

medbs_rdb_schema.stomach_contents_haul	
* country	varchar(3)
* area	varchar(7)
gfcml_rectangle	varchar(7)
* cruise	varchar(14)
* vessel_cd	varchar(12)
* haul_number	smallint
* year	smallint
* month	smallint
* day	smallint
shooting_time	smallint
shooting_latitude	numeric(7,4)
shooting_longitude	numeric(7,4)
shooting_depth	smallint
hauling_time	smallint
hauling_latitude	numeric(7,4)
hauling_longitude	numeric(7,4)
hauling_depth	smallint
estimated_lat_lon	char(1)
bottom_temperature_beginning	numeric(5,2)
bottom_temperature_end	numeric(5,2)
measuring_system	varchar(2)
bottom_salinity_beginning	numeric(5,2)
bottom_salinity_end	numeric(5,2)
sal_measuring_system	varchar(2)
bottom_type	varchar(7)
gear	varchar(7)
notes	varchar(1024)

month, day

country, area

medbs_rdb_schema.stomach_contents_pred	
* country	varchar(3)
* area	varchar(7)
* cruise	varchar(14)
* vessel_cd	varchar(12)
* haul_number	smallint
* year	smallint
* month	smallint
* day	smallint
* pred	varchar(3)
* pred_id	integer
pred_length	numeric(10,2)
pred_sex	char(1)
* pred_maturity	varchar(2)
pred_weight	numeric(10,2)
pooled_indicator	char(1)
* size_category	varchar(7)
mean_length	numeric(10,2)
number_of_stomachs	smallint
number_empty	smallint
stomach_regurgitated	smallint
stomach_with_skeletal_remains	smallint
* fullness_index	varchar(7)
total_stomach_weight	numeric(10)
total_stomach_volume	numeric(10)
pred_cpue	numeric(7,2)
stomach_metfp	varchar(14)
contact_person	varchar(64)
notes	varchar(1024)

pred, pred\_id

medbs_rdb_schema.stomach_contents_prey	
* country	varchar(3)
* area	varchar(7)
* cruise	varchar(14)
* vessel_cd	varchar(12)
* haul_number	smallint
* year	smallint
* month	smallint
* day	smallint
* pred	varchar(3)
* pred_id	integer
* prey_id	integer
* prey_item	varchar(64)
prey_length	numeric(10,2)
digestion_stage	smallint
ind_pre_y_weight	numeric(7,2)
ind_pre_y_volume	numeric(7,2)
fresh_number	smallint
accumulated_number	smallint
notes	varchar(1024)

country, area, cruise, vessel\_cd, haul\_number, year, month, day, pred, prey\_id, prey\_item

medbs_rdb_schema.stomach_contents_measure	
* country	varchar(3)
* area	varchar(7)
* cruise	varchar(14)
* vessel_cd	varchar(12)
* haul_number	smallint
* year	smallint
* month	smallint
* day	smallint
* pred	varchar(3)
* pred_id	integer
* prey_id	integer
* prey_item_index	smallint
* measurement_id	varchar(3)
measure_value	numeric(10,5)
prey_item_status	char(1)
notes	varchar(1024)

