**Contrat de Recherche relatif à la propagation de la marée en estuaire**

**Contrat de recherche n° 16CP09**

**Rapport de livraison n°2**

**10/06/2019**

Laboratoire LEGOS, Toulouse, [florent.lyard@legos.obs-mip.fr](mailto:florent.lyard@legos.obs-mip.fr)

**Unstructured and curvilinear model configurations:**

**Gironde configuration (triangle mesh) :**

Distribution: [ftp.legos.obs-mip.fr:pub/ecola/SHOM/MAREST-2018/unstructured/gironde/delivery-2019-01-30](ftp://ftp.legos.obs-mip.fr:pub/ecola/SHOM/MAREST-2018/unstructured/gironde/delivery-2019-01-30)

gironde.nei : unstructured mesh (neighbours format)

gironde.msh\_ww : unstructured mesh (GMSH format with boundary codes)  
gironde.msh : unstructured mesh (GMSH format without boundary codes)  
topo-LGP1-1.s2r : bathymetry  
slope-LGP1-1.v2r : bathymetry slopes  
gironde+rivers.bel : open boundaries specification (with rivers opened)  
gironde.bel bel : open boundaries specification (with rivers closed)

**Gironde configuration (curvilinear mesh) :**

Distribution: ftp.legos.obs-mip.fr/pub/ecola/SHOM/MAREST-2018/curvilinear/gironde-2019-10-15

girondeBathy-symtools-comodo.nc : curvilinear mesh, NetCDF format

girondeBathy-symtools-comodo.b : curvilinear mesh, HYCOM ascii header

girondeBathy-symtools-comodo.a : curvilinear mesh, HYCOM binary data

**Academic configuration (triangle mesh) :**

Distribution: [ftp.legos.obs-mip.fr:pub/ecola/SHOM/MAREST-2018/unstructured/academic/delivery-2019-01-30](ftp://ftp.legos.obs-mip.fr:pub/unstructured/academic/delivery-2019-01-30)

academic-estuary.nei : unstructured mesh (neighbours format)  
academic-estuary.bel : open boundaries specification (with rivers opened)  
topo-LGP1-1.s2r : bathymetry

slope-LGP1-1.v2r : bathymetry slopes  
academic-estuary.bel : open boundaries specification (with rivers opened)

**Academic configuration (curvilinear mesh) :**

Distribution: ftp.legos.obs-mip.fr/pub/ecola/SHOM/MAREST-2018/curvilinear/delivery-2019-09-27/

shorelines.plg : : shorelines

academicBathy-symtools-comodo.nc : curvilinear mesh, NetCDF format

academicBathy-symtools-comodo.b : curvilinear mesh, HYCOM ascii header

academicBathy-symtools-comodo.a : curvilinear mesh, HYCOM binary data

**Additional information :**

academic-v1.ppt on:

<https://mycore.core-cloud.net/index.php/s/vdmLAokimvZdV71>

password: SHOM-2018

**MNT, geoids and shorelines:**

**Gironde shorelines :**

Distribution: [ftp.legos.obs-mip.fr:pub/ecola/SHOM/MAREST-2018/ shorelines/delivery-2019-01-30](ftp://ftp.legos.obs-mip.fr:pub/ecola/SHOM/MAREST-2018/%20shorelines/delivery-2019-01-30)

Description: assembly of histolitt (SHOM) and BDTOP (IGN)

tc\_france\_prevag+BDTopo.shp : format shapefile (1/2)  
tc\_france\_prevag+BDTopo.shx : format shapefile (2/2)  
tc\_france\_prevag+BDTopo.cst : format LEGOS (binary)  
tc\_france\_prevag+BDTopo.plg.gz : format LEGOS (ASCII), compressed  
  
**Gironde MNT :**

Distribution: [ftp.legos.obs-mip.fr:pub/ecola/SHOM/MAREST-2018 /bathymetry/gironde/delivery-2019-01-30](ftp://ftp.legos.obs-mip.fr:pub/ecola/SHOM/MAREST-2018%20/bathymetry/gironde/delivery-2019-01-30)

