 18	2020	2020	HKE	68

Plot of sex ratio at length for HKE - ITA - GSA 18 - M

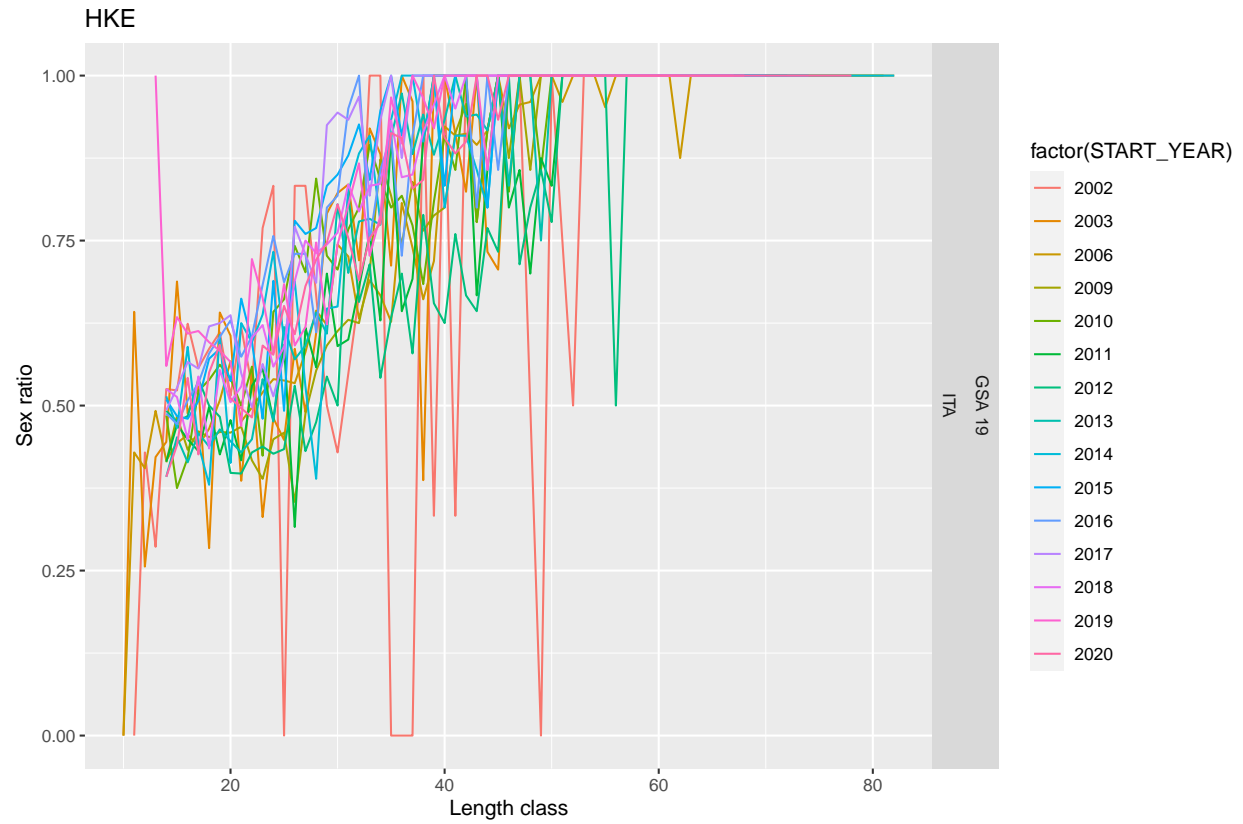


GSA 19

HKE Summary table of sex ratio at length for HKE in GSA 19

COUNTRY	GSA	START_YEAR	END_YEAR	SPECIES	COUNT
ITA	GSA 19	2002	2002	HKE	43
ITA	GSA 19	2003	2005	HKE	39
ITA	GSA 19	2006	2008	HKE	68
ITA	GSA 19	2009	2009	HKE	53
ITA	GSA 19	2010	2010	HKE	53
ITA	GSA 19	2011	2011	HKE	55
ITA	GSA 19	2012	2012	HKE	47
ITA	GSA 19	2013	2013	HKE	49
ITA	GSA 19	2014	2014	HKE	55
ITA	GSA 19	2015	2015	HKE	50
ITA	GSA 19	2016	2016	HKE	49
ITA	GSA 19	2017	2017	HKE	41
ITA	GSA 19	2018	2018	HKE	48
ITA	GSA 19	2019	2019	HKE	51
ITA	GSA 19	2020	2020	HKE	44

