TELEMAC-2D

Reference Manual

Version v8p2
December 1, 2020

Contents

1. Detail list of keywords

1.1 ABSCISSAE OF SOURCES

Type : Real
Dimension : 2
Mnemo XSCE
DEFAULT VALUE : MANDATORY
French keyword : `ABSCISSES DES SOURCES`

Abscissae of sources of flowrate and/or tracer. The source will be located at the nearest node in the mesh.

1.2 ACCURACY FOR DIFFUSION OF TRACERS

Type : Real
Dimension : 1
Mnemo SLVTRA(ITRAC)%EPS
DEFAULT VALUE : 1.E-6
French keyword : `PRECISION POUR LA DIFFUSION DES TRACEURS`

Sets the required accuracy for computing the tracer diffusion.

1.3 ACCURACY OF EPSILON

Type : Real
Dimension : 1
Mnemo SLVEP%EPS
DEFAULT VALUE : 1.E-9
French keyword : `PRECISION SUR EPSILON`

Sets the required accuracy for computing ε in the diffusion and source terms step of the ε transport equation.

1.4 ACCURACY OF K

Type : Real
Dimension : 1
Mnemo SLVK%EPS
DEFAULT VALUE : 1.E-9
French keyword : `PRECISION SUR K`

Sets the required accuracy for computing k in the diffusion and source terms step of the k transport equation.

1.5 ACCURACY OF SPALART-ALLMARAS

Type : Real
Dimension : 1
Mnemo SLVNU%EPS
DEFAULT VALUE : 1.E-9
French keyword : `PRECISION SUR SPALART-ALLMARAS`

Sets the required accuracy for the Spalart-Allmaras model in the diffusion and source terms step of the $\tilde{\nu}$.

1.6 AD LINEAR SOLVER DERIVATIVE CONVERGENCE

Type : Logical
Dimension : 1
Mnemo AD_LINSOLV_DERIVATIVE_CONVERGENCE
DEFAULT VALUE : YES
French keyword : `AD CONVERGENCE DES DERIVEES POUR LE SOLVEUR LINEAIRE`

Iterative linear solvers: derivative convergence test for AD.

1.7 AD LINEAR SOLVER RESET DERIVATIVES

Type : Logical
Dimension : 1
Mnemo AD_LINSOLV_RESETDERIV
DEFAULT VALUE : YES
French keyword : `AD REMISE A ZERO DES DERIVEES DU SOLVEUR LINEAIRE`

Resets the derivatives for AD.

1.8 AD NAMES OF DERIVATIVES

Type : String
Dimension : 2
Mnemo NAMES_ADVAR
DEFAULT VALUE : 'MANDATORY'
French keyword : `AD NOMS DES DERIVEES`

Name of user differentiators in 32 characters, 16 for the name, 16 for the unit.

1.9 AD NUMBER OF DERIVATIVES

Type : Integer
Dimension : 1
Mnemo NADVAR
DEFAULT VALUE : 0
French keyword : `AD NOMBRE DE DERIVEES`

Defines the number of user derivatives, within the framework of the algorithmic differentiation.

1.10 AD SYMBOLIC LINEAR SOLVER

Type : Logical
Dimension : 1
Mnemo AD_SYMBLINSOLV
DEFAULT VALUE : NO
French keyword : `AD SOLVEUR LINEAIRE SYMBOLIQUE`
Enables the symbolic linear solver for AD.

1.11 ADVECTION

Type : Logical
Dimension : 1
Mnemo CONV
DEFAULT VALUE : YES
French keyword : `CONVECTION`
Are the advection terms taken into account or not? If YES, some advection terms can still be deleted using the keywords `ADVECTION OF`...

1.12 ADVECTION OF H

Type : Logical
Dimension : 1
Mnemo CONVV(2)
DEFAULT VALUE : YES
French keyword : `CONVECTION DE H`
The advection of H is taken into account or ignored.

1.13 ADVECTION OF K AND EPSILON

Type : Logical
Dimension : 1
Mnemo CONVV(4)
DEFAULT VALUE : YES
French keyword : `CONVECTION DE K ET EPSILON`
The k and ε advection is taken into account or ignored (for $k-\varepsilon$ model) or $\tilde{\nu}$ advection (for Spalart-Allmaras model).

1.14 ADVECTION OF TRACERS

Type : Logical
Dimension : 1
Mnemo CONVV(3)
DEFAULT VALUE : YES
French keyword : `CONVECTION DES TRACEURS`
The advection of the passive tracer is taken into account or ignored.

1.15 ADVECTION OF U AND V

Type :	Logical
Dimension :	1
Mnemo	CONVV(1)
DEFAULT VALUE :	YES
French keyword :	CONVECTION DE U ET V

The advection of U and V is taken into account or ignored.

1.16 AIR PRESSURE

Type :	Logical
Dimension :	1
Mnemo	ATMOS
DEFAULT VALUE :	NO
French keyword :	PRESSION ATMOSPHERIQUE

Provided to decide whether the influence of an atmosphere pressure field is taken into account or not.

1.17 AIR TEMPERATURE

Type :	Real
Dimension :	1
Mnemo	CST_TAIR
DEFAULT VALUE :	20.
French keyword :	TEMPERATURE DE L'AIR

Gives the value of air temperature when it is constant in time and space. In °C.

1.18 ALGAE RELEASE TYPE

Type :	Integer
Dimension :	2
Mnemo	REL_ALGAE
DEFAULT VALUE :	1;1
French keyword :	TYPE DE RELACHE DES ALGUES

Possible values are:

- 1: TIMED : Algae move after a specified time has elapsed,
- 2: DISLODGEMENT: Algae move after a critical wave orbital velocity is exceeded.

1.19 ALGAE TRANSPORT MODEL

Type :	Logical
Dimension :	1
Mnemo	ALGAE
DEFAULT VALUE :	NO
French keyword :	MODELE DE TRANSPORT DES ALGUES

If YES, some or all the floats or particles will be algae.

1.20 ALGAE TYPE

Type : Integer
Dimension : 2
Mnemo YALGAE
DEFAULT VALUE : 1;1
French keyword : TYPE DES ALGUES
Algae type. Possible choices are:

- 1: Sphere,
- 2: Iridaeca Flaccida,
- 3: Pelvetiopsis Limitata,
- 4: Gigartina Leptorhynchos.

For choice 1 the algae particles will be modeled as spheres, and for the other choices see Gaylord et al. (1994).

1.21 ANTECEDENT MOISTURE CONDITIONS

Type : Integer
Dimension : 1
Mnemo AMC
DEFAULT VALUE : 2
French keyword : CONDITIONS D'HUMIDITE PRECEDENTE
Gives the antecedent moisture conditions before a rainfall event for the SCS CN runoff model. Available options are:

- 1: dry antecedent conditions,
- 2: normal antecedent conditions,
- 3: wet antecedent conditions.

This keyword is only usefull for runoff model 1 (SCS CN model).

1.22 ASCII ATMOSPHERIC DATA FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2ATMA)%NAME
DEFAULT VALUE : ”
French keyword : FICHIER ASCII DE DONNEES ATMOSPHERIQUES
ASCII data file containing the atmospheric data varying in time.

1.23 ASCII DATABASE FOR TIDE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DBDD)
DEFAULT VALUE : ”
French keyword : BASE ASCII DE DONNEES DE MAREE
Tide data base of harmonic constituents extracted from the TIDAL MODEL FILE. Old name in release 6.1: TIDE DATA BASE.

1.24 ASCII DROGUES FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DFLO)%NAME
DEFAULT VALUE : ”
French keyword : FICHIER ASCII DES FLOTTEURS
ASCII results file with positions of drogues.

1.25 BINARY ATMOSPHERIC DATA FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2ATMB)%NAME
DEFAULT VALUE : ”
French keyword : FICHIER BINAIRE DE DONNEES ATMOSPHERIQUES
Binary-coded data file containing the atmospheric data varying in time and space on the mesh.

1.26 BINARY ATMOSPHERIC DATA FILE FORMAT

Type : String
Dimension : 1
Mnemo T2D_FILES(T2ATMB)%FMT
DEFAULT VALUE : ’SERAFIN’
French keyword : FORMAT DU FICHIER BINAIRE DE DONNEES ATMOSPHERIQUES
Format of the BINARY ATMOSPHERIC DATA FILE. Possible values are:

- SERAFIN : classical single precision format in TELEMAC,
- SERAFIND: classical double precision format in TELEMAC,
- MED : MED double precision format based on HDF5.

1.27 BINARY DATA FILE 1

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DBI1)%NAME
DEFAULT VALUE : ”
French keyword : FICHIER DE DONNEES BINAIRE 1
Binary-coded data file available to the user.

1.28 BINARY DATA FILE 1 FORMAT

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DBI1)%FMT
DEFAULT VALUE : ’BIN’
French keyword : FORMAT DU FICHIER DE DONNEES BINAIRE 1
Format of the BINARY DATA FILE 1. Possible values are:

- BIN : standard binary format,
- SERAFIN : classical single precision format in TELEMAC,

- SERAFIND: classical double precision format in TELEMAC,
- MED : MED double precision format based on HDF5.

1.29 BINARY DATA FILE 2

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DBI2)%NAME
DEFAULT VALUE : ”
French keyword : FICHIER DE DONNEES BINAIRE 2
Binary-coded data file available to the user.

1.30 BINARY DATA FILE 2 FORMAT

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DBI2)%FMT
DEFAULT VALUE : ’BIN’
French keyword : FORMAT DU FICHIER DE DONNEES BINAIRE 2
Format of the BINARY DATA FILE 2. Possible values are:

- BIN : standard binary format,
- SERAFIN : classical single precision format in TELEMAC,
- SERAFIND: classical double precision format in TELEMAC,
- MED : MED double precision format based on HDF5.

1.31 BINARY DATABASE 1 FOR TIDE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DBB1)
DEFAULT VALUE : ”
French keyword : BASE BINAIRE 1 DE DONNEES DE MAREE
Binary database 1 of harmonic constants. In the case of the TPXO satellite altimetry model, this file should be for free surface level, for instance h_tpxo7.2

1.32 BINARY DATABASE 2 FOR TIDE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DBB2)
DEFAULT VALUE : ”
French keyword : BASE BINAIRE 2 DE DONNEES DE MAREE
Binary database 2 of harmonic constants. In the case of the TPXO satellite altimetry model, this file should be for tidal velocities, for instance u_tpxo7.2

1.33 BINARY DROGUES FILE

Type :	String
Dimension :	1
Mnemo	T2D_FILES(T2DBLO)%NAME
DEFAULT VALUE :	”
French keyword :	FICHIER BINAIRE DES FLOTTEURS

Binary results file with positions of drogues.

1.34 BINARY RESULTS FILE

Type :	String
Dimension :	1
Mnemo	T2D_FILES(T2DRBI)%NAME
DEFAULT VALUE :	”
French keyword :	FICHIER DE RESULTATS BINAIRE

Additional binary-coded result file available to the user.

1.35 BINARY RESULTS FILE FORMAT

Type :	String
Dimension :	1
Mnemo	T2D_FILES(T2DRBI)%NAME
DEFAULT VALUE :	’BIN’
French keyword :	FORMAT DU FICHIER DE RESULTATS BINAIRE

Format of the BINARY RESULTS FILE. Possible values are:

- BIN : standard binary format,
- SERAFIN : classical single precision format in TELEMAC,
- SERAFIND: classical double precision format in TELEMAC,
- MED : MED double precision format based on HDF5.

1.36 BOTTOM SMOOTHINGS

Type :	Integer
Dimension :	1
Mnemo	LISFON
DEFAULT VALUE :	0
French keyword :	LISSAGES DU FOND

Number of smoothings on bottom topography. Each smoothing is mass conservative. to be used when interpolation of bathymetry on the mesh gives very rough results.

1.37 BOTTOM SMOOTHINGS AFTER USER MODIFICATIONS

Type :	Logical
Dimension :	1
Mnemo	LISFON_AFTER
DEFAULT VALUE :	YES
French keyword :	LISSAGES DU FOND APRES MODIFICATIONS UTILISATEUR

Indicates if the number of potential smoothings on bottom topography is done after (or before otherwise) the topography modifications implemented by the user.

1.38 BOTTOM SURFACES DELWAQ FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DDL5)%NAME
DEFAULT VALUE : ”
French keyword : FICHIER DELWAQ DES SURFACES DU FOND
Results file for chaining with DELWAQ.

1.39 BOTTOM TOPOGRAPHY FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DFON)%NAME
DEFAULT VALUE : ”
French keyword : FICHIER DES FONDS
Name of the possible file containing the bathymetric data. Where this keyword is used, these bathymetric data shall be used in the computation.

1.40 BOUNDARY CONDITIONS FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DCLI)%NAME
DEFAULT VALUE : ’MANDATORY’
French keyword : FICHIER DES CONDITIONS AUX LIMITES
Name of the file containing the types of boundary conditions. This file is filled automatically by the mesh generator through through colours that are assigned to the boundary nodes.

1.41 BREACH

Type : Logical
Dimension : 1
Mnemo BRECHE
DEFAULT VALUE : NO
French keyword : BRECHE
Take in account some breaches during the computation by modifying the bottom level of the mesh. Breach description is done with the BREACHES DATA FILE.

1.42 BREACHES DATA FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DBRC)%NAME
DEFAULT VALUE : ”
French keyword : FICHIER DE DONNEES DES BRECHES
Description of breaches.

1.43 C-U PRECONDITIONING

Type :	Logical
Dimension :	1
Mnemo	PRECCU
DEFAULT VALUE :	YES
French keyword :	PRECONDITIONNEMENT C-U

Change of variable from H to C in the final linear system. This option is deactivated with wave equation i.e. TREATMENT OF THE LINEAR SYSTEM = 2.

1.44 CHECKING THE MESH

Type :	Logical
Dimension :	1
Mnemo	CHECK_MESH
DEFAULT VALUE :	NO
French keyword :	VERIFICATION DU MAILLAGE

If this keyword is equal to YES, a call to subroutine **CHECKMESH** will look for errors in the mesh, superimposed points, etc.

