medbs_rdb_schema.medias_acoustics_identity

Column	Type
survey_name	varchar(14)
cd_country	varchar(3)
gsa	varchar(7)
survey_area	varchar(32)
cd_centre	varchar(14)
cd_inst	varchar(14)
cd_vessel	varchar(12)
sampling_year	smallint
cd_cruise	varchar(14)
echo_sounder_type	varchar(32)
transects_design	varchar(128)
inter_transect_distance	smallint
edsu	numeric(4,2)
covered_area_size	numeric(7,2)
effectively_covered_area_size	numeric(7,2)
n_hauls	smallint
n_ctds	smallint
echo_sounding_depth_min	smallint
echo_sounding_depth_max	smallint
vessel_speed	numeric(4,2)
start_date	date
end_date	date
analysis_sw	varchar(128)
software_version	varchar(14)
file_format	varchar(36)
onboard_group	varchar(512)
notes	varchar(2048)

medbs_rdb_schema.medias_acoustics_sset

Column	Type
survey_name	varchar(14)
cd_country	varchar(3)
gsa	varchar(7)
survey_area	varchar(32)
cd_centre	varchar(14)
cd_inst	varchar(14)
cd_vessel	varchar(12)
sampling_year	smallint
cd_cruise	varchar(14)
calibration_id	smallint
calibration_date	date
absorption_coefficient	numeric(7,6)
sound_speed	numeric(6,2)
pulse_duration	numeric(5,3)
frequency	smallint
rms_beam	numeric(4,3)
adjusted_gain	numeric(6,2)
sa_corr	numeric(6,2)
beamwidth_athwart	numeric(5,2)
beamwidth_along	numeric(5,2)
athwart_offset	numeric(3,2)
along_offset	numeric(3,2)
ts_of_sphere	numeric(6,2)
bottom_depth	smallint

medbs_rdb_schema.medias_acoustics_sset_echotypes

Column	Type
survey_name	varchar(14)
cd_country	varchar(3)
gsa	varchar(7)
survey_area	varchar(32)
geographical_stratum	varchar(32)
cd_centre	varchar(14)
cd_inst	varchar(14)
cd_vessel	varchar(12)
sampling_year	smallint
cd_cruise	varchar(14)
calibration_id	smallint
echo_type	varchar(3)
echo_type_description	varchar(100)

medbs_rdb_schema.medias_acoustics_sset_nasc

Column	Type
survey_name	varchar(14)
cd_country	varchar(3)
gsa	varchar(7)
survey_area	varchar(32)
geographical_stratum	varchar(32)
cd_centre	varchar(14)
cd_inst	varchar(14)
cd_vessel	varchar(12)
sampling_year	smallint
cd_cruise	varchar(14)
calibration_id	smallint
transect	smallint
transect_name	varchar(32)
edsu_id	smallint
trawl_haul_reference	varchar(128)
echo_type	varchar(3)
tm_avg	timestamp
depth_avg	numeric(6,2)
longitude_avg	numeric(7,4)
latitude_avg	numeric(7,4)
nasc	numeric(10,4)

medbs_rdb_schema.medias_acoustics_sset_nasc_species

Column	Type
survey_name	varchar(14)
cd_country	varchar(3)
gsa	varchar(7)
survey_area	varchar(32)
geographical_stratum	varchar(32)
cd_centre	varchar(14)
cd_inst	varchar(14)
cd_vessel	varchar(12)
sampling_year	smallint
cd_cruise	varchar(14)
calibration_id	smallint
transect	smallint
edsu_id	smallint
trawl_haul_reference	varchar(128)
echo_type	varchar(3)
species	varchar(7)
size_category	char(1)
abundance	numeric(14,2)
biomass	numeric(14,4)
species_b20	numeric(5,2)
species_nasc	numeric(8,4)

medbs_rdb_schema.medias_acoustics_sset_nasc_species_lenclass

Column	Type
survey_name	varchar(14)
cd_country	varchar(3)
gsa	varchar(7)
survey_area	varchar(32)
geographical_stratum	varchar(32)
cd_centre	varchar(14)
cd_inst	varchar(14)
cd_vessel	varchar(12)
sampling_year	smallint
cd_cruise	varchar(14)
calibration_id	smallint
transect	smallint
edsu_id	smallint
species	varchar(7)
length_class	smallint
abundance	integer
biomass	numeric(14,4)