Description: assembly of histolitt (SHOM) and BDTOP (IGN)

assembly-RGE-filled-masked+SRTM+MNT\_Gironde-IGN69.nc : MNT on IGN69/RGF93 geoid reference  
assembly-RGE-filled-masked+SRTM+MNT\_Gironde-MSL.nc : MNT on MSL geoid (Ile d’Aix) reference

**Additional information :**

gironde-MNT-Flyard-v1.ppt on:

<https://mycore.core-cloud.net/index.php/s/vdmLAokimvZdV71>

password: SHOM-2018

**Academic MNT :**

Distribution: [ftp.legos.obs-mip.fr:pub/ecola/SHOM/MAREST-2018 /bathymetry/academic/delivery-2019-02-20](ftp://ftp.legos.obs-mip.fr:pub/ecola/SHOM/MAREST-2018%20/bathymetry/academic/delivery-2019-02-20)

Description: synthetic MNT

academic-smoothed.nc : MNT on MSL geoid reference

**GEOIDS :**

Distribution: [ftp.legos.obs-mip.fr:pub/ecola/SHOM/MAREST-2018/ geoids/delivery-2019-03-23/IGN69](ftp://ftp.legos.obs-mip.fr:pub/ecola/SHOM/MAREST-2018/%20geoids/delivery-2019-03-23/IGN69)

Description: netcdf gridded geoids from IGN over WGS84 ellipsoid

2012 IGN source:

Extraction from Circée

2019 IGN source:

XYZ ASCII file RAF18.txt from <https://geodesie.ign.fr/index.php?page=grilles> , renamed v0 ign69\_wgs84.xyz  
  
2012 processing :

2019 processing : mapxyz-v0 ign69\_wgs84.xyz –v ign69 -v accuracy -o ign69\_wgs84

ign69\_wgs84-v2019.nc : IGN on WGS84 ellipsoid reference, updated 2019 (geoid and accuracy)  
ign69\_wgs84-v2012.nc : IGN on WGS84 ellipsoid reference, updated 2012 (geoid)  
do add original files 2012 and 2019

**DREAL tide gauges (intermediate delivery) :**

Distribution: [ftp.legos.obs-mip.fr:pub/ecola/SHOM/MAREST-2018 /gauges/gironde/delivery-2019-02-20](ftp://ftp.legos.obs-mip.fr:pub/ecola/SHOM/MAREST-2018%20/gauges/gironde/delivery-2019-02-20)

Description: DREAL gauges time series

cadillac-limni-DREAL-DATUM.gnu : time series, DREAL (local) datum, ASCII format  
langon-limni-DREAL-DATUM.gnu : time series, DREAL (local) datum, ASCII format  
langon-airbus-DREAL-DATUM.gnu : time series, DREAL (local) datum, ASCII format  
la-reole-limni-DREAL-DATUM.gnu : time series, DREAL (local) datum, ASCII format  
pessac-limni1-DREAL-DATUM.gnu : time series, DREAL (local) datum, ASCII format  
pessac-limni2-DREAL-DATUM.gnu : time series, DREAL (local) datum, ASCII format  
  
**PMABDX and SHOM tide gauges (intermediate delivery) :**

Distribution: [ftp.legos.obs-mip.fr:pub/ecola/SHOM/MAREST-2018 /gauges/gironde/delivery-2019-03-20](ftp://ftp.legos.obs-mip.fr:pub/ecola/SHOM/MAREST-2018%20/gauges/gironde/delivery-2019-03-20)

Description: CalNaGironde data, GPMBDX and SHOM original and reformatted gauges time series