1.45 CLOUD COVER

Type :	Real
Dimension :	1
Mnemo	CST_CLDC
DEFAULT VALUE :	5.
French keyword :	NEBULOSITE

Gives the value of cloud cover when it is constant in time and space. In Octas or tenth.

1.46 COEFFICIENT FOR DIFFUSION OF TRACERS

Type :	Real
Dimension :	1
Mnemo	DIFNU
DEFAULT VALUE :	1.E-6
French keyword :	COEFFICIENT DE DIFFUSION DES TRACEURS

Sets the value of the tracer diffusivity. These values may have a significant effect on the evolution of tracers in time. Since release 8.2, it has been an array, with one value per tracer, separated by semicolons.

1.47 COEFFICIENT OF WIND INFLUENCE

Type :	Real
Dimension :	1
Mnemo	FAIR
DEFAULT VALUE :	1.55E-6
French keyword :	COEFFICIENT D'INFLUENCE DU VENT

Sets the value of the wind driving coefficient. See the User Manual or the principle note for the value to give.

1.48 COEFFICIENT OF WIND INFLUENCE VARYING WITH WIND SPEED

Type : Logical
Dimension : 1
Mnemo FAIRACCU
DEFAULT VALUE : YES
French keyword : COEFFICIENT D'INFLUENCE DU VENT DEPENDANT DE LA VITESSE DU VE

If YES, the value of the wind driving coefficient is computed with respect to the wind velocity. The value of COEFFICIENT OF WIND INFLUENCE is overwritten. Old default value = NO until V8P1.

1.49 COEFFICIENT TO CALIBRATE SEA LEVEL

Type : Real
Dimension : 1
Mnemo MSL
DEFAULT VALUE : 0.
French keyword : COEFFICIENT DE CALAGE DU NIVEAU DE MER

Coefficient to calibrate the sea level. It may depend on the altimetric reference used in the model, for example Chart Datum, Mean Sea Level...

1.50 COEFFICIENT TO CALIBRATE TIDAL RANGE

Type : Real
Dimension : 1
Mnemo CTIDE
DEFAULT VALUE : 1.
French keyword : COEFFICIENT DE CALAGE DU MARNAGE

Coefficient to calibrate the tidal range of tidal wave at tidal open boundary conditions.

1.51 COEFFICIENT TO CALIBRATE TIDAL VELOCITIES

Type : Real
Dimension : 1
Mnemo CTIDEV
DEFAULT VALUE : 999999.
French keyword : COEFFICIENT DE CALAGE DES VITESSES DE COURANT

Coefficient to calibrate the tidal velocities of tidal wave at tidal open boundary conditions. Default value 999,999. means that the square root of COEFFICIENT TO CALIBRATE TIDAL RANGE is taken.

1.52 COMPATIBLE COMPUTATION OF FLUXES

Type : Logical
Dimension : 1
Mnemo COMFLU
DEFAULT VALUE : NO
French keyword : CALCUL COMPATIBLE DES FLUX

Flowrates through control sections, computation compatible with the weak formulation of no-flux boundary condition.

1.53 COMPUTATION CONTINUED

Type : Logical
Dimension : 1
Mnemo .NOT.DEBU
DEFAULT VALUE : NO
French keyword : SUITE DE CALCUL

Determines whether the computation under way is independent result or is following an earlier result.

- NO: It is the first run for this computation and a whole set of initial conditions should be defined,
- YES: It follows a former computation: the initial conditions consist in the last time step of the PREVIOUS COMPUTATION FILE defined in the steering file used for submitting the computation.

All the data from the steering file may be defined once again, which provides an opportunity to change, for example, the time step, the turbulence model, the friction, to add or remove a tracer...
It is also possible to define new boundary conditions (in the subroutine **BORD** or values defined in the steering file).

1.54 CONCATENATE PARTEL OUTPUT

Type : Logical
Dimension : 1
Mnemo CONCAT_PARTEL
DEFAULT VALUE : NO
French keyword : CONCATENATION SORTIE PARTEL

With this option partel no more generates a file (GEO/CLI/PAR) per process but a single concatenate file of them, associated to an index file. Then instead of having partel generating 3P files, it only generates 6 files.

1.55 CONTINUITY CORRECTION

Type : Logical
Dimension : 1
Mnemo CORCON
DEFAULT VALUE : NO
French keyword : CORRECTION DE CONTINUITE

Correction of the velocities on points with a prescribed elevation, where the continuity equation has not been solved. It has to be activated with tidal flats and TREATMENT OF NEGATIVE DEPTHS = 2 or 3.

1.56 CONTROL OF LIMITS

Type : Logical
Dimension : 1
Mnemo VERLIM
DEFAULT VALUE : NO
French keyword : CONTROLE DES LIMITES

Use with the key-word: LIMIT VALUES. The program is stopped if the limits on U, V, H or tracers are trepassed.

1.57 CONTROL SECTIONS

Type : Integer
Dimension : 2
Mnemo CTRLSC
DEFAULT VALUE : MANDATORY
French keyword : SECTIONS DE CONTROLE
Couples of points (global numbers in the mesh) defining sections where the instantaneous and cumulated discharges will be given.

1.58 CONVERGENCE STUDY

Type : Logical
Dimension : 1
Mnemo CONVERGENCE
DEFAULT VALUE : NO
French keyword : ETUDE DE CONVERGENCE
Activates a convergence study compared to an analytical solution on a fine mesh.

1.59 CORIOLIS

Type : Logical
Dimension : 1
Mnemo CORIOL
DEFAULT VALUE : NO
French keyword : CORIOLIS
The Coriolis force is taken into account or ignored.

1.60 CORIOLIS COEFFICIENT

Type : Real
Dimension : 1
Mnemo FCOR
DEFAULT VALUE : 0.
French keyword : COEFFICIENT DE CORIOLIS
Sets the value of the Coriolis force coefficient, in cartesian coordinates. This coefficient, denoted **FCOR** in the code, should be equal to $2\omega\sin(l)$ where ω denotes the earth angular speed of rotation and l the latitude. ω = 7.2921 10-5 rad/s.
The Coriolis force components are then:
$FU = FCOR \times V$,
$FV = -FCOR \times U$.
When using the spherical coordinates, the Coriolis coefficient is automatically computed.

1.61 COST FUNCTION

Type : Integer
Dimension : 1
Mnemo OPTCOST
DEFAULT VALUE : 1
French keyword : FONCTION COUT
Possible choices:

- computed with h, u, v,

- computed with c, u, v.

1.62 COUPLING PERIOD FOR SISYPHE

Type :	Integer
Dimension :	1
Mnemo	PERCOU
DEFAULT VALUE :	1
French keyword :	`PERIODE DE COUPLAGE POUR SISYPHE`

Sets the coupling period with the SISYPHE module, in number of time steps. By default, it is coupled at every time step.

1.63 COUPLING PERIOD FOR TOMAWAC

Type :	Integer
Dimension :	1
Mnemo	PERCOU_WAC
DEFAULT VALUE :	1
French keyword :	`PERIODE DE COUPLAGE POUR TOMAWAC`

Sets the coupling period with the TOMAWAC module, in number of time steps. By default, it is coupled at every time step.

1.64 COUPLING WITH

Type :	String
Dimension :	1
Mnemo	COUPLING, IN BIEF
DEFAULT VALUE :	”
French keyword :	`COUPLAGE AVEC`

List of codes to be coupled with TELEMAC-2D:

- SISYPHE: internal coupling with SISYPHE,
- TOMAWAC: internal coupling with TOMAWAC,
- WAQTEL: internal coupling with WAQTEL,
- KHIONE: internal coupling with KHIONE,
- DELWAQ: will yield results file for DELWAQ,
- GAIA: internal coupling with GAIA.

1.65 CULVERTS DATA FILE

Type :	String
Dimension :	1
Mnemo	T2D_FILES(T2DBUS)%NAME
DEFAULT VALUE :	”
French keyword :	`FICHIER DE DONNEES DES BUSES`

Description of culverts/tubes/bridges existing in the model.

1.66 DEBUGGER

Type : Integer
Dimension : 1
Mnemo DEBUG
DEFAULT VALUE : 0
French keyword : DEBUGGER
If 1, calls of subroutines will be printed in the listing.

1.67 DEFINITION OF ZONES

Type : Logical
Dimension : 1
Mnemo DEFZON
DEFAULT VALUE : NO
French keyword : DEFINITION DE ZONES
Triggers the call to **USER_DEF_ZONES** subroutine to give a zone number to every point.

1.68 DELWAQ PRINTOUT PERIOD

Type : Integer
Dimension : 1
Mnemo WAQPRD
DEFAULT VALUE : 1
French keyword : PERIODE DE SORTIE POUR DELWAQ
Printout period for DELWAQ files.

1.69 DELWAQ STEERING FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DL11)%NAME
DEFAULT VALUE : ”
French keyword : FICHIER DE COMMANDE DELWAQ
Steering file for chaining with DELWAQ.

1.70 DENSITY EFFECTS

Type : Logical
Dimension : 1
Mnemo ROVAR
DEFAULT VALUE : NO
French keyword : EFFETS DE DENSITE
The horizontal gradient of density is taken into account. The 1st tracer is then the salinity. $\rho_{\text{water}} = 999.972.(1 - 7.10^{-6}(T_{\text{mean}} - 4)^2)$.

1.71 DENSITY OF ALGAE

Type : Real
Dimension : 2
Mnemo RALGAE
DEFAULT VALUE : 1050.;1050.
French keyword : MASSE VOLUMIQUE DES ALGUES

Density of algae in kg/m^3.

1.72 DEPTH IN FRICTION TERMS

Type :	Integer
Dimension :	1
Mnemo	HFROT
DEFAULT VALUE :	1
French keyword :	HAUTEUR DANS LES TERMES DE FROTTEMENT

Possible choices:

- 1: nodal,
- 2: average.

1.73 DESIRED COURANT NUMBER

Type :	Real
Dimension :	1
Mnemo	CFLWTD
DEFAULT VALUE :	1.
French keyword :	NOMBRE DE COURANT SOUHAITE

Desired Courant number when VARIABLE TIME-STEP is set to YES.

1.74 DIAMETER OF ALGAE

Type :	Real
Dimension :	2
Mnemo	DALGAE
DEFAULT VALUE :	0.1;0.1
French keyword :	DIAMETRE DES ALGUES

Diameter of algae in m.

1.75 DICTIONARY

Type :	String
Dimension :	1
Mnemo	
DEFAULT VALUE :	'telemac2d.dico'
French keyword :	DICTIONNAIRE

Key word dictionary.

1.76 DIFFUSION OF TRACERS

Type :	Logical
Dimension :	1
Mnemo	DIFT
DEFAULT VALUE :	YES
French keyword :	DIFFUSION DES TRACEURS

The diffusion of the passive tracer is taken into account or ignored.

1.77 DIFFUSION OF VELOCITY

Type : Logical
Dimension : 1
Mnemo DIFVIT
DEFAULT VALUE : YES
French keyword : `DIFFUSION DES VITESSES`
Makes it possible to decide whether the diffusion of velocity (i.e. viscosity) is taken into account or not.

1.78 DIFFUSIVITY DELWAQ FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DL10)%NAME
DEFAULT VALUE : ”
French keyword : `FICHIER DELWAQ DE LA DIFFUSION`
Results file for chaining with DELWAQ.

1.79 DIFFUSIVITY FOR DELWAQ

Type : Logical
Dimension : 1
Mnemo DIFF_DEL
DEFAULT VALUE : NO
French keyword : `DIFFUSION POUR DELWAQ`
Triggers the output of diffusion for DELWAQ.

1.80 DISCRETIZATIONS IN SPACE

Type : Integer
Dimension : 5
Mnemo DISCRE
DEFAULT VALUE : 11;11;11;11;11
French keyword : `DISCRETISATIONS EN ESPACE`
Choice of space discretisation for every variable. These coefficients are respectively applied to:

- 1) U and V,
- 2) H,
- 3) T,
- 4) k and ε ($k-\varepsilon$ model),
- 5) $\tilde{\nu}$ (Spalart-Allmaras model).

Possible choices are:

- 11: linear,
- 12: quasi-bubble,
- 13: quadratic.

Quadratic elements (13) have not been implemented for wave equation (`TREATMENT OF THE LINEAR SYSTEM` = 2).

1.81 DISSIPATION COEFFICIENT FOR SECONDARY CURRENTS

Type : Real
Dimension : 1
Mnemo SEC_DS
DEFAULT VALUE : 5.E-1
French keyword : COEFFICIENT DE DISSIPATION POUR COURANTS SECONDAIRES
Coefficient of dissipation term of Ω.

1.82 DROGUES FILE FORMAT

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DBLO)%FMT
DEFAULT VALUE : 'TECPLOT'
French keyword : FORMAT DU FICHIER DES FLOTTEURS
Format of the BINARY DROGUES FILE. Possible choices are:

- BKBINPCL: format binary PCL native to BlueKenue,
- TECPLOT: format Tecplot original (ASCII).

1.83 DROGUES INITIAL POSITIONING DATA FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DPLY)%NAME
DEFAULT VALUE : ''
French keyword : FICHIER POSITIONNANT LES DROGUES INITIALES
ASCII data file containing polygons or points defining the initial positioning of drogues at the start of the simulation.

1.84 DURATION

Type : Real
Dimension : 1
Mnemo DUREE
DEFAULT VALUE : 0.
French keyword : DUREE DU CALCUL
Sets the duration of simulation in seconds. May be used instead of the parameter NUMBER OF TIME STEPS. The nearest integer to (duration/time step) is taken. If NUMBER OF TIME STEPS is also given, the greater value is taken.

1.85 DURATION BEFORE ALGAE RELEASE

Type : Real
Dimension : 2
Mnemo TALGAE
DEFAULT VALUE : 0.0;0.0
French keyword : DUREE AVANT RELACHE DES ALGUES
Duration in seconds before the release of the algae from the start of the simulation.