MEDIAS acoustics

Table medbs_rdb_schema.medias_acoustics_identity

Idx	Name	Data Type	Description
	MEDIAS acoustics survey identity		
* Pk	survey_name	varchar(14)	Survey name (e.g. MEDIAS)
* Pk	cd_country	varchar(3)	Country ISO 3166 international standard
* Pk	gsa	varchar(7)	GFCM Geographical subarea
* Pk	survey_area	varchar(32)	Survey area (may extend more than one GSA, e.g. Iberian coast)
* Pk	cd_centre	varchar(14)	Research center code
* Pk	cd_inst	varchar(14)	Research institute code
* Pk	cd_vessel	varchar(12)	Vessel code. Additional information is provided in the parametric table p_research_vessel
* Pk	sampling_year	smallint	Sampling year
* Pk	cd_cruise	varchar(14)	Cruise code
*	echo_sounder_type	varchar(32)	Echo sounder type
	transects_design	varchar(128)	Transects design
	inter_transect_distance	smallint	Inter-transect distance (NM), will be filled where transect is parallel/zig zag (not mand.)
	edsu	numeric(4,2)	EDSU: the Elementary Distance Sampling Unit used for acoustic integration (nmi). E.g. 1 = by 1 nmi, 0.54 by 0.54 nmi, etc.
	covered_area_size	numeric(7,2)	Size of area to be covered (NM2/km2)
	effectively_covered_area_size	numeric(7,2)	Size of area effectively covered (NM2/km2)
	n_hauls	smallint	Number of hauls (auto filled)
	n_ctds	smallint	Number of CTDs (auto filled)
	echo_sounding_depth_min	smallint	Echo sounding depth (min, m), auto calculated from NASC
	echo_sounding_depth_max	smallint	Echo sounding depth (max, m) recording, auto calculated from NASC
	vessel_speed	numeric(4,2)	Speed of research vessel (kt) during acoustic sampling
	start_date	date	Starting date of survey
	end_date	date	Ending date of survey
	analysis_sw	varchar(128)	Software for analysis
	software_version	varchar(14)	Software version
	file_format	varchar(36)	Acoustic data storage format. This can be 'raw' or 'hac' for current systems, and any of: 'raw', 'hac', 'ek5', 'BI500', 'ek6', 'dt4' if we include historical data.
	onboard_group	varchar(512)	Onboard group
	notes	varchar(2048)	Notes

Indexes

Type	Name	On	Description
Pk	medias_acoustics_identity_pkey	survey_name, cd_country, gsa, survey_area, cd_centre, cd_inst, cd_vessel, sampling_year, cd_cruise	

Foreign Keys

Type	Name	On	Description
	cd_inst_fk$p_fishery_body_departments (cd_inst) ref p_fishery_body_departments (department)		
	cd_vessel_fk$rv_eurofleets (cd_vessel) ref rv_eurofleets (vessel_code)		
	echosounder_fk$e_echosounder (echo_sounder_type) ref e_echosounder (echo_sounder)		
	gsa_fk$p_fdi_subregion (gsa) ref p_fdi_subregion (subregion_cd)		

Table medbs_rdb_schema.medias_acoustics_identity

medias_acoustics_identity_country_fk$p_country3166 (
cd_country) ref p_countries_iso3166 (country_a3code)

survey_area_fk$p_medias_survey_area (survey_area) ref
p_medias_survey_area (survey_area_code)

survey_name_fk$p_surveys (survey_name) ref p_surveys
(survey_code)

transects_design_fk$p_medias_transect_design (
transects_design) ref p_medias_transect_design (
transect_design)

cd_centre_fk$p_fishery_bodies_acronym (cd_centre) ref
p_fishery_bodies (acronym)