## StomachContent

Table medbs_rdb_schema.stomach_contents_haul			
Idx	Name	Data Type	Description
Stomach Contents: data on the haul			
* Pk	country	varchar(3)	ISO 3166 Alpha-3 country code
* Pk	area	varchar(7)	Geographic subarea: GFCM Code
	gfcml_rectangle	varchar(7)	GFCM rectangle
* Pk	cruise	varchar(14)	Cruise
* Pk	vessel_cd	varchar(12)	Vessel code
* Pk	haul_number	smallint	Haul number
* Pk	year	smallint	Sampling year with the format yyyy
* Pk	month	smallint	Sampling month with the format mm
* Pk	day	smallint	Day
	shooting_time	smallint	0 to 2400 - In UT Ex: 7 h 25 min > 725
	shooting_latitude	numeric(7,4)	Shooting latitude in decimal degress - Ex 38.7234
	shooting_longitude	numeric(7,4)	Shooting longitude in decimal degress - Ex 18.8754
	shooting_depth	smallint	Shooting depth at the vessel position, in meters; unknown: 0
	hauling_time	smallint	0 to 2400 - In UT Ex: 7 h 25 min > 725
	hauling_latitude	numeric(7,4)	hauling latitude in decimal degress - Ex 38.7234
	hauling_longitude	numeric(7,4)	hauling longitude in decimal degress - Ex 18.8754
	hauling_depth	smallint	Hauling depth at the vessel position, in meters; unknown: 0
	estimated_lat_lon	char(1)	Flag whether the sampling position based on the reported area
	bottom_temperature_beginning	numeric(5,2)	0 to 30 - in °C with two decimals; NA if not available
	bottom_temperature_end	numeric(5,2)	0 to 30 - in °C with two decimals; NA if not available
	measuring_system	varchar(2)	Depth & temperature measuring system; NA if not available
	bottom_salinity_beginning	numeric(5,2)	0 to 50 - in ppt with two decimals; NA if not available
	bottom_salinity_end	numeric(5,2)	0 to 50 - in ppt with two decimals; NA if not available
	sal_measuring_system	varchar(2)	Salinity measuring system; NA if not available
	bottom_type	varchar(7)	Bottom type
	gear	varchar(7)	Gear Code - the gear used to catch the fish
	notes	varchar(1024)	Notes
Indexes			
Type	Name	On	Description
Pk	stom_cont_pkey	country, area, cruise, vessel_cd, haul_number, year, month, day	
Foreign Keys			
Type	Name	On	Description
	fk_area\$p_fdi_subregion ( area ) ref p_fdi_subregion ( subregion_cd )		
	fk_bottom_type\$p_bottom_types ( bottom_type ) ref p_bottom_types ( cd_bottom )		
	fk_country\$country ( country ) ref p_country ( country_cd )		
	fk_gear\$p_fdi_gear ( gear ) ref p_fdi_gear ( gear_cd )		
	fk_gfcml_rectangle\$p_gfcml_rectangle ( gfcml_rectangle ) ref p_gfcml_rectangles ( cellcode )		
	fk_measuring_system\$p_measuring_system ( measuring_system ) ref p_meditis_measuring_system ( measuring_system_cd )		
	fk_sal_measuring_system\$p_measuring_system ( sal_measuring_system ) ref p_meditis_measuring_system ( measuring_system_cd )		
	fk_vessel\$p_vessels ( vessel_cd ) ref p_vessels ( vessel_cd )		

Table medbs\_rdb\_schema.stomach\_contents\_haul

## Constraints

Name	Definition	Description
chk_bottom_salinity_end	bottom_salinity_end >= (0)::numeric) AND (bottom_salinity_end <= (50)::numeric	
chk_bottom_temperature_beginning	bottom_temperature_beginning >= (0)::numeric) AND (bottom_temperature_beginning <= (30)::numeric	
chk_bottom_temperature_end	bottom_temperature_end >= (0)::numeric) AND (bottom_temperature_end <= (30)::numeric	
chk_haul_number	(haul_number)::numeric >= (1)::numeric) AND ((haul_number)::numeric <= (9999999)::numeric	
chk_hauling_depth	((hauling_depth)::numeric >= (1)::numeric) AND ((hauling_depth)::numeric <= (1000)::numeric)) OR ((hauling_depth)::numeric = (0)::numeric	
chk_hauling_latitude	hauling_latitude >= 34.00) AND (hauling_latitude <= 45.70	latitude_avg: range(34.00,35.00) latitude_avg: range(34.00,45.70)
chk_bottom_salinity_beginning	bottom_salinity_beginning >= (0)::numeric) AND (bottom_salinity_beginning <= (50)::numeric	
chk_hauling_time	(hauling_time)::numeric >= (0)::numeric) AND ((hauling_time)::numeric <= (2400)::numeric	
chk_shooting_depth	((shooting_depth)::numeric >= (1)::numeric) AND ((shooting_depth)::numeric <= (1000)::numeric)) OR ((shooting_depth)::numeric = (0)::numeric	
chk_shooting_latitude	shooting_latitude >= 34.00) AND (shooting_latitude <= 45.70	latitude_avg: range(34.00,35.00) latitude_avg: range(34.00,45.70)
chk_shooting_longitude	shooting_longitude >= '-5.50':::numeric) AND (shooting_longitude <= 35.00	longitude_avg: range(-5.50,35.00) latitude_avg: range(34.00,45.70)
chk_shooting_time	(shooting_time)::numeric >= (0)::numeric) AND ((shooting_time)::numeric <= (2400)::numeric	
chk_hauling_longitude	hauling_longitude >= '-5.50':::numeric) AND (hauling_longitude <= 35.00	longitude_avg: range(-5.50,35.00) latitude_avg: range(34.00,45.70)