1.86 DURATION OF RAIN OR EVAPORATION IN HOURS

Type : Real
Dimension : 1
Mnemo RAIN_HDUR
DEFAULT VALUE : 1.E6
French keyword : DUREE DE LA PLUIE OU EVAPORATION EN HEURES
Gives the duration of the rain in hours, default value is infinite.

1.87 ELEMENTS MASKED BY USER

Type : Logical
Dimension : 1
Mnemo MSKUSE
DEFAULT VALUE : NO
French keyword : ELEMENTS MASQUES PAR L'UTILISATEUR
If YES, fill in the subroutine **USER_MASKOB**.

1.88 EQUATIONS

Type : String
Dimension : 1
Mnemo EQUA
DEFAULT VALUE : 'SAINT-VENANT FE'
French keyword : EQUATIONS
Choice of equations to solve:

- Shallow Water Finite Elements,
- Shallow Water Finite Volumes,
- Boussinesq 20 Characters.

1.89 EXCHANGE AREAS DELWAQ FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DDL2)%NAME
DEFAULT VALUE : ''
French keyword : FICHIER DELWAQ DES SURFACES DE FLUX
Results file for chaining with DELWAQ.

1.90 EXCHANGES BETWEEN NODES DELWAQ FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DDL6)%NAME
DEFAULT VALUE : ''
French keyword : FICHIER DELWAQ DES ECHANGES ENTRE NOEUDS
Results file for chaining with DELWAQ.

1.91 FINITE ELEMENT ASSEMBLY

Type : Integer
Dimension : 1
Mnemo MODASS
DEFAULT VALUE : 1
French keyword : `ASSEMBLAGE EN ELEMENTS FINIS`
Possible choices are:

- 1: normal,
- 2: with I8 integers,
- 3: compensation (for reproducibility).

1.92 FINITE VOLUME SCHEME

Type : Integer
Dimension : 1
Mnemo OPTVF
DEFAULT VALUE : 1
French keyword : `SCHEMA EN VOLUMES FINIS`
Possible choices:

- 0: Roe scheme,
- 1: kinetic,
- 3: Zokagoa scheme,
- 4: Tchamen scheme,
- 5: HLLC,
- 6: WAF.

1.93 FINITE VOLUME SCHEME SPACE ORDER

Type : Integer
Dimension : 1
Mnemo SORDER
DEFAULT VALUE : 1
French keyword : `ORDRE EN ESPACE DU SCHEMA VOLUME FINIS`
Possible choices:

- 1: first order in space,
- 2: second order in space.

1.94 FINITE VOLUME SCHEME TIME ORDER

Type : Integer
Dimension : 1
Mnemo TORDER
DEFAULT VALUE : 1
French keyword : `ORDRE EN TEMPS DU SCHEMA VOLUME FINIS`
Possible choices:

- 1: first order in time,
- 2: second order in time.

1.95 FLUX LIMITOR FOR H PLUS Z

Type : Integer
Dimension : 1
Mnemo ILIMHZ
DEFAULT VALUE : 1
French keyword : `LIMITEUR DE FLUX POUR H PLUS Z`
Possible choices:

- 1 : Minmod,
- 2 : Van Albada,
- 3 : MC (Monotonized Central-difference),
- 4 : GenMinmod.

1.96 FLUX LIMITOR FOR TRACERS

Type : Integer
Dimension : 1
Mnemo ILIMT
DEFAULT VALUE : 2
French keyword : `LIMITEUR DE FLUX POUR LES TRACEURS`
Possible choices:

- 1 : Minmod,
- 2 : Van Albada,
- 3 : MC (Monotonized Central-difference),
- 4 : GenMinmod.

1.97 FLUX LIMITOR FOR U AND V

Type : Integer
Dimension : 1
Mnemo ILIMUV
DEFAULT VALUE : 2
French keyword : `LIMITEUR DE FLUX POUR U ET V`
Possible choices:

- 1 : Minmod,
- 2 : Van Albada,
- 3 : MC (Monotonized Central-difference),
- 4 : GenMinmod.

1.98 FLUXLINE

Type : Logical
Dimension : 1
Mnemo DOFLUX
DEFAULT VALUE : NO
French keyword : FLUXLINE
Use Fluxline to compute flux over lines.

1.99 FLUXLINE INPUT FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DFLX)%NAME
DEFAULT VALUE : ”
French keyword : FICHIER DE FLUXLINE
Name of the fluxline file, with data on cross-sections.

1.100 FORMAT OF THE DROGUES POSITIONING DATA FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DPLY)%FMT
DEFAULT VALUE : ’BKASCI2S’
French keyword : FORMAT DU FICHIER POSITIONNANT LES DROGUES
Format of the DROGUES INITIAL POSITIONING DATA FILE. Single possible choice is:

- BKASCI2S: format AXCII I2S native of BlueKenue.

1.101 FORMATTED DATA FILE 1

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DFO1)%NAME
DEFAULT VALUE : ”
French keyword : FICHIER DE DONNEES FORMATE 1
Formatted data file available to the user.

1.102 FORMATTED DATA FILE 2

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DFO2)%NAME
DEFAULT VALUE : ”
French keyword : FICHIER DE DONNEES FORMATE 2
Formatted data file available to the user.

1.103 FORMATTED RESULTS FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DRFO)%NAME
DEFAULT VALUE : ”
French keyword : FICHIER DE RESULTATS FORMATE
Formatted file of results available to the user.

1.104 FORTRAN FILE

Type : String
Dimension : 1
Mnemo NOMFOR
DEFAULT VALUE : ”
French keyword : FICHIER FORTRAN
Name of the FORTRAN file or directory to be submitted, including specific subroutines of the model.

1.105 FOURIER ANALYSIS PERIODS

Type : Real
Dimension : 2
Mnemo PERIAF
DEFAULT VALUE : MANDATORY
French keyword : PERIODES D’ANALYSE DE FOURIER
List of periods to be analysed.

1.106 FREE SURFACE GRADIENT COMPATIBILITY

Type : Real
Dimension : 1
Mnemo TETAZCOMP
DEFAULT VALUE : 1.
French keyword : COMPATIBILITE DU GRADIENT DE SURFACE LIBRE
Values between 0 and 1 may suppress spurious oscillations.

1.107 FRICTION COEFFICIENT

Type : Real
Dimension : 1
Mnemo FFON
DEFAULT VALUE : 50.
French keyword : COEFFICIENT DE FROTTEMENT
Sets the value of the friction coefficient for the selected formulation. It is noteworthy that the meaning of this figure changes according to the selected formula (Chezy, Strickler, etc.):

- 1: linear coefficient,
- 2: Chezy coefficient,
- 3: Strickler coefficient,
- 4: Manning coefficient,

- 5: Nikuradse grain size.

1.108 FRICTION DATA

Type :	Logical
Dimension :	1
Mnemo	FRICTB
DEFAULT VALUE :	NO
French keyword :	`DONNEES POUR LE FROTTEMENT`

Logical to say if friction laws are defined by area.

1.109 FRICTION DATA FILE

Type :	String
Dimension :	1
Mnemo	T2D_FILES(T2DCOF)%NAME
DEFAULT VALUE :	”
French keyword :	`FICHIER DE DONNEES POUR LE FROTTEMENT`

Friction data file name. See the TELEMAC-2D user manual for its description.

1.110 GAIA STEERING FILE

Type :	String
Dimension :	1
Mnemo	PAS DE MNEMO
DEFAULT VALUE :	”
French keyword :	`FICHIER DES PARAMETRES DE GAIA`

GAIA parameter file in case of internal coupling.

1.111 GEOGRAPHIC SYSTEM

Type :	Integer
Dimension :	1
Mnemo	GEOSYST
DEFAULT VALUE :	-1
French keyword :	`SYSTEME GEOGRAPHIQUE`

Geographic coordinates system in which the numerical model is built. Indicate the corresponding zone with the keyword. The possible choices are:

- 0: defined by the user,
- 1: WGS84 longitude/latitude in real degrees,
- 2: WGS84 Northern UTM,
- 3: WGS84 Southern UTM,
- 4: Lambert,
- 5: Mercator projection.

1.112 GEOMETRY FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DGEO)%NAME
DEFAULT VALUE : 'MANDATORY'
French keyword : FICHIER DE GEOMETRIE

Name of the file containing the mesh. This file may also contain the topography and the friction coefficients.

1.113 GEOMETRY FILE FORMAT

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DGEO)%FMT
DEFAULT VALUE : 'SERAFIN'
French keyword : FORMAT DU FICHIER DE GEOMETRIE

Format of the GEOMETRY FILE. Possible values are:

- SERAFIN : classical single precision format in TELEMAC,
- SERAFIND: classical double precision format in TELEMAC,
- MED : MED double precision format based on HDF5.

1.114 GLOBAL NUMBER OF THE POINT TO CALIBRATE HIGH WATER

Type : Integer
Dimension : 1
Mnemo ICALHWG
DEFAULT VALUE : 0
French keyword : NUMERO GLOBAL DU POINT POUR CALER LA PLEINE MER

Global number of the point (between 1 and the number of boundary nodes in the 2D mesh) with respect to which the tidal constituents have their phase shifted to start the calculation with a high water (for schematic tides only). This point has to be a maritime boundary node. Only harmonic constants databases like TPXO are concerned.

1.115 GLOBAL NUMBERS OF SOURCE NODES

Type : Integer
Dimension : 2
Mnemo ISCE
DEFAULT VALUE : MANDATORY
French keyword : NUMEROS GLOBAUX DES NOEUDS DES SOURCES

Global numbers of nodes in the mesh that correspond to source point locations.

1.116 GRAPHIC PRINTOUT PERIOD

Type : Integer
Dimension : 1
Mnemo LEOPRD
DEFAULT VALUE : 1
French keyword : PERIODE POUR LES SORTIES GRAPHIQUES

Determines, in number of time steps, the printout period for the VARIABLES FOR GRAPHIC PRINTOUTS in the RESULTS FILE.

1.117 GRAVITY ACCELERATION

Type :	Real
Dimension :	1
Mnemo	GRAV
DEFAULT VALUE :	9.81
French keyword :	ACCELERATION DE LA PESANTEUR

Sets the value of the acceleration due to gravity in m/s^2.

1.118 H CLIPPING

Type :	Logical
Dimension :	1
Mnemo	CLIPH
DEFAULT VALUE :	NO
French keyword :	CLIPPING DE H

Determines whether limiting the water depth H by a lower value desirable or not (for instance in the case of tidal flats). This keyword may have an influence on mass conservation since the truncation of depth is equivalent to adding mass.

1.119 HARMONIC CONSTANTS FILE

Type :	String
Dimension :	1
Mnemo	T2D_FILES(T2DHAR)
DEFAULT VALUE :	”
French keyword :	FICHIER DES CONSTANTES HARMONIQUES

File containing the harmonic constants to compute the tidal boundary conditions.

1.120 ICE PROCESSES

Type :	Integer
Dimension :	1
Mnemo	ICEPROCESS
DEFAULT VALUE :	1
French keyword :	PROCESSUS LIES AUX GLACES

Provides the ice process number with the number being defined on the basis of a multiplication of primary numbers (2, 3, 5, 7, 11, 13...). For instance, 14 (= 2 $\times$ 7) activates processes 2 and 7. Exception is for:

- if the number is 1, there will be no ice processes included,
- if the number is 0, all processes are included, as follows:
  - 2: thermical budget,
  - 3: ...

1.121 IDENTIFICATION METHOD

Type : Integer
Dimension : 1
Mnemo OPTID
DEFAULT VALUE : 1
French keyword : METHODE D'IDENTIFICATION
Possible choices:

- 0: list of tests,
- 1: gradient,
- 2: conjugate gradient,
- 3: Lagrangian interpolation.

1.122 IMPLICITATION COEFFICIENT OF TRACERS

Type : Real
Dimension : 1
Mnemo TETAT
DEFAULT VALUE : 0.6
French keyword : COEFFICIENT D'IMPLICITATION DES TRACEURS
Sets the value of the implicitation coefficient for the tracer. If an advection scheme for tracers is a distributive scheme (e.g.: 3, 4, 5, 13, 14 or 15), IMPLICITATION COEFFICIENT OF TRACERS is prescribed at 0. (explicit).

1.123 IMPLICITATION FOR DEPTH

Type : Real
Dimension : 1
Mnemo TETAC
DEFAULT VALUE : 0.55
French keyword : IMPLICITATION POUR LA HAUTEUR
Sets the value of the implicitation coefficient for C (the celerity of waves) in the propagation step (refer to principle note). Values below 0.5 result in an unstable scheme (and are then forbidden).

1.124 IMPLICITATION FOR DIFFUSION OF VELOCITY

Type : Real
Dimension : 1
Mnemo TETAD
DEFAULT VALUE : 1.
French keyword : IMPLICITATION POUR LA DIFFUSION DES VITESSES
Sets the value of the implicitation coefficient for the diffusion of velocity.

1.125 IMPLICITATION FOR VELOCITY

Type : Real
Dimension : 1
Mnemo TETAU
DEFAULT VALUE : 0.55
French keyword : IMPLICITATION POUR LA VITESSE

Sets the value of the implicitation coefficient for velocity in the propagation step (refer to principle note). Values below 0.5 result in an unstable condition (and are then forbidden).

1.126 INFORMATION ABOUT K-EPSILON MODEL

Type : Logical
Dimension : 1
Mnemo INFOKE
DEFAULT VALUE : YES
French keyword : `INFORMATIONS SUR LE MODELE K-EPSILON`

Gives the number of iterations of the solver in the diffusion and source terms step of the $k-\varepsilon$ model.

1.127 INFORMATION ABOUT SOLVER

Type : Logical
Dimension : 1
Mnemo INFOGR
DEFAULT VALUE : YES
French keyword : `INFORMATIONS SUR LE SOLVEUR`

If YES, prints the number of iterations that have been necessary to get the solution of the linear system.

1.128 INFORMATION ABOUT SPALART-ALLMARAS MODEL

Type : Logical
Dimension : 1
Mnemo INFONU
DEFAULT VALUE : YES
French keyword : `INFORMATION SUR LE MODELE SPALART-ALLMARAS`

If yes, informations about solver of Spalart-Allmaras model are printed to the listing.