Constraints

Name	Definition	Description
chk_covered_area_size	covered_area_size >= (100)::numeric) AND (covered_area_size <= (99999)::numeric	
chk_echo_sounding_depth_max	((echo_sounding_max >= 10) AND (echo_sounding_depth_max <= 1500)) OR NULL::boolean	
chk_echo_sounding_depth_min	((echo_sounding_min >= 10) AND (echo_sounding_depth_min <= 1500)) OR NULL::boolean	
chk_edsu	edsu >= 0.1) AND (edsu <= (5)::numeric	
chk_effectively_covered_area_size	effectively_covered_area_size >= (100)::numeric) AND (effectively_covered_area_size <= (99999)::numeric	
chk_analysis_sw	analysis_sw)::text = ANY (ARRAY[('MOVIES3D'::character varying)::text, ('Echoview'::character varying)::text, ('MOVIES'::character varying)::text]	
chk_inter_transect_distance	(inter_transect_distance >= 5) AND (inter_transect_distance <= 12)) OR (inter_transect_distance = '-1'::integer	
chk_n_ctds	((n_ctds >= 1) AND (n_ctds <= 999)) OR NULL::boolean	
chk_n_hauls	((n_hauls >= 1) AND (n_hauls <= 999)) OR NULL::boolean	
chk_vessel_speed	(vessel_speed)::double precision >= (8)::double precision) AND ((vessel_speed)::double precision <= (10)::double precision	
chk_file_format	(file_format)::text ~* '^(raw|hac|ek5|ek6|dt4|BI500)(-(raw|hac|ek5|ek6|dt4|BI500))*$'::text	

Table medbs_rdb_schema.medias_acoustics_sset

Idx	Name	Data Type	Description
Hydro Acoustic SubSet (calibration)			
* Pk	survey_name	varchar(14)	Survey name (e.g. MEDIAS)
* Pk	cd_country	varchar(3)	Country ISO 3166 international standard
* Pk	gsa	varchar(7)	GFCM Geographical subarea
* Pk	survey_area	varchar(32)	Survey area (may extend more than one GSA, e.g. Iberian coast)
* Pk	cd_centre	varchar(14)	Research center code
* Pk	cd_inst	varchar(14)	Research institute code
* Pk	cd_vessel	varchar(12)	Vessel
* Pk	sampling_year	smallint	Sampling year
* Pk	cd_cruise	varchar(14)	Cruise code
* Pk	calibration_id	smallint	The echosounder calibration identification code (e.g. 1, 2). Used to associate acoustic integration data in other tables with the specific instrument calibration applied during data collection & analysis.
	calibration_date	date	Calibration date
	absorption_coefficient	numeric(7,6)	Value of the acoustic absorption coefficient alpha (dB/m) calculated during calibration
	sound_speed	numeric(6,2)	Value of the speed of sound (m/s) calculated during calibration
	pulse_duration	numeric(5,3)	Acoustic pulse duration used for calibration and data acquisition (ms), e.g. 1.024, 0.512
	frequency	smallint	Acoustic pulse frequency used for calibration and data acquisition (kHz). Typically 38 kHz for biomass surveys. Additional frequencies might be calibrated for auxiliary purposes during echogram scrutinization (e.g. echotrace identification and/or plankton filtering)
	rms_beam	numeric(4,3)	The root-mean-square (RMS) error (dB) between measurements taken during calibration, and the adjusted acoustic beam model, e.g. 0.02, 0.1
	adjusted_gain	numeric(6,2)	The adjusted transducer gain (dB) as a result of the calibration procedure
	sa_corr	numeric(6,2)	Sa correction (dB). This value is estimated during calibration and represents the correction required to the Sv constant to harmonize the TS and NASC measurements
	beamwidth_athwart	numeric(5,2)	The 3 dB beamwidth angle (deg) in the athwartship direction, as calculated during calibration, e.g. 6.8
	beamwidth_along	numeric(5,2)	The 3 dB beamwidth angle (deg) in the alongship direction, as calculated during calibration, e.g. 6.8
	athwart_offset	numeric(3,2)	The beam offset angle (deg) in the athwartship direction, as calculated during calibration, e.g. 0.1, 0.2
	along_offset	numeric(3,2)	The beam offset angle (deg) in the alongtship direction, as calculated during calibration, e.g. 0.1, 0.2
	ts_of_sphere	numeric(6,2)	Target Strength (TS) of calibration sphere (dB re 1 m^2) at distance of 1 m, e.g. – 33.5
	bottom_depth	smallint	Sea bottom depth at the calibration location (m), e.g. 25