Table medbs\_rdb\_schema.stomach\_contents\_measure

Idx	Name	Data Type	Description
Stomach Contents: Measures			
* PK	country	varchar(3)	ISO 3166 Alpha-3 country code
* PK	area	varchar(7)	Geographic subarea: GFCM Code
* PK	cruise	varchar(14)	Cruise
* PK	vessel_cd	varchar(12)	Vessel code

Table medbs\_rdb\_schema.stomach\_contents\_measure

* Pk	haul_number	smallint	Haul number
* Pk	year	smallint	Year
* Pk	month	smallint	Month
* Pk	day	smallint	Day
* Pk	pred	varchar(3)	Predator FAO a3_code
*	pred_id	integer	Predator reference unique code ID
* Pk	prey_id	integer	Prey WoRMS AphiaID or ITIS
* Pk	prey_item_index	smallint	A sequential number within a prey
*	measurement_id	varchar(3)	An alphabetic code for measurement (DML, LRL, etc.) - dorsal mantle length (DML), lower rostral lengths (LRLs)
	measure_value	numeric(10,5)	The measure value (units depend of size type)
	prey_item_status	char(1)	Prey item status: F for a fresh item or A for a accumulated item
	notes	varchar(1024)	Notes

## Indexes

Type	Name	On	Description
Pk	stom_cont_measure_pkey	country, area, cruise, vessel_cd, haul_number, year, month, day, pred, prey_id, prey_item_index	

## Foreign Keys

Type	Name	On	Description
	fk_area\$p_fdi_subregion ( area ) ref p_fdi_subregion ( subregion_cd )		
	fk_country\$country ( country ) ref p_country ( country_cd )		
	fk_stom_cont_measure\$measurement_id ( measurement_id ) ref p_stom_cont_measure_measurement_id ( measurement_id )		
	fk_stom_cont_measure\$p_stom_cont_preys_item_status ( prey_item_status ) ref p_stom_cont_measure_preys_item_status ( prey_item_status )		
	fk_stomach_content_measure\$stomach_content_preys ( country, area, cruise, vessel_cd, haul_number, year, month, day, pred, pred_id, prey_id ) ref stomach_contents_preys ( country, area, cruise, vessel_cd, haul_number, year, month, day, pred, pred_id, prey_id )		
	fk_vessel\$p_vessels ( vessel_cd ) ref p_vessels ( vessel_cd )		

Table medbs\_rdb\_schema.stomach\_contents\_pred

Idx	Name	Data Type	Description
Stomach Contents: data on predators			
* Pk	country	varchar(3)	ISO 3166 Alpha-3 country code
* Pk	area	varchar(7)	Geographic subarea: GFCM Code
* Pk	cruise	varchar(14)	Cruise
* Pk	vessel_cd	varchar(12)	Vessel code
* Pk	haul_number	smallint	Haul number
* Pk	year	smallint	Year
* Pk	month	smallint	Month
* Pk	day	smallint	Day
* Pk	pred	varchar(3)	Predator FAO a3_code
* Pk	pred_id	integer	Predator reference unique code ID
	pred_length	numeric(10,2)	Predator length
	pred_sex	char(1)	Predator sex
*	pred_maturity	varchar(2)	Predator maturity

Table medbs\_rdb\_schema.stomach\_contents\_pred

	pred_weight	numeric(10,2)	Predator weight
	pooled_indicator	char(1)	Pooled indicator (Y/N)
*	size_category	varchar(7)	Size category i.e. (LF, LD1, etc.)
	mean_length	numeric(10,2)	Mean length
	number_of_stomachs	smallint	Total number of stomachs in the pool - for single stomachs always 1
	number_empty	smallint	Number of empty stomachs
	stomach_regurgitated	smallint	Number of stomachs regurgitated
	stomach_with_skeletal_remains	smallint	Number of stomachs with skeletal remains
*	fullness_index	varchar(7)	Fullness index
	total_stomach_weight	numeric(10)	Total stomach weight
	total_stomach_volume	numeric(10)	Total stomach volume
	pred_cpue	numeric(7,2)	Predator catch per hour
	stomach_metfp	varchar(14)	Method of stomach preservation
	contact_person	varchar(64)	The chief scientist name
	notes	varchar(1024)	Notes