1.129 INITIAL CONDITIONS

Type : String
Dimension : 1
Mnemo CDTINI
DEFAULT VALUE : 'ZERO ELEVATION'
French keyword : `CONDITIONS INITIALES`

Makes it possible to define the initial conditions of the water depth. The possible values are as follows:

- ZERO ELEVATION: Initializes the free surface elevation to 0. The initial water depths are then found by computing the difference between the free surface and the bottom,
- CONSTANT ELEVATION: Initializes the water elevation to the value given by the keyword `INITIAL ELEVATION`. The initial water depths are computed as in the previous case,
- ZERO DEPTH: Initializes the water depths to 0.
- CONSTANT DEPTH: Initializes the water depths to the value given by the keyword `INITIAL DEPTH`,

- TPXO SATELITE ALTIMETRY: The initial conditions on the free surface and velocities are established from the satellite program data given by the harmonic constants database coming from OSU (e.g. TPXO) and stored in the `BINARY DATABASE 1/2 FOR TIDE`,
- SPECIAL or PARTICULAR: The initial conditions with the water depth should be stated in the **USER_CONDIN_H** subroutine.

1.130 INITIAL DEPTH

Type : Real
Dimension : 1
Mnemo HAUTIN
DEFAULT VALUE : 0.
French keyword : `HAUTEUR INITIALE`
Value to be used along with the option: `INITIAL CONDITIONS` : "CONSTANT DEPTH".

1.131 INITIAL DROGUES SAMPLING DENSITY

Type : Real
Dimension : 2
Mnemo DRG_DENSITY
DEFAULT VALUE : 1000;1000
French keyword : `DENSITE INITIALE DE REPARTITION DES FLOTTEURS`
Initial density of drogues, or number of drogues per m2, used to spatially place the initial drogues in a simulation.

1.132 INITIAL ELEVATION

Type : Real
Dimension : 1
Mnemo COTINI
DEFAULT VALUE : 0.
French keyword : `COTE INITIALE`
Value to be used with the option: `INITIAL CONDITIONS` : "CONSTANT ELEVATION".

1.133 INITIAL GUESS FOR H

Type : Integer
Dimension : 1
Mnemo IORDRH
DEFAULT VALUE : 1
French keyword : `ORDRE DU TIR INITIAL POUR H`
Initial guess for the solver in the propagation step. Makes it possible to modify the initial value of C, upon each iteration in the propagation step, by using the ultimate values this variable had in the earlier time steps. Thus, the convergence can be speeded up when the system is being solved. 3 options are available:

- 0: DH = 0,
- 1: DH = DHn (ultimate DH value in the next previous time step),
- 2: DH = 2.DHn - DHn-1 (extrapolation).

1.134 INITIAL GUESS FOR U

Type :	Integer
Dimension :	1
Mnemo	IORDRU
DEFAULT VALUE :	1
French keyword :	`ORDRE DU TIR INITIAL POUR U`

Initial guess for the solver in the propagation step. Makes it possible to modify the initial value of U, upon each iteration in the propagation step, by using the ultimate values this variable had in the earlier time steps. Thus, the convergence can be speeded up when the system is being solved. 3 options are available:

- 0 : U = 0,
- 1 : U = U(n),
- 2 : U = 2 U(n)- U(n-1) (extrapolation).

1.135 INITIAL TIME SET TO ZERO

Type :	Logical
Dimension :	1
Mnemo	RAZTIM
DEFAULT VALUE :	NO
French keyword :	`REMISE A ZERO DU TEMPS`

Initial time set to zero in case of restart.

1.136 INITIAL VALUES OF TRACERS

Type :	Real
Dimension :	2
Mnemo	TRAC0
DEFAULT VALUE :	0.;0.
French keyword :	`VALEURS INITIALES DES TRACEURS`

Sets the initial value of the tracer(s). Required value(s) separated with a semicolumn ; if more than one. The number of supplied values must be equal to the number of declared tracers.

1.137 INITIAL VELOCITIES COMPUTED BY TPXO

Type :	Logical
Dimension :	1
Mnemo	VITINI_TPXO
DEFAULT VALUE :	OUI
French keyword :	`VITESSES INITIALES CALCULEES PAR TPXO`

Initial velocity components computed from a tidal solution from OSU (e.g. TPXO). NO to prevent from an initialisation with too big tidal velocities. For tidal solutions coming from OSU only (e.g. TPXO).

1.138 KHIONE STEERING FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(KHIONE)
DEFAULT VALUE : ”
French keyword : FICHIER DES PARAMETRES DE KHIONE
Steering file for physical parameters of ice processes.

1.139 LAMBERT 93 CONVERSION FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DL93)
DEFAULT VALUE : ”
French keyword : FICHIER DE CONVERSION LAMBERT 93
Name of file gr3df97a.txt, conversion grid for Lambert 93.

1.140 LANGUAGE

Type : Integer
Dimension : 1
Mnemo LNG
DEFAULT VALUE : 2
French keyword : LANGUE
1: FRENCH 2: ENGLISH

1.141 LATITUDE OF ORIGIN POINT

Type : Real
Dimension : 1
Mnemo LAMBD0
DEFAULT VALUE : 48.
French keyword : LATITUDE DU POINT ORIGINE
Determines the origin used for computing latitudes when a computation is made in spherical coordinates. This latitude is in particular used to compute the Coriolis force. In cartesian coordinates, Coriolis coefficient is considered constant. Also used for heat exchange with atmosphere, Okada model for tsunamis, frazil.

1.142 LAW OF BOTTOM FRICTION

Type : Integer
Dimension : 1
Mnemo KFROT
DEFAULT VALUE : MANDATORY
French keyword : LOI DE FROTTEMENT SUR LE FOND
Selects the type of formulation used for the bottom friction. The possible laws are as follows (refer to the Principle note):

- 0: no friction against bottom,
- 1: Haaland”s formula,
- 2: Chezy”s formula,

- 3: Strickler"s formula,
- 4: Manning"s formula,
- 5: Nikuradse"s formula.

1.143 LAW OF FRICTION ON LATERAL BOUNDARIES

Type :	Integer
Dimension :	1
Mnemo	KFROTL
DEFAULT VALUE :	0
French keyword :	`LOI DE FROTTEMENT SUR LES PAROIS LATERALES`

Selects the type of formulation used for the friction on lateral boundaries. The possible laws are as follows (refer to the Principle note):

- 0: no friction,
- 1 : linear,
- 2 : Chezy,
- 3 : Strickler,
- 4 : Manning,
- 5: Nikuradse"s formula,
- 6 : log law,
- 7 : Colebrook-White.

1.144 LIMIT VALUES

Type :	Real
Dimension :	8
Mnemo	BORNES
DEFAULT VALUE :	-1000.;9000.;-1000.;1000.;-1000.;1000.;-1000.;1000.
French keyword :	`VALEURS LIMITES`

To be used with the key-word `CONTROL OF LIMITS`. Min and max acceptable values for H, U, V and tracers in the following order: min(H) max(H) min(U) max(U) min(V) max(V) min(T) max(T).

1.145 LINEARIZED PROPAGATION

Type :	Logical
Dimension :	1
Mnemo	PROLIN
DEFAULT VALUE :	NO
French keyword :	`PROPAGATION LINEARISEE`

Provided for linearizing the propagation step, e.g. when performing test-cases for which an analytical solution in the linearized case is available.

1.146 LIQUID BOUNDARIES FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DIMP)%NAME
DEFAULT VALUE : ”
French keyword : FICHIER DES FRONTIERES LIQUIDES
File containing the variations in time of boundary conditions.

1.147 LIST OF POINTS

Type : Integer
Dimension : 2
Mnemo LIST_PTS
DEFAULT VALUE : MANDATORY
French keyword : LISTE DE POINTS
List of remarkable points for printouts.

1.148 LISTING FOR PRINTOUT PERIOD

Type : Integer
Dimension : 1
Mnemo LISPRD
DEFAULT VALUE : 1
French keyword : PERIODE POUR LES SORTIES LISTING
Determines, in number of time steps, the printout period of the VARIABLES TO BE PRINTED. The results are systematically printed out on the listing file (file CAS.SORTIE at the workstation), Has priority before LISTING PRINTOUT PERIOD.

1.149 LISTING PRINTOUT

Type : Logical
Dimension : 1
Mnemo LISTIN
DEFAULT VALUE : YES
French keyword : SORTIE LISTING
Result printout on hard copy. When NO is selected, the listing only includes the heading and the phrase "NORMAL END OF PROGRAM". In addition, the options MASS-BALANCE and VALIDATION are inhibited. Not recommended for use.

1.150 LISTING PRINTOUT PERIOD

Type : Integer
Dimension : 1
Mnemo LISPRD
DEFAULT VALUE : 1
French keyword : PERIODE DE SORTIE LISTING
Determines, in number of time steps, the printout period of the VARIABLES TO BE PRINTED. The results are systematically printed out on the listing file (file CAS.SORTIE at the workstation).

1.151 LOCAL NUMBER OF THE POINT TO CALIBRATE HIGH WATER

Type :	Integer
Dimension :	1
Mnemo	ICALHWB
DEFAULT VALUE :	0
French keyword :	NUMERO LOCAL DU POINT POUR CALER LA PLEINE MER

Local number between 1 and the number of tidal boundary points (of the HARMONIC CONSTANTS FILE) where the tidal boundary conditions are computed with JMJ, NEA, FES, PREVIMER databases (except TPXO-type databases). The tidal constituents have their phase shifted with respect to this point to start the simulation with a high water (for schematic tides only).

1.152 LONGITUDE OF ORIGIN POINT

Type :	Real
Dimension :	1
Mnemo	PHI0
DEFAULT VALUE :	0.
French keyword :	LONGITUDE DU POINT ORIGINE

Give the value of the longitude of the origin point of the model, when taking into account of the tide generator force. For the Mercator projection, see the keyword GEOGRAPHIC SYSTEM. Also used for tide generating force, heat exchange with atmosphere, Okada model for tsunamis.

1.153 MANNING DEFAULT VALUE FOR COLEBROOK-WHITE LAW

Type :	Real
Dimension :	1
Mnemo	NDEF
DEFAULT VALUE :	0.02
French keyword :	VALEUR PAR DEFAUT DU MANNING POUR LA LOI DE COLEBROOK-WHITE

Manning default value for the friction law of Colebrook-White (law number 7).

1.154 MASS-BALANCE

Type :	Logical
Dimension :	1
Mnemo	BILMAS
DEFAULT VALUE :	NO
French keyword :	BILAN DE MASSE

Determines whether a check of the mass-balance over the domain is mader or not. This procedures computes the following at each time step:

- the domain inflows and outflows,
- the overall flow across all the boundaries,
- the relative error in the mass for that time step.

The relative error in the mass over the whole computation can be found at the end of the listing.

1.155 MASS-LUMPING FOR WEAK CHARACTERISTICS

Type : Real
Dimension : 1
Mnemo AGGLOW
DEFAULT VALUE : 0.
French keyword : MASS-LUMPING POUR LES CARACTERISTIQUES FAIBLES

Sets the amount of mass-lumping that is applied to the mass matrix when using weak characteristics.

1.156 MASS-LUMPING ON H

Type : Real
Dimension : 1
Mnemo AGGLOC
DEFAULT VALUE : 0.
French keyword : MASS-LUMPING SUR H

TELEMAC-2D provides an opportunity to carry out mass-lumping either on H or on the velocity. This is equivalent to bringing the matrices AM1 (h) or AM2 (U) and AM3 (V) wholly or partly, back onto their diagonal. Thanks to that technique, the code can be speeded up to a quite significant extent and it can also be made much more stable. The resulting solutions, however, become artificially smoothed. This parameter sets the extent of mass-lumping that is performed on h.

1.157 MASS-LUMPING ON TRACERS

Type : Real
Dimension : 1
Mnemo AGGLOT
DEFAULT VALUE : 0.
French keyword : MASS-LUMPING SUR LES TRACEURS

Sets the amount of mass-lumping that is performed on the tracer. Read but replaced by the value of MASS-LUMPING ON H to ensure tracer mass conservation.

1.158 MASS-LUMPING ON VELOCITY

Type : Real
Dimension : 1
Mnemo AGGLOU
DEFAULT VALUE : 0.
French keyword : MASS-LUMPING SUR LA VITESSE

Sets the amount of mass-lumping that is performed on the velocity. The keyword TREATMENT OF THE LINEAR SYSTEM changes the used value to 1.

1.159 MATRIX STORAGE

Type : Integer
Dimension : 1
Mnemo OPTASS
DEFAULT VALUE : 3
French keyword : STOCKAGE DES MATRICES

Defines the method to store matrices. The possible choices are:

- 1: classical EBE,
- 3: edge-based storage.

Option 3 is mandatory with a distributive scheme for advection (= 3, 4, 5, 13, 14 or 15).

1.160 MATRIX-VECTOR PRODUCT

Type : Integer
Dimension : 1
Mnemo PRODUC
DEFAULT VALUE : 1
French keyword : PRODUIT MATRICE-VECTEUR
Possible choices are:

- 1: classic,
- 2: frontal. Beware, with option 2, a special numbering of points is required.

1.161 MAXIMUM NUMBER OF BOUNDARIES

Type : Integer
Dimension : 1
Mnemo MAXFRO
DEFAULT VALUE : 30
French keyword : NOMBRE MAXIMUM DE FRONTIERES
Maximal number of boundaries in the mesh. Used for dimensioning arrays. Can be increased if needed.

1.162 MAXIMUM NUMBER OF DROGUES

Type : Integer
Dimension : 1
Mnemo NFLOT_MAX
DEFAULT VALUE : 0
French keyword : NOMBRE MAXIMAL DE FLOTTEURS
Maximum number of drogues in the computation.

1.163 MAXIMUM NUMBER OF FRICTION DOMAINS

Type : Integer
Dimension : 1
Mnemo NZONMX
DEFAULT VALUE : 10
French keyword : NOMBRE MAXIMUM DE DOMAINES DE FROTTEMENT
Maximal number of zones defined for the friction. Could be increased if needed.