Indexes

Type	Name	On	Description
Pk	medias_acoustics_sset_pkey	survey_name, cd_country, gsa, survey_area, cd_centre, cd_inst, cd_vessel, sampling_year, cd_cruise, calibration_id	

Foreign Keys

Type	Name	On	Description
	cd_centre_fk$p_fishery_bodies_acronym (cd_centre) ref p_fishery_bodies (acronym)		

Table medbs_rdb_schema.medias_acoustics_sset

cd_inst_fk$p_fishery_body_departments (cd_inst) ref
p_fishery_body_departments (department)

cd_vessel_fk$rv_eurofleets (cd_vessel) ref
rv_eurofleets (vessel_code)

fk_sset$identity (survey_name, cd_country, gsa,
survey_area, cd_centre, cd_inst, cd_vessel,
sampling_year, cd_cruise) ref
medias_acoustics_identity (survey_name, cd_country,
gsa, survey_area, cd_centre, cd_inst, cd_vessel,
sampling_year, cd_cruise)

gsa_fk$p_fdi_subregion (gsa) ref p_fdi_subregion (
subregion_cd)

medias_acoustics_sset_country_fk$p_country3166 (
cd_country) ref p_countries_iso3166 (country_a3code)

survey_area_fk$p_medias_survey_area (survey_area) ref
p_medias_survey_area (survey_area_code)

survey_name_fk$p_surveys (survey_name) ref p_surveys
(survey_code)

Constraints

Name	Definition	Description
chk_adjusted_gain	adjusted_gain >= (1)::numeric) AND (adjusted_gain <= (9999)::numeric	
chk_along_offset	along_offset >= (0)::numeric) AND (along_offset <= (1)::numeric	
chk_athwart_offset	athwart_offset >= (-(1)::numeric)) AND (athwart_offset <= (1)::numeric	
chk_beamwidth_along	beamwidth_along >= (5)::numeric) AND (beamwidth_along <= (12)::numeric	
chk_beamwidth_athwart	beamwidth_athwart >= (5)::numeric) AND (beamwidth_athwart <= (12)::numeric	
chk_absorption_coefficient	absorption_coefficient >= (0)::numeric) AND (absorption_coefficient <= (1)::numeric	
chk_calibration_id	calibration_id >= 1) AND (calibration_id <= 10	
chk_rms	rms_beam >= (0)::numeric) AND (rms_beam <= (1)::numeric	
chk_sa_corr	sa_corr >= ('-2'::integer)::numeric) AND (sa_corr <= (2)::numeric	
chk_sound_speed	sound_speed >= (1400)::numeric) AND (sound_speed <= (1600)::numeric	
chk_ts_of_sphere	ts_of_sphere <= '-20.0'::numeric) AND (ts_of_sphere >= '-70.0'::numeric	
chk_bottom_depth	(bottom_depth)::numeric >= (5)::numeric) AND ((bottom_depth)::numeric <= (200)::numeric	

Table medbs_rdb_schema.medias_acoustics_sset

	chk_frequency	frequency = ANY (ARRAY[38, 70, 120, 200])