Gironde\_Maree\_GPMBDX.txt : time series, GPMBDX original data

Ambes\_20181013\_20181026.gnu : time series, GPMBDX (local) datum, ASCII format  
Bassens\_20181013\_20181026.gnu : time series, GPMBDX (local) datum, ASCII format  
Bordeaux\_20181013\_20181026.gnu : time series, GPMBDX (local) datum, ASCII format  
Fort\_Medoc\_20181013\_20181026.gnu : time series, GPMBDX (local) datum, ASCII format  
Lamena\_20181013\_20181026.gnu : time series, GPMBDX (local) datum, ASCII format  
Le\_Marquis\_20181013\_20181026.gnu : time series, GPMBDX (local) datum, ASCII format  
Le\_Verdon\_20181013\_20181026.gnu : time series, GPMBDX (local) datum, ASCII format  
Pauillac\_20181013\_20181026.gnu : time series, GPMBDX (local) datum, ASCII format  
Richard\_20181013\_20181026.gnu : time series, GPMBDX (local) datum, ASCII format

SHOM.0000\_20181014\_20181021.gnu : time series, SHOM (ZH) datum, ASCII format, 1st parameter to precise  
SHOM.0001\_20181014\_20181021.gnu : time series, SHOM (ZH) datum, ASCII format, 2nd parameter to precise  
SHOM.0000\_20181014\_20181026.gnu : time series, SHOM (ZH) datum, ASCII format, 1st parameter to precise  
SHOM.0001\_20181014\_20181026.gnu : time series, SHOM (ZH) datum, ASCII format, 2nd parameter to precise  
PAB-SHOM\_20181014\_20181026.gnu : time series, GPMBDX (ZH) datum, SHOM (?) processing to verify

cmdline.mgr-converter : processing execution log and commands  
README : processing informations

**Additional data:**

gironde-sample.dat : tide gauges location   
PortBloc-tugo.txt : T-UGOm simulation, timeseries at PortBloc

**DREAL tide gauges :**

Distribution: [ftp.legos.obs-mip.fr:pub/ecola/SHOM/MAREST-2018 /gauges/gironde/delivery-2019-03-23/upper-estuary/DREAL-data](ftp://ftp.legos.obs-mip.fr:pub/ecola/SHOM/MAREST-2018%20/gauges/gironde/upper-estuary/DREAL-data/delivery-2019-03-23)

Description: DREAL data, original time series

2018-Garonne-Dordogne.dat : regular ASCII to precise  
2018-Garonne-Dordogne.csv.bkp to precise  
2018-Garonne-Dordogne.csv : CSV format

Distribution: [ftp.legos.obs-mip.fr:pub/ecola/SHOM/MAREST-2018 /gauges/gironde/delivery-2019-03-23/upper-estuary/processing](ftp://ftp.legos.obs-mip.fr:pub/ecola/SHOM/MAREST-2018%20/gauges/gironde/delivery-2019-03-23/upper-estuary/processing)

cadillac-limni\_20171231\_20181113-DREAL-DATUM.gnu : DREAL timeseries, local datum  
cadillac-limni\_20171231\_20181113-IGN69.gnu : DREAL timeseries, IGN69/RGF93 datum  
cadillac\_20171231\_20181113-WGS84.gnu : DREAL timeseries, WGS84 datum (IGN version 2019)  
cadillac\_20171231\_20181113-WGS84-v2012.gnu : DREAL timeseries, WGS84 datum (IGN version 2012)

la-reole-limni\_20171231\_20181113-DREAL-DATUM.gnu : DREAL timeseries, local datum

la-reole-limni\_20171231\_20181113-IGN69.gnu : DREAL timeseries, IGN69/RGF93 datum  
la-reole\_20171231\_20181113-WGS84.gnu : DREAL timeseries, WGS84 datum (IGN version 2019)  
la-reole\_20171231\_20181113-WGS84-v2012.gnu : DREAL timeseries, WGS84 datum (IGN version 2019)

langon-airbus\_20171231\_20181113-DREAL-DATUM.gnu : DREAL timeseries, local datum  
langon-airbus\_20171231\_20181113-IGN69.gnu : DREAL timeseries, IGN69/RGF93 datum