1.164 MAXIMUM NUMBER OF ITERATIONS FOR ADVECTION SCHEMES

Type : Integer
Dimension : 1
Mnemo MAXADV
DEFAULT VALUE : 50
French keyword : MAXIMUM D'ITERATIONS POUR LES SCHEMAS DE CONVECTION

Limits the number of solver iterations for the advection schemes, only for schemes 13, 14 and 15. Old default value = 10 until release 8.1.

1.165 MAXIMUM NUMBER OF ITERATIONS FOR DIFFUSION OF TRACERS

Type : Integer
Dimension : 1
Mnemo SLVTRA(ITRAC)%NITMAX
DEFAULT VALUE : 60
French keyword : `MAXIMUM D'ITERATIONS POUR LA DIFFUSION DES TRACEURS`

Limits the number of solver iterations at each time step for the diffusion of tracer(s).

1.166 MAXIMUM NUMBER OF ITERATIONS FOR IDENTIFICATION

Type : Integer
Dimension : 1
Mnemo MAXEST
DEFAULT VALUE : 20
French keyword : `MAXIMUM D'ITERATIONS POUR L'IDENTIFICATION`

Every iteration implies at least a direct and an adjoint computation.

1.167 MAXIMUM NUMBER OF ITERATIONS FOR K AND EPSILON

Type : Integer
Dimension : 1
Mnemo SLVK%NITMAX
DEFAULT VALUE : 50
French keyword : `MAXIMUM D'ITERATIONS POUR K ET EPSILON`

Sets the maximum number of iterations that are acceptable when solving the diffusion source-terms step of k, ε (for $k-\varepsilon$ model) or $\tilde{\nu}$ (for Spalart-Allmaras model).

1.168 MAXIMUM NUMBER OF ITERATIONS FOR SOLVER

Type : Integer
Dimension : 1
Mnemo SLVPRO%NITMAX
DEFAULT VALUE : 100
French keyword : `MAXIMUM D'ITERATIONS POUR LE SOLVEUR`

Since the algorithms used for solving the propagation step are iterative, the allowed number of iterations should be limited. NOTE: a maximum number of 40 iterations per time step seems to be reasonable.

1.169 MAXIMUM NUMBER OF POINTS FOR SOURCES REGIONS

Type : Integer
Dimension : 1
Mnemo MAXPTSCE
DEFAULT VALUE : 10
French keyword : `NOMBRE MAXIMUM DE POINTS POUR DEFINIR DES SOURCES`

Maximal number of points to define regions containing sources. Used for dimensioning arrays. It can be increased if needed.

1.170 MAXIMUM NUMBER OF SOURCES

Type :	Integer
Dimension :	1
Mnemo	MAXSCE
DEFAULT VALUE :	20
French keyword :	NOMBRE MAXIMUM DE SOURCES

Maximal number of punctual sources in the mesh. Used for dimensioning arrays. Can be increased if needed.

1.171 MAXIMUM NUMBER OF TRACERS

Type :	Integer
Dimension :	1
Mnemo	MAXTRA
DEFAULT VALUE :	20
French keyword :	NOMBRE MAXIMUM DE TRACEURS

Maximal number of tracers. Used for dimensioning arrays. Can be increased if needed.

1.172 MEAN DEPTH FOR LINEARIZATION

Type :	Real
Dimension :	1
Mnemo	HAULIN
DEFAULT VALUE :	0.
French keyword :	PROFONDEUR MOYENNE POUR LA LINEARISATION

Sets the water depth around which the linearization is done when the LINEARIZED PROPAGATION option is selected.

1.173 MEAN TEMPERATURE

Type :	Real
Dimension :	1
Mnemo	TMOY
DEFAULT VALUE :	20.
French keyword :	TEMPERATURE MOYENNE

Reference temperature for density effects. To be used with the keyword DENSITY EFFECTS.

1.174 MINIMUM DEPTH TO COMPUTE TIDAL VELOCITIES BOUNDARY CONDITIONS

Type :	Real
Dimension :	1
Mnemo	HMIN_VIT_BC
DEFAULT VALUE :	0.1
French keyword :	HAUTEUR MINIMALE POUR LES CONDITIONS AUX LIMITES DE COURANTS

Minimum value of water depth used to compute tidal boundary conditions for velocities if the water depths are too small. For tidal solutions coming from OSU only (e.g. TPXO).

1.175 MINIMUM DEPTH TO COMPUTE TIDAL VELOCITIES INITIAL CONDITIONS

Type : Real
Dimension : 1
Mnemo HMIN_VIT_IC
DEFAULT VALUE : 0.1
French keyword : HAUTEUR MINIMALE POUR LES CONDITIONS INITIALES DE COURANTS

Minimum value of water depth above which initial conditions for tidal velocities are computed. Otherwise, the velocity components are equal to 0. For tidal solutions coming from OSU only (e.g. TPXO).

1.176 MINIMUM VALUE OF DEPTH

Type : Real
Dimension : 1
Mnemo HMIN
DEFAULT VALUE : 0.
French keyword : VALEUR MINIMUM DE H

Sets the minimum water depth H value when option H CLIPPING is implemented. Not fully implemented.

1.177 MINOR CONSTITUENTS INFERENCE

Type : Logical
Dimension : 1
Mnemo INTMICON
DEFAULT VALUE : NO
French keyword : INTERPOLATION DE COMPOSANTES MINEURES

For TPXO tidal data base only. Inference of minor constituents from the one read in input files linked to keywords BINARY DATABASE 1 FOR TIDE and BINARY DATABASE 2 FOR TIDE.

1.178 MIXING LENGTH MODEL COEFFICIENTS

Type : Real
Dimension : 2
Mnemo CALMIXLENGTH
DEFAULT VALUE : 0.1066667;0.0666667
French keyword : COEFFICIENTS DU MODELE DE LONGUEUR DE MELANGE

Calibration coefficients C_l and α_t in mixing length formula. Only used with TURBULENCE MODEL = 5.

1.179 NAMES OF CLANDESTINE VARIABLES

Type : String
Dimension : 2
Mnemo VARCLA
DEFAULT VALUE : 'MANDATORY'
French keyword : NOMS DES VARIABLES CLANDESTINES

Names of variables that are not used by TELEMAC-2D, but should be preserved when it is being run. This keyword may be used, for instance when TELEMAC-2D is coupled with another code. Thus, the clandestine variables belong to the other code and are given back in the results file.

1.180 NAMES OF POINTS

Type :	String
Dimension :	2
Mnemo	NAME_PTS
DEFAULT VALUE :	'MANDATORY'
French keyword :	NOMS DES POINTS

Names of remarkable points for printouts.

1.181 NAMES OF PRIVATE VARIABLES

Type :	String
Dimension :	2
Mnemo	NAMES_PRIVE
DEFAULT VALUE :	'MANDATORY'
French keyword :	NOMS DES VARIABLES PRIVEES

Name of private variables in 32 characters, 16 for the name, 16 for the unit. They are stored in the block **PRIVE** and can be read in the GEOMETRY FILE if they are here with their name.

1.182 NAMES OF TRACERS

Type :	String
Dimension :	2
Mnemo	NAMETRAC
DEFAULT VALUE :	'MANDATORY'
French keyword :	NOMS DES TRACEURS

Name of tracers in 32 characters, 16 for the name, 16 for the unit.

1.183 NESTOR

Type :	Logical
Dimension :	1
Mnemo	NESTOR
DEFAULT VALUE :	NO
French keyword :	NESTOR

Activates the use of the NESTOR module to change the bottom.

1.184 NESTOR ACTION FILE

Type :	String
Dimension :	1
Mnemo	T2D_FILES(T2NACT)%NAME
DEFAULT VALUE :	''
French keyword :	FICHIER DES PARAMETRES DE NESTOR

Name of the NESTOR steering file.

1.185 NESTOR POLYGON FILE

Type :	String
Dimension :	1
Mnemo	T2D_FILES(T2NPOL)%NAME
DEFAULT VALUE :	''
French keyword :	FICHIER DE POLYGONES DE NESTOR

Name of the NESTOR polygon file which indicates the location.

1.186 NESTOR RESTART FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2NRST)%NAME
DEFAULT VALUE : ”
French keyword : FICHIER DE REPRISE DE NESTOR
Name of the NESTOR restart file.

1.187 NESTOR SURFACE REFERENCE FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2NREF)%NAME
DEFAULT VALUE : ”
French keyword : FICHIER DE SURFACE REFERENCE DE NESTOR
Name of the NESTOR file which contains the reference water surface.

1.188 NEWMARK TIME INTEGRATION COEFFICIENT

Type : Real
Dimension : 1
Mnemo GAMMA
DEFAULT VALUE : 0.5
French keyword : COEFFICIENT D’INTEGRATION EN TEMPS DE NEWMARK
Possible choices are:

- 1.: Euler explicit,
- 0.5: order 2 in time.

Only for Finite Volumes.

1.189 NODES DISTANCES DELWAQ FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DDL7)%NAME
DEFAULT VALUE : ”
French keyword : FICHIER DELWAQ DES DISTANCES ENTRE NOEUDS
Results file for chaining with DELWAQ.

1.190 NON-DIMENSIONAL DISPERSION COEFFICIENTS

Type : Real
Dimension : 2
Mnemo ELDER
DEFAULT VALUE : 6.;0.6
French keyword : COEFFICIENTS ADIMENSIONNELS DE DISPERSION
Longitudinal and transversal coefficients in Elder s formula. Used only with TURBULENCE MODEL = 2.

1.191 NORTH

Type :	Real
Dimension :	1
Mnemo	NORD
DEFAULT VALUE :	0.
French keyword :	NORD

Angle of the North with the y axis, counted counter-clockwise, in degrees. 10.5 means 10 degrees and 30 minutes. Read but not used.

1.192 NUMBER OF ALGAE CLASSES

Type :	Integer
Dimension :	1
Mnemo	NALG_CLSS
DEFAULT VALUE :	0
French keyword :	NOMBRE DE CLASSES D'ALGUES

Number of algae classes. Each class will be associated with a particular property.

1.193 NUMBER OF CORRECTIONS OF DISTRIBUTIVE SCHEMES

Type :	Integer
Dimension :	0
Mnemo	NCO_DIST
DEFAULT VALUE :	1
French keyword :	NOMBRE DE CORRECTIONS DES SCHEMAS DISTRIBUTIFS

For predictor-corrector options with advection scheme of type 3, 4, 5, LIPS or not, and ERIA). Number of iterations for every time step (or sub-time step) to converge to the solution. It is useful for unsteady cases. For quasi-steady flows, this keyword does not have a large impact on the solution, so it can be set to 0. On the other hand, for unsteady flows, it is suggested to set this keyword to 2 (at least), which is a good compromise between accuracy and computational time. Indeed, increasing the number of corrections the scheme is more accurate but the CPU time rapidly increases.

1.194 NUMBER OF CULVERTS

Type :	Integer
Dimension :	1
Mnemo	NBUSE
DEFAULT VALUE :	0
French keyword :	NOMBRE DE BUSES

Number of culverts, tubes or bridges treated as source terms. They must be described as sources in the domain and their features are given in the **CULVERTS DATA FILE** (see written documentation).

1.195 NUMBER OF FIRST TIME STEP FOR GRAPHIC PRINTOUTS

Type :	Integer
Dimension :	1
Mnemo	PTINIG
DEFAULT VALUE :	0
French keyword :	NUMERO DU PREMIER PAS DE TEMPS POUR LES SORTIES GRAPHIQUES

Determines the number of time steps after which the results are first written into the RESULTS FILE.

1.196 NUMBER OF FIRST TIME STEP FOR LISTING PRINTOUTS

Type : Integer
Dimension : 1
Mnemo PTINIL
DEFAULT VALUE : 0
French keyword : NUMERO DU PREMIER PAS DE TEMPS POUR LES SORTIES LISTING
Determines the number of time steps after which the results are first written into the listing.

1.197 NUMBER OF GAUSS POINTS FOR WEAK CHARACTERISTICS

Type : Integer
Dimension : 1
Mnemo NGAUSS
DEFAULT VALUE : 3
French keyword : NOMBRE DE POINTS DE GAUSS POUR LES CARACTERISTIQUES FAIBLES
See release notes 6.3. Number of Gauss points used to compute the weak characteristics. Possible choices are:

- 1 point,
- 3 points,
- 4 points,
- 6 points,
- 7 points,
- 12 points.

The bigger the number is, the more conservative the scheme is, but the higher the computational costs are.

1.198 NUMBER OF LAGRANGIAN DRIFTS

Type : Integer
Dimension : 1
Mnemo NLAG
DEFAULT VALUE : 0
French keyword : NOMBRE DE DERIVES LAGRANGIENNES
Provided for performing several computations of Lagrangian drifts starting at different times. Add A and G in the VARIABLES FOR GRAPHIC PRINTOUTS keyword.

1.199 NUMBER OF PRIVATE ARRAYS

Type : Integer
Dimension : 1
Mnemo NPRIV
DEFAULT VALUE : 0
French keyword : NOMBRE DE TABLEAUX PRIVES
Number of arrays for own user programming.

1.200 NUMBER OF SUB-ITERATIONS FOR NON-LINEARITIES

Type : Integer
Dimension : 1
Mnemo NSOUSI
DEFAULT VALUE : 1
French keyword : NOMBRE DE SOUS-ITERATIONS POUR LES NON-LINEARITES

Used for updating, within one time step, the advection and propagation field. upon the first sub-iteration, these fields are given by C and the velocity field in the previous time step. At subsequent iterations, the results of the previous sub-iteration is used to update the advection and propagation field. The non-linearities can be taken into account through this technique.

1.201 NUMBER OF SUB-STEPS OF DISTRIBUTIVE SCHEMES

Type : Integer
Dimension : 1
Mnemo NSP_DIST
DEFAULT VALUE : 1
French keyword : NOMBRE DE SOUS-PAS DES SCHEMAS DISTRIBUTIFS

Only for implicit scheme with predictor-corrector (3, 4 or 5). This keyword allows to subdivide the time step given by the user in the STEERING FILE, into several sub-steps. Again, it produces an effect on the precision of the scheme and it is convenient to set this keyword in order to have Courant numbers not too large (around 1).