Table medbs_rdb_schema.medias_acoustics_sset_echotypes

Idx	Name	Data Type	Description
* Pk	survey_name	varchar(14)	Survey name (e.g. MEDIAS)
* Pk	cd_country	varchar(3)	Country ISO 3166 international standard
* Pk	gsa	varchar(7)	GFCM Geographical subarea
* Pk	survey_area	varchar(32)	Survey area (may extend more than one GSA, e.g. Iberian coast)
* Pk	geographical_stratum	varchar(32)	Geographical stratum (area inside a GSA and survey area)
* Pk	cd_centre	varchar(14)	Research center code
* Pk	cd_inst	varchar(14)	Research institute code
* Pk	cd_vessel	varchar(12)	Vessel
* Pk	sampling_year	smallint	Sampling year
* Pk	cd_cruise	varchar(14)	Cruise code
* Pk	calibration_id	smallint	The echosounder calibration identification code (e.g. 1, 2). Used to associate acoustic integration data in other tables with the specific instrument calibration applied during data collection & analysis.
* Pk	echo_type	varchar(3)	
	echo_type_description	varchar(100)	

Indexes

Type	Name	On	Description
Pk	medias_acoustics_sset_echotypes_pkey	survey_name, cd_country, gsa, survey_area, geographical_stratum, cd_centre, cd_inst, cd_vessel, sampling_year, cd_cruise, calibration_id, echo_type	

Foreign Keys

Type	Name	On	Description
	cd_centre_fk$p_fishery_bodies_acronym (cd_centre) ref p_fishery_bodies (acronym)		
	cd_inst_fk$p_fishery_body_departments (cd_inst) ref p_fishery_body_departments (department)		
	cd_vessel_fk$rv_eurofleets (cd_vessel) ref rv_eurofleets (vessel_code)		
	geo_stratum_fk$p_medias_geo_stratum (geographical_stratum) ref p_medias_geo_stratum (geo_stratum_code)		
	gsa_fk$p_fdi_subregion (gsa) ref p_fdi_subregion (subregion_cd)		
	medias_acoustics_sset_nasc_species_lc_country_fk$p_country3166 (cd_country) ref p_countries_iso3166 (country_a3code)		
	survey_area_fk$p_medias_survey_area (survey_area) ref p_medias_survey_area (survey_area_code)		
	survey_name_fk$p_surveys (survey_name) ref p_surveys (survey_code)		

Table medbs_rdb_schema.medias_acoustics_sset_nasc

Idx	Name	Data Type	Description

Hydro Acoustic: Nautical Area Scattering Coefficient (NASC)

Table medbs_rdb_schema.medias_acoustics_sset_nasc

* Pk	survey_name	varchar(14)	Survey name (e.g. MEDIAS)
* Pk	cd_country	varchar(3)	Country ISO 3166 international standard
* Pk	gsa	varchar(7)	GFCM Geographical subarea
* Pk	survey_area	varchar(32)	Survey area (may extend more than one GSA, e.g. Iberian coast)
* Pk	geographical_stratum	varchar(32)	Geographical stratum (area inside a GSA and survey area)
* Pk	cd_centre	varchar(14)	Research center code
* Pk	cd_inst	varchar(14)	Research institute code
* Pk	cd_vessel	varchar(12)	Vessel
* Pk	sampling_year	smallint	Sampling year
* Pk	cd_cruise	varchar(14)	Cruise
* Pk	calibration_id	smallint	The echosounder calibration identification code (e.g. 1, 2). Used to associate acoustic integration data in other tables with the specific instrument calibration applied during data collection & analysis.
* Pk	transect	smallint	Transect ID
	transect_name	varchar(32)	Transect name
* Pk	edsu_id	smallint	Elementary Distance Sampling Unit: The EDSU interval index (unitless) within the transect as a result of dividing the total transect length by the EDSU, e.g. 1, 2, 3
	trawl_haul_reference	varchar(128)	Trawl haul_id reference: [survey_name][cd_country][gsa][survey_area][geographical_stratum][cd_centre][cd_inst][cd_vessel][cd_cruise][subset_id][vhaul_id]
* Pk	echo_type	varchar(3)	Echo type: E1: fish schools at the bottom (altitude <20m); E2: schools in open water (altitude >20 m depth) attributed to sardine; E3: diffuse schools in open water (altitude >20 m depth) allocated to mackerel; E4: surface schools (altitude <30 m); E5: Myctophidae fish
	tm_avg	timestamp	The date and time of the middle ping in the domain corresponding to the EDSU interval
*	depth_avg	numeric(6,2)	The average bottom depth in the domain corresponding to the EDSU interval as calculated by all interval pings
*	longitude_avg	numeric(7,4)	The longitude (decimal degrees) of the middle ping in the domain corresponding to the EDSU interval
*	latitude_avg	numeric(7,4)	The latitude (decimal degrees) of the middle ping in the domain corresponding to the EDSU interval
*	nasc	numeric(10,4)	The Nautical Area Scattering Coefficient (NASC) corresponding to the acoustic backscatter characterized by echo type (m^2/nmi^2) within the EDSU interval