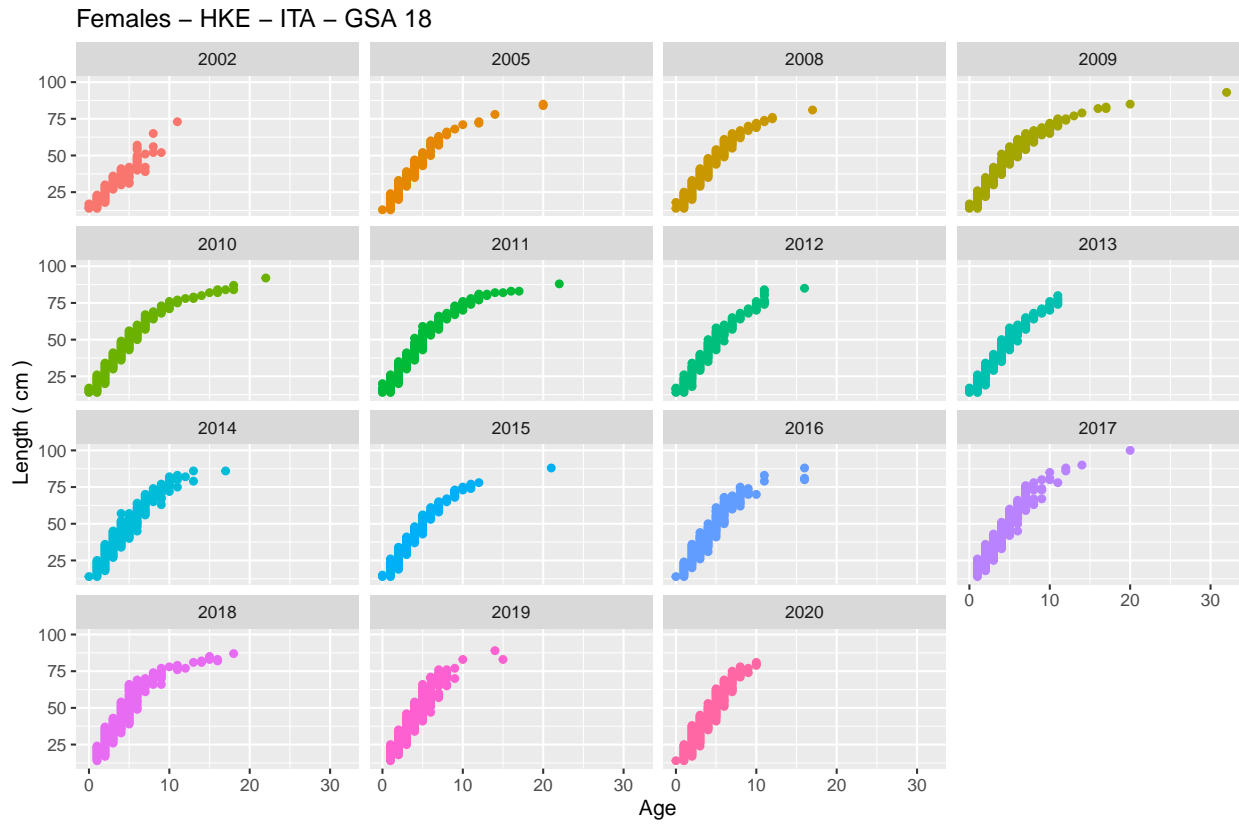
Plot of sex ratio at length for HKE - ITA - GSA 19 - M