1.202 NUMBER OF TIME STEPS

Type : Integer
Dimension : 1
Mnemo NIT
DEFAULT VALUE : 1
French keyword : NOMBRE DE PAS DE TEMPS

Specifies the number of time steps performed when running the code.

1.203 NUMBER OF TRACERS

Type : Integer
Dimension : 1
Mnemo NTRAC
DEFAULT VALUE : 0
French keyword : NOMBRE DE TRACEURS

Defines the number of tracers

1.204 NUMBER OF WEIRS

Type : Integer
Dimension : 1
Mnemo NWEIRS
DEFAULT VALUE : 0
French keyword : NOMBRE DE SEUILS

Number of weirs that will be treated by boundary conditions. They must be described as boundaries of the domain and their features are given in the WEIRS DATA FILE (see written documentation)

1.205 OIL SPILL MODEL

Type :	Logical
Dimension :	1
Mnemo	SPILL_MODEL
DEFAULT VALUE :	NO
French keyword :	MODELE DE NAPPES D'HYDROCARBURES

Will trigger the oil spill model, in this case the OIL SPILL STEERING FILE is needed.

1.206 OIL SPILL STEERING FILE

Type :	String
Dimension :	1
Mnemo	T2D_FILES(T2DMIG)
DEFAULT VALUE :	”
French keyword :	FICHIER DE COMMANDES HYDROCARBURES

Contains data for the OIL SPILL MODEL.

1.207 OPTION FOR CHARACTERISTICS

Type :	Integer
Dimension :	1
Mnemo	OPTCHA
DEFAULT VALUE :	1
French keyword :	OPTION POUR LES CARACTERISTIQUES

Possible choices are:

- 1: strong form,
- 2: weak form.

If one component of array TYPE OF ADVECTION = 1 or SCHEME FOR ADVECTION OF... = 1, and also the corresponding keyword SCHEME OPTION FOR ADVECTION OF... = 2, OPTION FOR CHARACTERISTICS is automatically set to 2.

1.208 OPTION FOR CULVERTS

Type :	Integer
Dimension :	1
Mnemo	OPTBUSE
DEFAULT VALUE :	1
French keyword :	OPTION POUR LES BUSES

Option for the treatment of culverts. There are two options in TELEMAC-2D based on Bodhaine (1968) and Carlier (1976) formulae. Read the TELEMAC-3D theory guide for more informations.

1.209 OPTION FOR INITIAL ABSTRACTION RATIO

Type :	Integer
Dimension :	1
Mnemo	IASCNOPT
DEFAULT VALUE :	1
French keyword :	OPTION POUR RATIO DES PERTES INITIALES

Gives the ratio for Initial Abstraction to Maximal Potential Retention S for the SCS CN runoff model. Available options are:

- 1: IA/S = 0.2 (standard method),
- 2: IA/S = 0.05 (revised method, see Woodward, Hawkins et al. 2003.

With this option the CN values given in input are automatically converted see user manual). This keyword is only useful for runoff model 1 (SCS CN model).

1.210 OPTION FOR LIQUID BOUNDARIES

Type : Integer
Dimension : 2
Mnemo FRTYPE
DEFAULT VALUE : MANDATORY
French keyword : `OPTION POUR LES FRONTIERES LIQUIDES`

One integer per liquid boundary is given. Possible choices are:

- 1: classical boundary conditions,
- 2: Thompson method based on characteristics.

1.211 OPTION FOR THE DIFFUSION OF TRACERS

Type : Integer
Dimension : 1
Mnemo OPDTRA
DEFAULT VALUE : 1
French keyword : `OPTION POUR LA DIFFUSION DES TRACEURS`

Possible choices:

- 1: Diffusion in the form div(nu grad(T)),
- 2: Diffusion in the form 1/h div (h nu grad(T)).

1.212 OPTION FOR THE DIFFUSION OF VELOCITIES

Type : Integer
Dimension : 1
Mnemo OPDVIT
DEFAULT VALUE : 1
French keyword : `OPTION POUR LA DIFFUSION DES VITESSES`

Possible choices are:

- 1: Diffusion in the form div(ν grad(U)),
- 2: Diffusion in the form 1/h div (h ν grad(U)).

1.213 OPTION FOR THE SOLVER FOR K-EPSILON MODEL

Type : Integer
Dimension : 1
Mnemo SLVK%KRYLOV
DEFAULT VALUE : 2
French keyword : `OPTION DU SOLVEUR POUR LE MODELE K-EPSILON`

When GMRES (7) is chosen for solver, dimension of the Krylov space. Try values between 2 and 15. Common keyword for variables k, ε (for $k-\varepsilon$ model) and $\tilde{\nu}$ (for Spalart-Allmaras model).

1.214 OPTION FOR THE TREATMENT OF TIDAL FLATS

Type : Integer
Dimension : 1
Mnemo OPTBAN
DEFAULT VALUE : 1
French keyword : `OPTION DE TRAITEMENT DES BANCS DECOUVRANTS`
Used if `TIDAL FLATS` is YES. Possible choices are:

- 1: equations solved everywhere with correction on tidal flats (corrected free surface gradient),
- 2: dry elements are frozen (tidal flats area are masked). Warning: mass-conservation may be altered,
- 3: like 1 but with porosity (defina method).

1.215 OPTION FOR TIDAL BOUNDARY CONDITIONS

Type : Integer
Dimension : 2
Mnemo BND_TIDE
DEFAULT VALUE : MANDATORY
French keyword : `OPTION POUR LES CONDITIONS AUX LIMITES DE MAREE`
Option for tidal boundary conditions. For real tides, option 1 is recommended. This keyword has been an array with a value given per liquid boundary, separated by semicolons, since release 7.1. This enables to have tidal conditions (or not) computed on liquid boundaries with prescribed velocities or depths, avoiding a clash when using weirs in the domain. 0 codes for conditions other than tidal. BEWARE since release 7.1! Old models must be changed if their tidal boundary is not number 1. In that case this keyword must be changed and more values given. Possible calibration with the keywords `COEFFICIENT TO CALIBRATE TIDAL RANGE`, `COEFFICIENT TO CALIBRATE TIDAL VELOCITIES` and `COEFFICIENT TO CALIBRATE SEA LEVEL`.

1.216 OPTION FOR TSUNAMI GENERATION

Type : Integer
Dimension : 1
Mnemo OPTTSUNAMI
DEFAULT VALUE : 0
French keyword : `OPTION POUR LA GENERATION DE TSUNAMI`
Possible choices:

- 0: no tsunami,
- 1: tsunami generated on the basis of the Okada model (1992).

1.217 OPTION FOR WIND

Type : Integer
Dimension : 1
Mnemo OPTWIND
DEFAULT VALUE : 1
French keyword : `OPTION DU VENT`
Gives the option for managing the wind:

- 1: constant in time and space, given by the keyword SPEED AND DIRECTION OF WIND,
- 2: variable in time and constant in space, given by ASCII ATMOSPHERIC DATA FILE,
- 3: variable in time and space, given by formatted file or by a binary SERAFIN file.

1.218 OPTION OF THE HYDROSTATIC RECONSTRUCTION

Type : Integer
Dimension : 1
Mnemo HROPT
DEFAULT VALUE : 1
French keyword : OPTION DE LA RECONSTRUCTION HYDROSTATIQUE

Gives the option for hydrostatic reconstruction (only used for Finite Volumes with kinetic, HLLC and WAF schemes):

- 1: Audusse et al. option ;
- 2: Chen and Noelle option.

1.219 ORDINATES OF SOURCES

Type : Real
Dimension : 2
Mnemo YSCE
DEFAULT VALUE : MANDATORY
French keyword : ORDONNEES DES SOURCES

Ordinates of sources of flowrate and/or tracer. The source will be located at the nearest node in the mesh.

1.220 ORIGINAL DATE OF TIME

Type : Integer
Dimension : 3
Mnemo MARDAT
DEFAULT VALUE : 1900;1;1
French keyword : DATE DE L'ORIGINE DES TEMPS

Enables to set the date of the time origin of the model when taking into account of the tide (tide generator force and/or the tidal boundary conditions). Also used with drogues, heat exchange with atmosphere, frazil, chaining with DELWAQ.

1.221 ORIGINAL HOUR OF TIME

Type : Integer
Dimension : 3
Mnemo MARTIM
DEFAULT VALUE : 0;0;0
French keyword : HEURE DE L'ORIGINE DES TEMPS

Enables to set the time of the time origin of the model when taking into account of the tide (tide generator force and/or the tidal boundary conditions). Also used with drogues, heat exchange with atmosphere, frazil, chaining with DELWAQ.

1.222 PARALLEL PROCESSORS

Type : Integer
Dimension : 1
Mnemo NCSIZE
DEFAULT VALUE : 0
French keyword : `PROCESSEURS PARALLELES`
Number of processors for domain partition.

- 0: 1 machine, compiling without parallel library,
- 1: 1 machine, compiling with a parallel library,
- 2: 2 processors or machines in parallel etc...

1.223 PARAMETER ESTIMATION

Type : String
Dimension : 1
Mnemo ESTIME
DEFAULT VALUE : ”
French keyword : `ESTIMATION DE PARAMETRE`
List of parameter to be estimated, choices:

- FRICTION,
- FRICTION, STEADY.

1.224 PARTITIONING TOOL

Type : String
Dimension : 1
Mnemo
DEFAULT VALUE : ’METIS’
French keyword : `PARTITIONNEUR`
Partitioning tool selection:

- 1: METIS,
- 2: SCOTCH,
- 3: PARMETIS,
- 4: PTSCOTCH.

1.225 PHYSICAL CHARACTERISTICS OF THE TSUNAMI

Type : Real
Dimension : 10
Mnemo COETSUNAMI
DEFAULT VALUE : 100.;210000.;75000.;13.6;81.;41.;110.;0.;0.;3.
French keyword : `PARAMETRES PHYSIQUES DU TSUNAMI`
Physical characteristics of the tsunami. There are 10 of them:

- *HH* focal depth (in m),

- L fault length (in m),
- W fault width (in m),
- D dislocation (in m),
- TH strike direction (in decimal degrees),
- DL dip angle (in decimal degrees),
- RD slip angle (in decimal degrees),
- $Y0$ epicentre latitude (in decimal degrees),
- $X0$ epicentre longitude (in decimal degrees),
- $C0$ size of the ellipse of influence ($L \times W$).

1.226 PRECONDITIONING

Type : Integer
Dimension : 1
Mnemo SLVPRO%PRECON
DEFAULT VALUE : 2
French keyword : PRECONDITIONNEMENT

Choice of the preconditioning in the propagation step linear system that the convergence is speeded up when it is being solved.

- 0: no preconditioning,
- 2: diagonal preconditioning,
- 3: block-diagonal preconditioning (systemes a 4 ou 9 matrices),
- 5: diagonal preconditioning with absolute value,
- 7: Crout"s preconditioning per element or segment (does not work in parallel),
- 11: Gauss-Seidel"s preconditioning per element or segment,
- 13: preconditioning supplied by the user.

Some operations (either 2 or 3 diagonal preconditioning) can be performed concurrently with the others. Only prime numbers are therefore kept to denote the preconditioning operations. When several of them are to be performed concurrently, the product of relevant options shall be made.

1.227 PRECONDITIONING FOR DIFFUSION OF TRACERS

Type : Integer
Dimension : 1
Mnemo SLVTRA(ITRAC)%PRECON
DEFAULT VALUE : 2
French keyword : PRECONDITIONNEMENT POUR LA DIFFUSION DES TRACEURS

Choice of the preconditioning of the linear system of the tracer diffusion so that the convergence is speeded up when it is being solved.

- 0: no preconditioning,
- 2: diagonal preconditioning,
- 7: Crout"s preconditioning per element or segment (does not work in parallel).

Some operations (either 2 or 3 diagonal preconditioning) can be performed concurrently with the others. Only prime numbers are therefore kept to denote the preconditioning operations. When several of them are to be performed concurrently, the product of relevant options shall be made.

1.228 PRECONDITIONING FOR K-EPSILON MODEL

Type : Integer
Dimension : 1
Mnemo SLVK%PRECON
DEFAULT VALUE : 2
French keyword : `PRECONDITIONNEMENT POUR LE MODELE K-EPSILON`

Choice of the preconditioning of the linear system in the diffusion step of k, ε (for $k-\varepsilon$ model) or $\tilde{\nu}$ (for Spalart-Allmaras model) so that the convergence is speeded up when it is being solved.

- 0: no preconditioning,
- 2: diagonal preconditioning,
- 7: Crout"s preconditioning per element or segment (does not work in parallel).

Some operations (either 2 or 3 diagonal preconditioning) can be performed concurrently with the others. Only prime numbers are therefore kept to denote the preconditioning operations. When several of them are to be performed concurrently, the product of relevant options shall be made.

1.229 PRESCRIBED ELEVATIONS

Type : Real
Dimension : 2
Mnemo COTE
DEFAULT VALUE : MANDATORY
French keyword : `COTES IMPOSEES`

Values of the elevations prescribed at open boundaries. The section about boundary conditions is to be read in the manual.

1.230 PRESCRIBED FLOWRATES

Type : Real
Dimension : 2
Mnemo DEBIT
DEFAULT VALUE : MANDATORY
French keyword : `DEBITS IMPOSES`

Values of the flowrates prescribed at open boundaries. The section about boundary conditions is to be read in the manual.

1.231 PRESCRIBED TRACERS VALUES

Type :	Real
Dimension :	2
Mnemo	TRACER
DEFAULT VALUE :	MANDATORY
French keyword :	VALEURS IMPOSEES DES TRACEURS

Tracer values prescribed at the inflow boundaries. Read the user manual section dealing with the boundary conditions.

1.232 PRESCRIBED VELOCITIES

Type :	Real
Dimension :	2
Mnemo	VITES
DEFAULT VALUE :	MANDATORY
French keyword :	VITESSES IMPOSEES

Values of the magnitudes of velocity prescribed at open boundaries. Refer to the section dealing with the boundary conditions.