Indexes

Type	Name	On	Description
Pk	medias_acoustics_sset_bio_pkey	survey_name, cd_country, gsa, survey_area, geographical_stratum, cd_centre, cd_inst, cd_vessel, sampling_year, cd_cruise, calibration_id, transect, edsu_id, echo_type	

Foreign Keys

Type	Name	On	Description
	cd_centre_fk$p_fishery_bodies_acronym (cd_centre) ref p_fishery_bodies (acronym)		
	cd_inst_fk$p_fishery_body_departments (cd_inst) ref p_fishery_body_departments (department)		
	cd_vessel_fk$rv_eurofleets (cd_vessel) ref rv_eurofleets (vessel_code)		

Table medbs_rdb_schema.medias_acoustics_sset_nasc

fk_sset_bio$survey_sset (survey_name, cd_country, gsa, survey_area, cd_centre, cd_inst, cd_vessel, sampling_year, cd_cruise, calibration_id) ref medias_acoustics_sset (survey_name, cd_country, gsa, survey_area, cd_centre, cd_inst, cd_vessel, sampling_year, cd_cruise, calibration_id)

geo_stratum_fk$p_medias_geo_stratum (geographical_stratum) ref p_medias_geo_stratum (geo_stratum_code)

gsa_fk$p_fdi_subregion (gsa) ref p_fdi_subregion (subregion_cd)

medias_acoustics_sset_nasc_country_fk$p_country3166 (cd_country) ref p_countries_iso3166 (country_a3code)

survey_area_fk$p_medias_survey_area (survey_area) ref p_medias_survey_area (survey_area_code)

survey_name_fk$p_surveys (survey_name) ref p_surveys (survey_code)

Constraints

Name	Definition	Description
chk_depth_avg	depth_avg >= (10)::numeric) AND (depth_avg <= (1500)::numeric	
chk_echo_type	echo_type)::text = ANY (ARRAY[('E1'::character varying)::text, ('E2'::character varying)::text, ('E3'::character varying)::text, ('E4'::character varying)::text, ('E5'::character varying)::text, ('E6'::character varying)::text]	
chk_edsu_id	edsu_id >= 1) AND (edsu_id <= 2000	
chk_calibration_id	calibration_id >= 1) AND (calibration_id <= 10	
chk_longitude_avg	longitude_avg >= '-5.50'::numeric) AND (longitude_avg <= 35.00	
chk_total_fish_nasc	nasc >= (0)::numeric	
chk_transect	transect >= 1) AND (transect <= 999	
chk_latitude_avg	latitude_avg >= 34.00) AND (latitude_avg <= 45.70	

Table medbs_rdb_schema.medias_acoustics_sset_nasc_species

Idx	Name	Data Type	Description
Hydro Acoustic: Biomass (NASC) Species Identification			
* Pk	survey_name	varchar(14)	Survey name (e.g. MEDIAS)
* Pk	cd_country	varchar(3)	Country ISO 3166 international standard
* Pk	gsa	varchar(7)	GFCM Geographical subarea
* Pk	survey_area	varchar(32)	Survey area (may extend more than one GSA, e.g. Iberian coast)
* Pk	geographical_stratum	varchar(32)	Geographical stratum (area inside a GSA and survey area)
* Pk	cd_centre	varchar(14)	Research center code
* Pk	cd_inst	varchar(14)	Research institute code
* Pk	cd_vessel	varchar(12)	Vessel