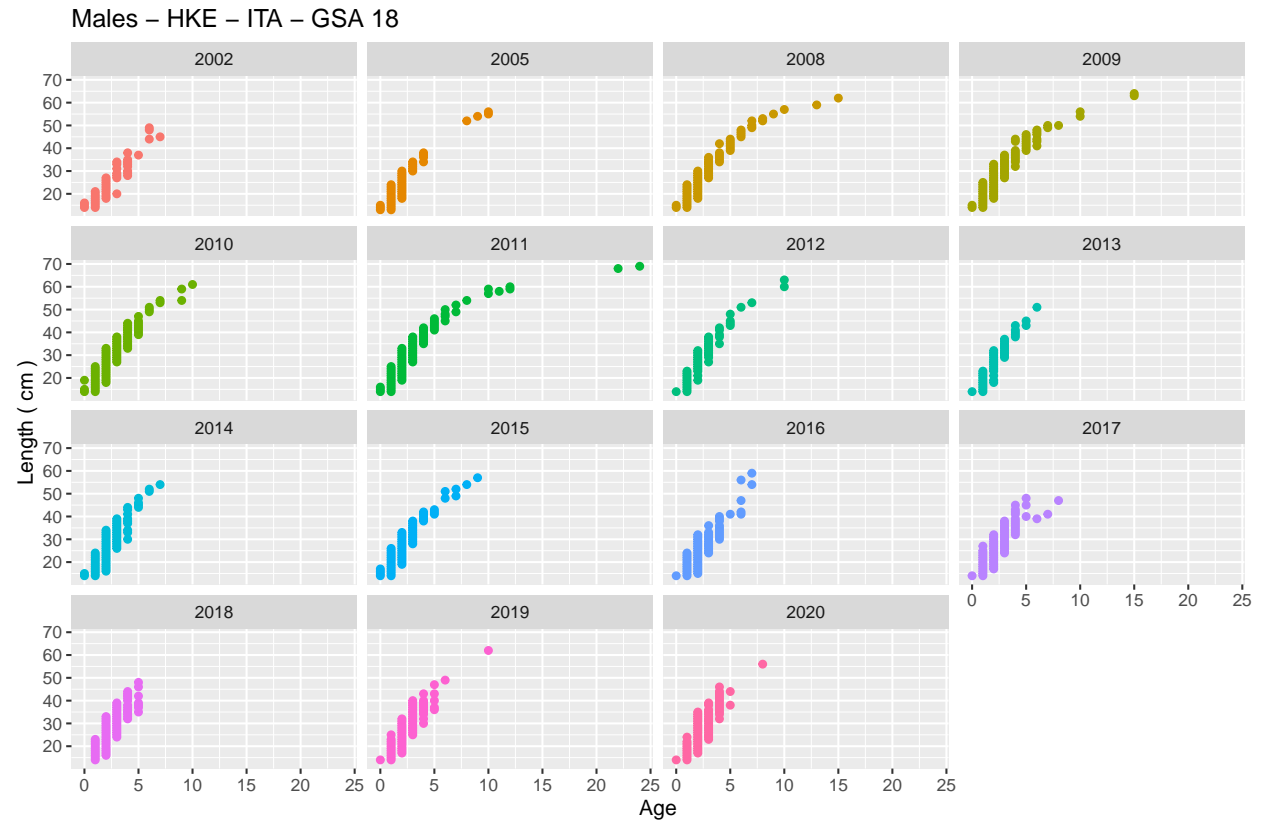
Plots of Age-Length Keys (ALK) data

GSA 18

HKE Plot of ALK for HKE - ITA - GSA 18 - Females

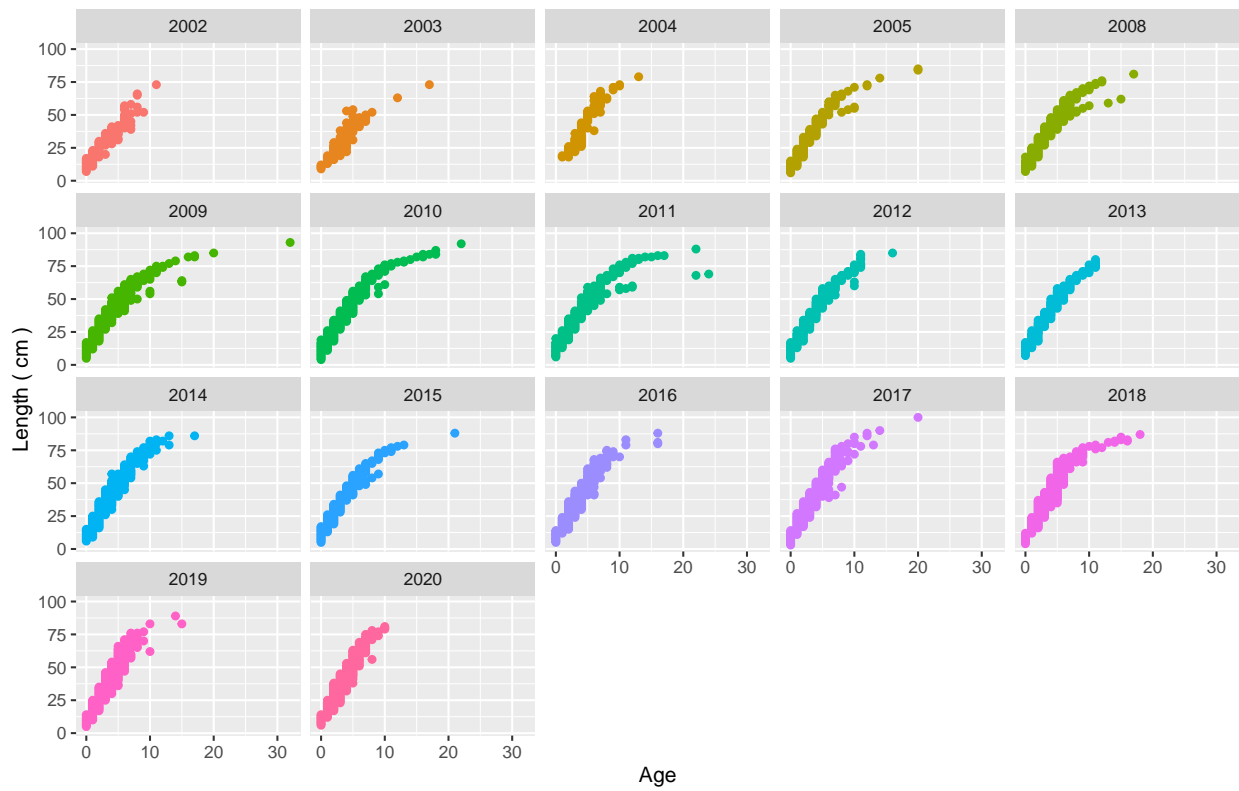


Plot of ALK for HKE - ITA - GSA 18 - Males



Plot of ALK for HKE - ITA - GSA 18 - Combined