langon-airbus\_20171231\_20181113-WGS84.gnu : DREAL timeseries, WGS84 datum (IGN version 2019)  
langon-airbus\_20171231\_20181113-WGS84-v2012.gnu : DREAL timeseries, WGS84 datum (IGN version 2012)

langon-limni\_20171231\_20181113-DREAL-DATUM.gnu : Cadillac DREAL timeseries, local datum (no data)

pessac-limni1\_20171231\_20181113-DREAL-DATUM.gnu : DREAL timeseries, local datum  
pessac-limni1\_20171231\_20181113-IGN69.gnu : DREAL timeseries, IGN69/RGF93 datum  
pessac-limni1\_20171231\_20181113-WGS84.gnu : DREAL timeseries, WGS84 datum (IGN version 2019)  
pessac-limni1\_20171231\_20181113-WGS84-v2012.gnu : DREAL timeseries, WGS84 datum (IGN version 2012)

pessac-limni2\_20171231\_20181113-DREAL-DATUM.gnu : DREAL timeseries, local datum  
pessac-limni2\_20171231\_20181113-IGN69.gnu : DREAL timeseries, IGN69/RGF93 datum  
pessac-limni2\_20171231\_20181113-WGS84.gnu : DREAL timeseries, WGS84 datum (IGN version 2019)  
pessac-limni2\_20171231\_20181113-WGS84-v2012.gnu : DREAL timeseries, WGS84 datum (IGN version 2012)

cmdline.mgr-converter : processing execution log and commands  
README : processing informations

**GPMBDX tide gauges :**

Distribution: [ftp.legos.obs-mip.fr:pub/ecola/SHOM/MAREST-2018 /gauges/gironde/delivery-2019-03-23/lower-estuary/](ftp://ftp.legos.obs-mip.fr:pub/ecola/SHOM/MAREST-2018%20/gauges/gironde/delivery-2019-03-23/lower-estuary/DREAL-data)

Description: GPMBDX data, original and gauges time series

to be completed, relocated

Gironde\_Maree\_GPMBDX.txt : time series, GPMBDX original data

Distribution: [ftp.legos.obs-mip.fr:pub/ecola/SHOM/MAREST-2018 /gauges/gironde/delivery-2019-03-23/lower-estuary/processing](ftp://ftp.legos.obs-mip.fr:pub/ecola/SHOM/MAREST-2018%20/gauges/gironde/delivery-2019-03-23/lower-estuary/processing)

Ambes\_20181013\_20181026-GPMBX-DATUM.gnu : GPMBDX timeseries, local datum  
Ambes\_20181013\_20181026-IGN69.gnu : GPMBDX timeseries, IGN69/RGF93 datum  
Ambes\_20181013\_20181026-WGS84.gnu : GPMBDX timeseries, WGS84 datum (IGN version 2019)  
Ambes\_20181013\_20181026-WGS84-v2012.gnu : GPMBDX timeseries, WGS84 datum (IGN version 2012)

Bassens\_20181013\_20181026-GPMBX-DATUM.gnu : GPMBDX timeseries, local datum  
Bassens\_20181013\_20181026-IGN69.gnu : GPMBDX timeseries, IGN69/RGF93 datum  
Bassens\_20181013\_20181026-WGS84.gnu : GPMBDX timeseries, WGS84 datum (IGN version 2019)  
Bassens\_20181013\_20181026-WGS84-v2012.gnu : GPMBDX timeseries, WGS84 datum (IGN version 2012)

Bordeaux\_20181013\_20181026-GPMBX-DATUM.gnu : GPMBDX timeseries, local datum  
Bordeaux\_20181013\_20181026-IGN69.gnu : GPMBDX timeseries, IGN69/RGF93 datum  
Bordeaux\_20181013\_20181026-WGS84.gnu : GPMBDX timeseries, WGS84 datum (IGN version 2019)  
Bordeaux\_20181013\_20181026-WGS84-v2012.gnu : GPMBDX timeseries, WGS84 datum (IGN version 2012)