Table medbs_rdb_schema.medias_acoustics_sset_nasc_species

* Pk	sampling_year	smallint	Sampling year
* Pk	cd_cruise	varchar(14)	Cruise code
* Pk	calibration_id	smallint	The echosounder calibration identification code (e.g. 1, 2). Used to associate acoustic integration data in other tables with the specific instrument calibration applied during data collection & analysis.
* Pk	transect	smallint	Transect ID
* Pk	edsu_id	smallint	Elementary Distance Sampling Unit: The EDSU interval index (unitless) within the transect as a result of deviding the total transect length by the EDSU, e.g. 1, 2, 3
	trawl_haul_reference	varchar(128)	Trawl haul_id reference: [survey_name][cd_country][gsa][survey_area][geographical_stratum][cd_centre][cd_inst][cd_vessel][cd_cruise][subset_id][vhaul_id]
* Pk	echo_type	varchar(3)	Echo type: E1: fish schools at the bottom (altitude <20m); E2: schools in open water (altitude >20 m depth) attributed to sardine; E3: diffuse schools in open water (altitude >20 m depth) allocated to mackerel; E4: surface schools (altitude <30 m); E5: Myctophidae fish
* Pk	species	varchar(7)	Species code: species list based on ASFIS FAO and WoRMS (for MEDIAS purposes)
* Pk	size_category	char(1)	
*	abundance	numeric(14,2)	The number of fish for the species corresponding to the EDSU interval
*	biomass	numeric(14,4)	The total weight of fish for the species corresponding to the EDSU interval (ton)
*	species_b20	numeric(5,2)	The species TS (dB) for the EDSU interval. This is a result of the average species fish length attributed to the EDSU interval (form biological sampling) and the L-TS function used
*	species_nasc	numeric(8,4)	The Nautical Area Scattering Coefficient (NASC) corresponding to backscatter attributed species within the EDSU interval (m^2/nmi^2)

Indexes

Type	Name	On	Description
Pk	medias_acoustics_sset_bio_species_pkey	survey_name, cd_country, gsa, survey_area, geographical_stratum, cd_centre, cd_inst, cd_vessel, sampling_year, cd_cruise, calibration_id, transect, edsu_id, echo_type, species, size_category	

Foreign Keys

Type	Name	On	Description
	species_fk$species_list_medias (species) ref species_list_medias (species)		
	cd_centre_fk$p_fishery_bodies_acronym (cd_centre) ref p_fishery_bodies (acronym)		
	cd_inst_fk$p_fishery_body_departments (cd_inst) ref p_fishery_body_departments (department)		
	cd_vessel_fk$rv_eurofleets (cd_vessel) ref rv_eurofleets (vessel_code)		
	fk_sset_nasc_spec$sset_nasc (survey_name, cd_country, gsa, survey_area, geographical_stratum, cd_centre, cd_inst, cd_vessel, sampling_year, cd_cruise, calibration_id, transect, edsu_id, echo_type) ref medias_acoustics_sset_nasc (survey_name, cd_country, gsa, survey_area, geographical_stratum, cd_centre, cd_inst, cd_vessel, sampling_year, cd_cruise, calibration_id, transect, edsu_id, echo_type)		

Table medbs_rdb_schema.medias_acoustics_sset_nasc_species

geo_stratum_fk$p_medias_geo_stratum (
geographical_stratum) ref p_medias_geo_stratum (
geo_stratum_code)

gsa_fk$p_fdi_subregion (gsa) ref p_fdi_subregion (
subregion_cd)

medias_acoustics_sset_nasc_species_country_fk$p_country
3166 (cd_country) ref p_countries_iso3166 (
country_a3code)

survey_area_fk$p_medias_survey_area (survey_area) ref
p_medias_survey_area (survey_area_code)

survey_name_fk$p_surveys (survey_name) ref p_surveys
(survey_code)