1.233 PREVIOUS COMPUTATION FILE

Type :	String
Dimension :	1
Mnemo	T2D_FILES(T2DPRE)%NAME
DEFAULT VALUE :	”
French keyword :	FICHIER DU CALCUL PRECEDENT

Name of a file containing the results of an earlier computation which was made on the same mesh. The last recorded time step will provide the initial conditions for the new computation.

1.234 PREVIOUS COMPUTATION FILE FORMAT

Type :	String
Dimension :	1
Mnemo	T2D_FILES(T2DPRE)%FMT
DEFAULT VALUE :	’SERAFIN’
French keyword :	FORMAT DU FICHIER DU CALCUL PRECEDENT

Format of the PREVIOUS COMPUTATION FILE. Possible values are:

- SERAFIN : classical single precision format in TELEMAC,
- SERAFIND: classical double precision format in TELEMAC,
- MED : MED double precision format based on HDF5.

1.235 PREVIOUS DROGUES FILE

Type :	String
Dimension :	1
Mnemo	T2D_FILES(T2DPLO)%NAME
DEFAULT VALUE :	”
French keyword :	FICHIER DES FLOTTEURS PRECEDENT

Name of a file containing the results of an earlier computation with drogues.

1.236 PREVIOUS DROGUES FILE FORMAT

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DPLO)%FMT
DEFAULT VALUE : 'BKBINPCL'
French keyword : FORMAT DU FICHIER DES FLOTTEURS PRECEDENT
Format of the PREVIOUS DROGUES FILE. Possible choices are:

- BKBINPCL: format binary PCL native of BlueKenue,
- BKASCPCL: format SCII PCL native of BlueKenue.

1.237 PRINTING CUMULATED FLOWRATES

Type : Logical
Dimension : 1
Mnemo CUMFLO
DEFAULT VALUE : NO
French keyword : IMPRESSION DU CUMUL DES FLUX
Printing the cumulated flowrates through control sections.

1.238 PRINTOUT PERIOD FOR DROGUES

Type : Integer
Dimension : 1
Mnemo FLOPRD
DEFAULT VALUE : 1
French keyword : PERIODE POUR LES SORTIES DE FLOTTEURS
Number of time steps between 2 outputs of drogues positions in the output file.

1.239 PRODUCTION COEFFICIENT FOR SECONDARY CURRENTS

Type : Real
Dimension : 1
Mnemo SEC_AS
DEFAULT VALUE : 7.071
French keyword : COEFFICIENT DE PRODUCTION POUR COURANTS SECONDAIRES
A constant in the production terms of Ω.

1.240 PROPAGATION

Type : Logical
Dimension : 1
Mnemo PROPA
DEFAULT VALUE : YES
French keyword : PROPAGATION
Determines whether the propagation step is taken into account or not. The diffusion being included in that step will be deleted as well.

1.241 RAIN OR EVAPORATION

Type :	Logical
Dimension :	1
Mnemo	RAIN
DEFAULT VALUE :	NO
French keyword :	PLUIE OU EVAPORATION

Enables to add or remove water at the free surface. See the keyword RAIN OR EVAPORATION IN MM PER DAY.

1.242 RAIN OR EVAPORATION IN MM PER DAY

Type :	Real
Dimension :	1
Mnemo	CST_RAINFALL
DEFAULT VALUE :	0.0
French keyword :	PLUIE OU EVAPORATION EN MM PAR JOUR

To add or remove water at the free surface.

1.243 RAINFALL-RUNOFF MODEL

Type :	Integer
Dimension :	1
Mnemo	RUNOFFOPT
DEFAULT VALUE :	0
French keyword :	MODELE PLUIE-DEBIT

Option for the rainfall-runoff model. Available options are:

- 0: No infiltration (basic function),
- 1: CN runoff model (Curve Number method of the SCS).

1.244 RATE OF DEGRADATION FOR ALGAE

Type :	Real
Dimension :	2
Mnemo	A_ALGAE
DEFAULT VALUE :	0.;0.
French keyword :	TAUX DE DEGRADATION POUR LES ALGUES

Rate of degradation for algae.

1.245 RECORD NUMBER FOR RESTART

Type :	Integer
Dimension :	1
Mnemo	START_RECORD
DEFAULT VALUE :	0
French keyword :	ENREGISTREMENT POUR SUITE DE CALCUL

In case of COMPUTATION CONTINUED = YES, record number to start from in the PREVIOUS COMPUTATION FILE. 0 means the last record is taken.

1.246 RECORD NUMBER IN WAVE FILE

Type : Integer
Dimension : 1
Mnemo NPTH
DEFAULT VALUE : 1
French keyword : NUMERO DE L'ENREGISTREMENT DANS LE FICHIER DE HOULE
Record number to be read in the wave driven currents file.

1.247 REFERENCE FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DREF)%NAME
DEFAULT VALUE : ”
French keyword : FICHIER DE REFERENCE
Binary-coded result file for validation.

1.248 REFERENCE FILE FORMAT

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DREF)%FMT
DEFAULT VALUE : 'SERAFIN'
French keyword : FORMAT DU FICHIER DE REFERENCE
Format of the REFERENCE FILE. Possible values are:

- SERAFIN : classical single precision format in TELEMAC,
- SERAFIND: classical double precision format in TELEMAC,
- MED : MED double precision format based on HDF5.

1.249 REFINEMENT LEVELS

Type : Integer
Dimension : 1
Mnemo RLEVELS
DEFAULT VALUE : 0
French keyword : NIVEAUX DE RAFFINEMENT
Gives the number of refinement levels that the user wants to use in the convergence study (when activating CONVERGENCE STUDY = YES). Each level multiplies the number of elements by 4.

1.250 RESULT FILE IN LONGITUDE-LATITUDE

Type : Logical
Dimension : 1
Mnemo KEEP_LONLAT
DEFAULT VALUE : YES
French keyword : FICHIER RESULTAT EN LONGITUDE-LATITUDE
Gives the coordinates of the result file in longitude-latitude if the geometry file is also given in longitude-latitude.

1.251 RESULTS FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DRES)%NAME
DEFAULT VALUE : ”
French keyword : FICHIER DES RESULTATS
Name of the file into which the computation results are written with a periodicity given by the keyword GRAPHIC PRINTOUT PERIOD.

1.252 RESULTS FILE FORMAT

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DRES)%FMT
DEFAULT VALUE : ’SERAFIN’
French keyword : FORMAT DU FICHIER DES RESULTATS
Format of the RESULTS FILE. Possible choices are:

- SERAFIN : classical single precision format in TELEMAC,
- SERAFIND: classical double precision format in TELEMAC,
- MED : MED double precision format based on HDF5.

1.253 ROUGHNESS COEFFICIENT OF BOUNDARIES

Type : Real
Dimension : 1
Mnemo SB
DEFAULT VALUE : 100.
French keyword : COEFFICIENT DE RUGOSITE DES BORDS
Sets the value of the friction coefficient of the solid boundary with the bed roughness option. Same meaning than friction coefficient:

- 1: not implemented,
- 2: Chezy coefficient,
- 3: Strickler coefficient,
- 4: Manning coefficient,
- 5: Nikuradse grain size.

1.254 SALINITY DELWAQ FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DDL4)%NAME
DEFAULT VALUE : ”
French keyword : FICHIER DELWAQ DE LA SALINITE
Results file for chaining with DELWAQ.

1.255 SALINITY FOR DELWAQ

Type : Logical
Dimension : 1
Mnemo SALI_DEL
DEFAULT VALUE : NO
French keyword : SALINITE POUR DELWAQ
Triggers the output of salinity for DELWAQ.

1.256 SCHEME FOR ADVECTION OF K-EPSILON

Type : Integer
Dimension : 1
Mnemo ICONVF(4)
DEFAULT VALUE : 1
French keyword : SCHEMA POUR LA CONVECTION DU K-EPSILON
Choice of the advection scheme for k and ε (for $k-\varepsilon$ model) or $\tilde{\nu}$ (for Spalart-Allmaras model), replaces TYPE OF ADVECTION.

1.257 SCHEME FOR ADVECTION OF TRACERS

Type : Integer
Dimension : 1
Mnemo ICONVFT
DEFAULT VALUE : 1
French keyword : SCHEMA POUR LA CONVECTION DES TRACEURS
Choice of the advection scheme for the tracers, replaces TYPE OF ADVECTION.

1.258 SCHEME FOR ADVECTION OF VELOCITIES

Type : Integer
Dimension : 1
Mnemo ICONVF(1)
DEFAULT VALUE : 1
French keyword : SCHEMA POUR LA CONVECTION DES VITESSES
Choice of the advection scheme for the velocities, replaces TYPE OF ADVECTION.

1.259 SCHEME OPTION FOR ADVECTION OF K-EPSILON

Type : Integer
Dimension : 1
Mnemo OPTADV_KE
DEFAULT VALUE : 1
French keyword : OPTION DU SCHEMA POUR LA CONVECTION DU K-EPSILON
If present replaces and has priority over: OPTION FOR CHARACTERISTICS SUPG OPTION.
If characteristics:

- 1 = strong form,
- 2 = weak form.

If N or PSI scheme:

- 1 = explicit,

- 2 = predictor-corrector,
- 3 = predictor-corrector second-order in time,
- 4 = implicit.

Common keyword for variables k, ε (for $k-\varepsilon$ model) and $\tilde{\nu}$ (for Spalart-Allmaras model).

1.260 SCHEME OPTION FOR ADVECTION OF TRACERS

Type : Integer
Dimension : 1
Mnemo OPTADV_TR
DEFAULT VALUE : 1
French keyword : `OPTION DU SCHEMA POUR LA CONVECTION DES TRACEURS`
If present replaces and has priority over: `OPTION FOR CHARACTERISTICS` `SUPG OPTION`.
If characteristics:

- 1 = strong form,
- 2 = weak form.

If N or PSI scheme:

- 1 = explicit,
- 2 = predictor-corrector,
- 3 = predictor-corrector second-order in time,
- 4 = implicit.

1.261 SCHEME OPTION FOR ADVECTION OF VELOCITIES

Type : Integer
Dimension : 1
Mnemo OPTADV_VI
DEFAULT VALUE : 1
French keyword : `OPTION DU SCHEMA POUR LA CONVECTION DES VITESSES`
If present replaces and has priority over: `OPTION FOR CHARACTERISTICS` `SUPG OPTION`.
If characteristics:

- 1 = strong form,
- 2 = weak form.

If N or PSI scheme:

- 1 = explicit,
- 2 = predictor-corrector,
- 3 = predictor-corrector second-order in time,
- 4 = implicit.

1.262 SECONDARY CURRENTS

Type : Logical
Dimension : 1
Mnemo SECCURRENTS
DEFAULT VALUE : NO
French keyword : COURANTS SECONDAIRES
Using the parametrisation for secondary currents.

1.263 SECTIONS INPUT FILE

Type : String
Dimension : 1
Mnemo T2D_FILES%ADR(T2DSEC)
DEFAULT VALUE : ”
French keyword : FICHIER DES SECTIONS DE CONTROLE
Sections input file, partitioned.

1.264 SECTIONS OUTPUT FILE

Type : String
Dimension : 1
Mnemo T2D_FILES%ADR(T2DSEO)
DEFAULT VALUE : ”
French keyword : FICHIER DE SORTIE DES SECTIONS DE CONTROLE
Sections output file, written by the master.

1.265 SECURITY COEFFICIENT FOR SCARACT

Type : Real
Dimension : 1
Mnemo SECU_DROGUES
DEFAULT VALUE : 1.
French keyword : COEFFICIENT DE SECURITE POUR SCARACT
Security coefficient for memory allocation for **SCARACT**.

1.266 SISYPHE STEERING FILE

Type : String
Dimension : 1
Mnemo PAS DE MNEMO
DEFAULT VALUE : ”
French keyword : FICHIER DES PARAMETRES DE SISYPHE
SISYPHE parameter file in case of internal coupling.

1.267 SOLAR RADIATION

Type : Real
Dimension : 1
Mnemo CST_RAY3
DEFAULT VALUE : 160.
French keyword : RAYONNEMENT SOLAIRE
Gives the value of solar radiation when it is constant in time and space. In W/m^2.

1.268 SOLVER

Type :	Integer
Dimension :	1
Mnemo	SLVPRO%SLV
DEFAULT VALUE :	3
French keyword :	SOLVEUR

Makes it possible to select the solver used for solving the propagation step. Possible choices are:

- 1: conjugate gradient,
- 2: conjugate residual,
- 3: conjugate gradient on a normal equation,
- 4: minimum error,
- 5: squared conjugate gradient (not implemented),
- 6: conjugate gradient squared stabilised (cgstab),
- 7: GMRES (see SOLVER OPTION),
- 8: direct.

1.269 SOLVER ACCURACY

Type :	Real
Dimension :	1
Mnemo	SLVPRO%EPS
DEFAULT VALUE :	1.E-4
French keyword :	PRECISION DU SOLVEUR

Required accuracy for solving the propagation step (refer to Principle note).

1.270 SOLVER FOR DIFFUSION OF TRACERS

Type :	Integer
Dimension :	2
Mnemo	SLVTRA(ITRAC)%SLV
DEFAULT VALUE :	1;1
French keyword :	SOLVEUR POUR LA DIFFUSION DES TRACEURS

Makes it possible to select the solver used for solving the system of tracer(s) diffusion. Possible choices are:

- 1: conjugate gradient,
- 2: conjugate residual,
- 3: conjugate gradient on a normal equation,
- 4: minimum error,
- 5: squared conjugate gradient (not implemented),
- 6: cgstab,
- 7: GMRES (see SOLVER OPTION FOR TRACERS DIFFUSION,
- 8: direct.