## Indexes

Type	Name	On	Description
Pk	stom_cont_pred_pkey	country, area, cruise, vessel_cd, haul_number, year, month, day, pred, pred_id	

## Foreign Keys

Type	Name	On	Description
	fk_stomach_content_pred\$stomach_content_haul ( country, area, cruise, vessel_cd, haul_number, year, month, day ) ref stomach_contents_haul ( country, area, cruise, vessel_cd, haul_number, year, month, day )		
	fk_stomach_content_pred_sex\$p_rcg_sex ( pred_sex ) ref p_rcg_sex ( cd )		
	fk_stomach_content_pred_species\$species_list_asfis ( pred ) ref species_list_asfis ( a3_code )		
	fk_stomach_content_pred_size_cat\$p_stom_cont_com_size_cat ( size_category ) ref p_stom_cont_commercial_size_category ( cd )		
	fk_area\$p_fdi_subregion ( area ) ref p_fdi_subregion ( subregion_cd )		
	fk_country\$country ( country ) ref p_country ( country_cd )		
	fk_vessel\$p_vessels ( vessel_cd ) ref p_vessels ( vessel_cd )		
	fk_stomach_content_pred_maturity\$p_stom_cont_sexual_maturity ( pred_maturity ) ref p_stom_cont_sexual_maturity ( stage )		

Table medbs\_rdb\_schema.stomach\_contents\_preym

Idx	Name	Data Type	Description
Stomach Contents: data on prey			
* Pk	country	varchar(3)	ISO 3166 Alpha-3 country code
* Pk	area	varchar(7)	Geographic subarea: GFCM Code
* Pk	cruise	varchar(14)	Cruise
* Pk	vessel_cd	varchar(12)	Vessel code
* Pk	haul_number	smallint	Haul number
* Pk	year	smallint	Year
* Pk	month	smallint	Month
* Pk	day	smallint	Day
* Pk	pred	varchar(3)	Predator FAO a3_code

Table medbs\_rdb\_schema.stomach\_contents\_prey

* Pk	pred_id	integer	Predator reference unique code ID
* Pk	prey_id	integer	Prey WoRMS AphiaID or ITIS
*	prey_item	varchar(64)	Prey item (scientific name)
	prey_length	numeric(10,2)	Prey length
	digestion_stage	smallint	Digestion stage (0= Intact prey (skin, fins, legs and flesh is complete), 1= partially digested prey (prey in more advanced stages of digestion), 2= partially digested prey (prey in more advanced stages of digestion), 3= skeletal material (no flesh, only bones, shells, otoliths)
	ind_preay_weight	numeric(7,2)	Ind prey weight
	ind_preay_volume	numeric(7,2)	Ind prey volume
	fresh_number	smallint	Fresh items number
	accumulated_number	smallint	Accumulated items number
	notes	varchar(1024)	Notes

## Indexes

Type	Name	On	Description
Pk	stom_cont_preay_pkey	country, area, cruise, vessel_cd, haul_number, year, month, day, pred, pred_id, prey_id	

## Foreign Keys

Type	Name	On	Description
	fk_area\$pred_subregion ( area ) ref pred_subregion ( subregion_cd )		
	fk_country\$country ( country ) ref pred_country ( country_cd )		
	fk_stomach_content_preay\$stomach_content_pred ( country, area, cruise, vessel_cd, haul_number, year, month, day, pred, pred_id ) ref stomach_contents_pred ( country, area, cruise, vessel_cd, haul_number, year, month, day, pred, pred_id )		
	fk_stomach_content_preay_id\$pred_stom_cont_worms_lookup ( prey_id ) ref pred_stom_cont_worms_lookup ( aphia_id )		
	fk_stomach_content_preay_item\$pred_stom_cont_worms_lookup ( prey_item ) ref pred_stom_cont_worms_lookup ( scientific_name )		
	fk_vessel\$pred_vessels ( vessel_cd ) ref pred_vessels ( vessel_cd )		