Lamena\_20181013\_20181026-GPMBX-DATUM.gnu : GPMBDX timeseries, local datum  
Lamena\_20181013\_20181026-IGN69.gnu : GPMBDX timeseries, IGN69/RGF93 datum  
Lamena\_20181013\_20181026-WGS84.gnu : GPMBDX timeseries, WGS84 datum (IGN version 2019)  
Lamena\_20181013\_20181026-WGS84-v2012.gnu : GPMBDX timeseries, WGS84 datum (IGN version 2012)

Pauillac\_20181013\_20181026-GPMBX-DATUM.gnu : GPMBDX timeseries, local datum  
Pauillac\_20181013\_20181026-IGN69.gnu : GPMBDX timeseries, IGN69/RGF93 datum  
Pauillac\_20181013\_20181026-WGS84.gnu : GPMBDX timeseries, WGS84 datum (IGN version 2019)  
Pauillac\_20181013\_20181026-WGS84-v2012.gnu : GPMBDX timeseries, WGS84 datum (IGN version 2012)

Fort\_Medoc\_20181013\_20181026-GPMBX-DATUM.gnu : GPMBDX timeseries, local datum  
Fort\_Medoc\_20181013\_20181026-IGN69.gnu : GPMBDX timeseries, IGN69/RGF93 datum  
Fort\_Medoc\_20181013\_20181026-WGS84.gnu : GPMBDX timeseries, WGS84 datum (IGN version 2019)  
Fort\_Medoc\_20181013\_20181026-WGS84-v2012.gnu : GPMBDX timeseries, WGS84 datum (IGN version 2012)

Le\_Marquis\_20181013\_20181026-GPMBX-DATUM.gnu : GPMBDX timeseries, local datum  
Le\_Marquis\_20181013\_20181026-IGN69.gnu : GPMBDX timeseries, IGN69/RGF93 datum  
Le\_Marquis\_20181013\_20181026-WGS84.gnu : GPMBDX timeseries, WGS84 datum (IGN version 2019)  
Le\_Marquis\_20181013\_20181026-WGS84-v2012.gnu : GPMBDX timeseries, WGS84 datum (IGN version 2012)

Le\_Verdon\_20181013\_20181026-GPMBX-DATUM.gnu : GPMBDX timeseries, local datum  
Le\_Verdon\_20181013\_20181026-IGN69.gnu : GPMBDX timeseries, IGN69/RGF93 datum  
Le\_Verdon\_20181013\_20181026-WGS84.gnu : GPMBDX timeseries, WGS84 datum (IGN version 2019)  
Le\_Verdon\_20181013\_20181026-WGS84-v2012.gnu : GPMBDX timeseries, WGS84 datum (IGN version 2012)

Richard\_20181013\_20181026-GPMBX-DATUM.gnu : GPMBDX timeseries, local datum  
Richard\_20181013\_20181026-IGN69.gnu : GPMBDX timeseries, IGN69/RGF93 datum  
Richard\_20181013\_20181026-WGS84.gnu : GPMBDX timeseries, WGS84 datum (IGN version 2019)  
Richard\_20181013\_20181026-WGS84-v2012.gnu : GPMBDX timeseries, WGS84 datum (IGN version 2012)

PortBloc\_SHOM\_20181014\_20181026-ZH.gnu : SHOM timeseries, ZH datum  
Port\_Bloc\_SHOM\_20181014\_20181026-IGN69.gnu : SHOM timeseries, IGN69/RGF93 datum

Le\_Verdon\_GPMBX-SHOM\_20181014\_20181026-WGS84.gnu : SHOM timeseries, WGS84 datum (IGN version 2019)

(review filename)

cmdline.mgr-converter : processing execution log and commands  
README : processing informations  
  
**Additional data:**

PortBloc-tugo.txt : T-UGOm simulation, timeseries at PortBloc  
cmdline.predictor : tide prediction execution log and commands

gironde-sample.dat : tide gauges location   
FES2014-prediction.dat : tide prediction at Gironde tide gauges, output