Constraints

Name	Definition	Description
chk_biomass	biomass >= (0)::numeric	
chk_calibration_id	calibration_id >= 1) AND (calibration_id <= 10	
chk_echo_type	echo_type)::text = ANY (ARRAY[('E1'::character varying)::text, ('E2'::character varying)::text, ('E3'::character varying)::text, ('E4'::character varying)::text, ('E5'::character varying)::text, ('E6'::character varying)::text]	
chk_edsu_id	edsu_id >= 1) AND (edsu_id <= 2000	
chk_abundance	abundance >= 0	
chk_species_b20	species_b20 >= ('-90'::integer)::numeric) AND (species_b20 <= ('-60'::integer)::numeric	
chk_species_nasc	species_nasc >= (0)::numeric	
chk_transect	transect >= 1) AND (transect <= 999	
chk_size_category	size_category = ANY (ARRAY['S'::bpchar, 'L'::bpchar, 'C'::bpchar])	

Table medbs_rdb_schema.medias_acoustics_sset_nasc_species_lenclass

Idx	Name	Data Type	Description
	Hydro Acoustic: Length classes		
*	survey_name	varchar(14)	Survey name (e.g. MEDIAS)
*	cd_country	varchar(3)	Country ISO 3166 international standard
*	gsa	varchar(7)	GFCM Geographical subarea
*	survey_area	varchar(32)	Survey area (may extend more than one GSA, e.g. Iberian coast)
*	geographical_stratum	varchar(32)	Geographical stratum (area inside a GSA and survey area)
*	cd_centre	varchar(14)	Research center code
*	cd_inst	varchar(14)	Research institute code
*	cd_vessel	varchar(12)	Vessel
*	sampling_year	smallint	Sampling year
*	cd_cruise	varchar(14)	Cruise code

Table medbs_rdb_schema.medias_acoustics_sset_nasc_species_lenclass

	Column	Type	Description
*	calibration_id	smallint	The echosounder calibration identification code (e.g. 1, 2). Used to associate acoustic integration data in other tables with the specific instrument calibration applied during data collection & analysis.
*	transect	smallint	Transect ID
*	edsu_id	smallint	Elementary Distance Sampling Unit: The EDSU interval index (unitless) within the transect as a result of deviding the total transect length by the EDSU, e.g. 1, 2, 3
*	species	varchar(7)	Species code: species list based on ASFIS FAO and WoRMS (for MEDIAS purposes)
*	length_class	smallint	Length class (by 0.5 cm)
	abundance	integer	The number of fish for species at length class, corresponding to the EDSU interval
	biomass	numeric(14,4)	The total weight of fish for cd_species at length_class corresponding to the EDSU interval (ton)

Foreign Keys

Type	Name	On	Description
	species_fk$species_list_medias (species) ref species_list_medias (species)		
	cd_centre_fk$p_fishery_bodies_acronym (cd_centre) ref p_fishery_bodies (acronym)		
	cd_inst_fk$p_fishery_body_departments (cd_inst) ref p_fishery_body_departments (department)		
	cd_vessel_fk$rv_eurofleets (cd_vessel) ref rv_eurofleets (vessel_code)		
	geo_stratum_fk$p_medias_geo_stratum (geographical_stratum) ref p_medias_geo_stratum (geo_stratum_code)		
	gsa_fk$p_fdi_subregion (gsa) ref p_fdi_subregion (subregion_cd)		
	medias_acoustics_sset_nasc_species_lc_country_fk$p_country3166 (cd_country) ref p_countries_iso3166 (country_a3code)		
	survey_area_fk$p_medias_survey_area (survey_area) ref p_medias_survey_area (survey_area_code)		
	survey_name_fk$p_surveys (survey_name) ref p_surveys (survey_code)		

Constraints

Name	Definition	Description
chk_abundance	abundance >= 0	
chk_biomass	biomass >= (0)::numeric	
chk_calibration_id	calibration_id >= 1) AND (calibration_id <= 10	
chk_edsu_id	edsu_id >= 1) AND (edsu_id <= 2000	
chk_transect	transect >= 1) AND (transect <= 999	