Combined sexes – HKE – ITA – GSA 18

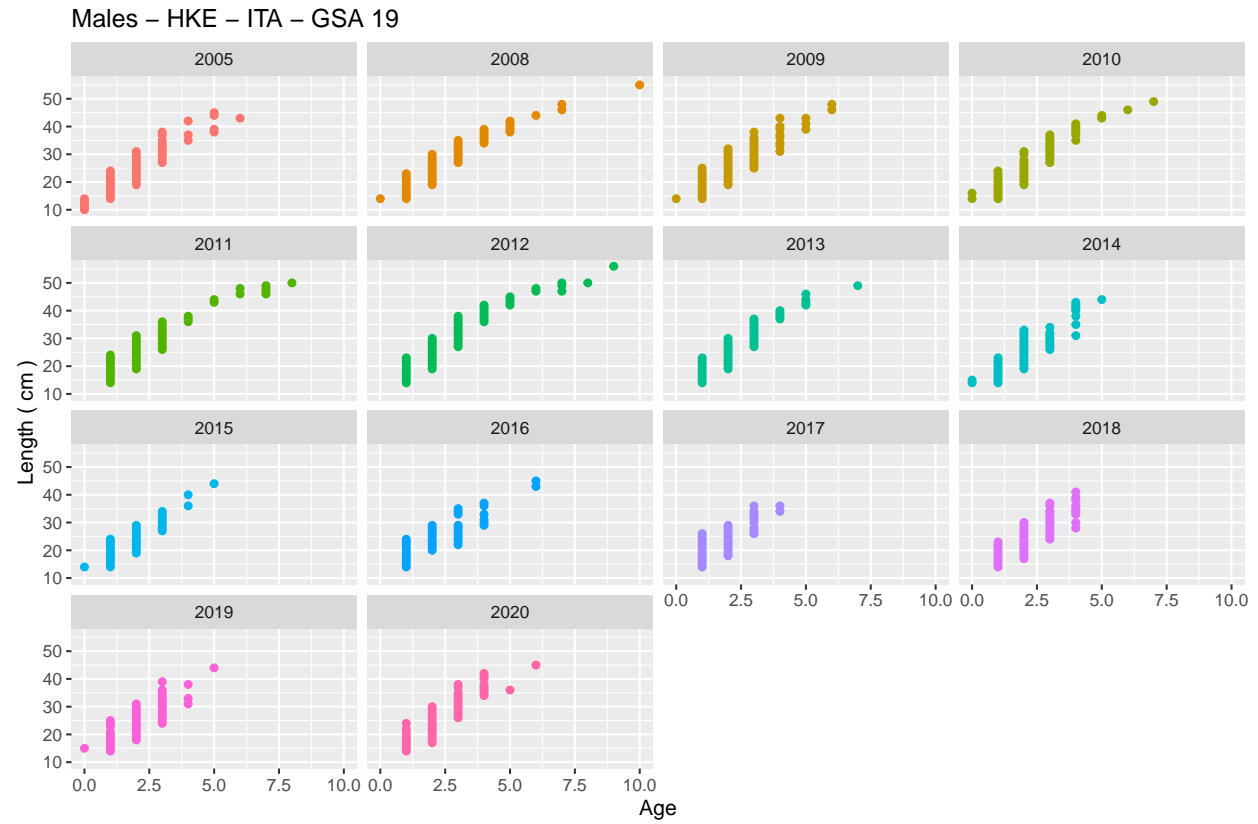


GSA 19

HKE Plot of ALK for HKE - ITA - GSA 19 - Females



Plot of ALK for HKE - ITA - GSA 19 - Males



Plot of ALK for HKE - ITA - GSA 19 - Combined

Combined sexes – HKE – ITA – GSA 19