1.271 SOLVER FOR K-EPSILON MODEL

Type : Integer
Dimension : 1
Mnemo SLVK%SLV
DEFAULT VALUE : 1
French keyword : SOLVEUR POUR LE MODELE K-EPSILON

Makes it possible to select the solver used for solving the system of the diffusion of k, ε (for $k-\varepsilon$ model) or $\tilde{\nu}$ (for Spalart-Allmaras model). Possible choices are:

- 1: conjugate gradient,
- 2: conjugate residual,
- 3: conjugate gradient on a normal equation,
- 4: minimum error,
- 5: squared conjugate gradient (not implemented),
- 6: conjugate gradient squared stabilised (cgstab),
- 7: GMRES (see OPTION FOR THE SOLVER FOR K-EPSILON MODEL),
- 8: direct.

1.272 SOLVER OPTION

Type : Integer
Dimension : 1
Mnemo SLVPRO%KRYLOV
DEFAULT VALUE : 2
French keyword : OPTION DU SOLVEUR

When GMRES (7) is chosen for solver, dimension of the Krylov space. Try values between 2 and 15.

1.273 SOLVER OPTION FOR TRACERS DIFFUSION

Type : Integer
Dimension : 1
Mnemo SLVTRA(ITRAC)%KRYLOV
DEFAULT VALUE : 2
French keyword : OPTION DU SOLVEUR POUR LA DIFFUSION DES TRACEURS

When GMRES (7) is chosen for solver, dimension of the Krylov space. Try values between 2 and 15.

1.274 SOURCE REGIONS DATA FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DSDN)%NAME
DEFAULT VALUE : ”
French keyword : FICHIER DES REGIONS DES SOURCES

ASCII data file containing sources informations: coordinates of the polygons containing sources.

1.275 SOURCES FILE

Type :	String
Dimension :	1
Mnemo	T2D_FILES(T2DVEF)%NAME
DEFAULT VALUE :	”
French keyword :	FICHIER DES SOURCES

Name of the file containing time-dependent information on sources.

1.276 SPATIAL PROJECTION TYPE

Type :	Integer
Dimension :	1
Mnemo	PROTYP
DEFAULT VALUE :	1
French keyword :	TYPE DE PROJECTION SPATIALE

Specifies the type of spatial projection used (for example when using spherical coordinates). Possible choices are:

- 1: Cartesian, not georeferenced,
- 2: Mercator,
- 3: latitude/longitude (in degrees).

Option 2 or 3 mandatory for spherical coordinates. Option 3: latitude and longitude in degrees! When using option 3, the coordinates are automatically treated by TELEMAC-2D using Mercator projection.

1.277 SPEED AND DIRECTION OF WIND

Type :	Real
Dimension :	2
Mnemo	CST_WINDS;CST_WINDD
DEFAULT VALUE :	0.;0.
French keyword :	VITESSE ET DIRECTION DU VENT

Gives the speed and direction (in degrees (from 0 to 360), 0 given $y = 0$ anx $x = +$infinity) when they are constant in time and space (keyword OPTION FOR WIND = 1).

1.278 SPHERICAL COORDINATES

Type :	Logical
Dimension :	1
Mnemo	SPHERI
DEFAULT VALUE :	NO
French keyword :	COORDONNEES SPHERIQUES

Selection of spherical coordinates to perform the computation (for large computation domains). Warning: this option is closely related to the mesh that should have been entered onto a nautical chart drawn as per Mercator projection The LATITUDE OF ORIGIN POINT, which corresponds to ordinate $y = 0$ in the mesh, must moreover be given.

1.279 STAGE-DISCHARGE CURVES

Type : Integer
Dimension : 2
Mnemo STA_DIS_CURVES
DEFAULT VALUE : MANDATORY
French keyword : COURBES DE TARAGE

Says if a discharge-elevation curve must be used for a given boundary (one value per open boundary):

- 0: no,
- 1: Z(Q),
- 2: Q(Z).

1.280 STAGE-DISCHARGE CURVES FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DMAB)%NAME
DEFAULT VALUE : ”
French keyword : FICHIER DES COURBES DE TARAGE

Name of the file containing stage-discharge curves.

1.281 STEERING FILE

Type : String
Dimension : 1
Mnemo NOMCAS
DEFAULT VALUE : ”
French keyword : FICHIER DES PARAMETRES

Name of the file containing the parameters of the computation Written by the user.

1.282 STOCHASTIC DIFFUSION MODEL

Type : Integer
Dimension : 1
Mnemo STOCHA
DEFAULT VALUE : 0
French keyword : MODELE DE DIFFUSION STOCHASTIQUE

Meant for particles: drogues, oil spills. If no turbulence is activated, this stochastic diffusion is not considered during the particle transport.

1.283 STOP CRITERIA

Type : Real
Dimension : 3
Mnemo CRIPER
DEFAULT VALUE : 1.E-4;1.E-4;1.E-4
French keyword : CRITERES D'ARRET

Stop criteria for a steady state. These coefficients are applied respectively to:

- U and V,

- H,
- Tracers.

To be used with the keyword STOP IF A STEADY STATE IS REACHED.

1.284 STOP IF A STEADY STATE IS REACHED

Type :	Logical
Dimension :	1
Mnemo	STOPER
DEFAULT VALUE :	NO
French keyword :	ARRET SI UN ETAT PERMANENT EST ATTEINT

To be used with the keyword: STOP CRITERIA.

1.285 SUPG OPTION

Type :	Integer
Dimension :	4
Mnemo	OPTSUP
DEFAULT VALUE :	2;2;2;2
French keyword :	OPTION DE SUPG

Possible choices are:

- 0: no upwinding,
- 1: classical SUPG,
- 2: modified SUPG.

These coefficients are applied respectively to:

- 1) U and V,
- 2) H,
- 3) T,
- 4) k and ε.

If using a distributive scheme (3, 4, 5, 13, 14, 15), the coefficient applied to H is automatically set to 0. Moreover, if using TREATMENT OF NEGATIVE DEPTHS = 2 or 3 with OPTION FOR THE TREATMENT OF TIDAL FLATS = 1, it is mandatory to choose 0 for the 2nd component of SUPG OPTION (water depth).

1.286 TEMPERATURE DELWAQ FILE

Type :	String
Dimension :	1
Mnemo	T2D_FILES(T2DDL8)%NAME
DEFAULT VALUE :	”
French keyword :	FICHIER DELWAQ DE LA TEMPERATURE

Results file for chaining with DELWAQ.

1.287 TEMPERATURE FOR DELWAQ

Type : Logical
Dimension : 1
Mnemo TEMP_DEL
DEFAULT VALUE : NO
French keyword : TEMPERATURE POUR DELWAQ
Triggers the output of temperature for DELWAQ.

1.288 THICKNESS OF ALGAE

Type : Real
Dimension : 2
Mnemo EALGAE
DEFAULT VALUE : 0.01;0.01
French keyword : EPAISSEUR DES ALGUES
Thickness of algae in m.

1.289 THRESHOLD DEPTH FOR RECEDING PROCEDURE

Type : Real
Dimension : 1
Mnemo HREC
DEFAULT VALUE : 0.
French keyword : PROFONDEUR LIMITE POUR PROCEDURE DE RESSUYAGE
If > 0., will trigger the receeding procedure that avoids overwhelming of dykes which are too loosely discretised.

1.290 THRESHOLD DEPTH FOR WIND

Type : Real
Dimension : 1
Mnemo HWIND
DEFAULT VALUE : 1.
French keyword : PROFONDEUR LIMITE POUR LE VENT
Wind is not taken into account for depths smaller than this value.

1.291 THRESHOLD FOR NEGATIVE DEPTHS

Type : Real
Dimension : 1
Mnemo HNEG
DEFAULT VALUE : 0.
French keyword : SEUIL POUR LES PROFONDEURS NEGATIVES
Below the threshold the negative depths are smoothed. Only used with TREATMENT OF NEGATIVE DEPTHS = 1.

1.292 TIDAL DATA BASE

Type : Integer
Dimension : 1
Mnemo TIDALDB
DEFAULT VALUE : -1
French keyword : BASE DE DONNEES DE MAREE

For JMJ, indicate the location of the files bdd_jmj and geofin with keywords ASCII DATABASE FOR TIDE and TIDAL MODEL FILE. For TPXO, LEGOS-NEA, FES20XX and PREVIMER, the user has to download files of harmonic constituents on the internet.

1.293 TIDAL FLATS

Type : Logical
Dimension : 1
Mnemo BANDEC
DEFAULT VALUE : YES
French keyword : BANCS DECOUVRANTS

When NO, the specific treatments for tidal flats are by-passed. This spares time, but of course you must be sure that you have no tidal flats.

1.294 TIDAL MODEL FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DTID)
DEFAULT VALUE : ”
French keyword : FICHIER DU MODELE DE MAREE

Geometry file of the model from which harmonic constituents are extracted.

1.295 TIDAL MODEL FILE FORMAT

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DTID)%FMT
DEFAULT VALUE : ’SERAFIN’
French keyword : FORMAT DU FICHIER DU MODELE DE MAREE

Format of the TIDAL MODEL FILE. Possible choices are:

- SERAFIN : classical single precision format in TELEMAC,
- SERAFIND: classical double precision format in TELEMAC,
- MED : MED double precision format based on HDF5.

1.296 TIDE GENERATING FORCE

Type : Logical
Dimension : 1
Mnemo MAREE
DEFAULT VALUE : NO
French keyword : FORCE GENERATRICE DE LA MAREE

The tide generating force is taken into account. The keyword SPHERICAL COORDINATES has to be activated, it is impossible to account tide generating force in cartesian coordinates.

1.297 TIME RANGE FOR FOURIER ANALYSIS

Type : Real
Dimension : 2
Mnemo TAFBGN,TAFEND
DEFAULT VALUE : 0.;0.
French keyword : BORNES EN TEMPS POUR L'ANALYSE DE FOURIER
For computing tidal range and phase of tide.

1.298 TIME STEP

Type : Real
Dimension : 1
Mnemo DT
DEFAULT VALUE : 1.
French keyword : PAS DE TEMPS
Specifies the time step in seconds.

1.299 TITLE

Type : String
Dimension : 1
Mnemo TITCAS
DEFAULT VALUE : ”
French keyword : TITRE
Title of the case being considered.

1.300 TOLERANCES FOR IDENTIFICATION

Type : Real
Dimension : 4
Mnemo TOLEST
DEFAULT VALUE : 1.E-3;1.E-3;1.E-3;1.E-4
French keyword : PRECISIONS POUR L'IDENTIFICATION
4 numbers: absolute precision on H, U, V, and relative precision on the cost function.

1.301 TOMAWAC STEERING FILE

Type : String
Dimension : 1
Mnemo PAS DE MNEMO
DEFAULT VALUE : ”
French keyword : FICHIER DES PARAMETRES DE TOMAWAC
TOMAWAC parameter file in case of internal coupling.

1.302 TREATMENT OF FLUXES AT THE BOUNDARIES

Type : Integer
Dimension : 1
Mnemo DIRFLU
DEFAULT VALUE : 1
French keyword : TRAITEMENT DES FLUX AUX FRONTIERES
Used so far only with the SUPG, PSI and N schemes. With option 2, Dirichlet prescribed values

are not obeyed, but the fluxes are correct. One single and same value for every liquid boundary.

1.303 TREATMENT OF NEGATIVE DEPTHS

Type : Integer
Dimension : 1
Mnemo OPT_HNEG
DEFAULT VALUE : 1
French keyword : `TRAITEMENT DES HAUTEURS NEGATIVES`

Only with `OPTION FOR THE TREATMENT OF TIDAL FLATS` = 1. Possible choices are:

- 0: no treatment,
- 1: smoothing,
- 2: flux control, by segment,
- 3: flux control, by element.

If using options 2 or 3 with tidal flats, it is mandatory to set `MASS-LUMPING ON H` = 1. + `CONTINUITY CORRECTION` = YES + `SUPG OPTION` for water depth = 0 (no SUPG upwinding on depth).

1.304 TREATMENT OF THE LINEAR SYSTEM

Type : Integer
Dimension : 1
Mnemo SOLSYS
DEFAULT VALUE : 2
French keyword : `TRAITEMENT DU SYSTEME LINEAIRE`

Possible choices:

- 1: Coupled,
- 2: Wave equation.

Old default value = 1 (coupled) until release V8P1.

1.305 TURBULENCE MODEL

Type : Integer
Dimension : 1
Mnemo ITURB
DEFAULT VALUE : 1
French keyword : `MODELE DE TURBULENCE`

The current alternatives are as follows:

- 1: constant viscosity,
- 2: elder"s model,
- 3: k-ε model,
- 4: Smagorinski model,
- 5: mixing length model,

- 6: Spalart-Allmaras model.

NOTE: when option 1 is chosen, it should be kept in mind that the value of the keyword VELOCITY DIFFUSIVITY has to be ajusted. When option 2 is chosen, the two values of keyword NON-DIMENSIONAL DISPERSION COEFFICIENTS are used. When option 3 is chosen, this parameter should recover its true physical value, since it is used as such in the turbulence model.

1.306 TURBULENCE REGIME FOR SOLID BOUNDARIES

Type :	Integer
Dimension :	1
Mnemo	LISRUG
DEFAULT VALUE :	2
French keyword :	REGIME DE TURBULENCE POUR LES PAROIS

Provided for selecting the type of friction on the walls. Possible choices are:

- 1: smooth,
- 2: rough.

1.307 TYPE OF ADVECTION

Type :	Integer
Dimension :	4
Mnemo	ICONVF
DEFAULT VALUE :	1;5;1;1
French keyword :	FORME DE LA CONVECTION

Choice of advection schemes for every variable. These coefficients are applied respectively to

- 1) U and V,
- 2) H,
- 3) T,
- 4) k and ε.

Possible choices are:

- 1: characteristics,
- 2: SUPG,
- 3: Conservative N-scheme,
- 4: Conservative N-scheme,
- 5: Conservative PSI-scheme,
- 13: Edge-based N-scheme,
- 14: Edge-based N-scheme,
- 15: ERIA scheme.

The second integer must be 5.

1.308 TYPE OF BOUNDARY CONDITION FOR KINETIC SCHEME

Type :	Integer
Dimension :	1
Mnemo	BNDCIN
DEFAULT VALUE :	1
French keyword :	`TYPE DE CONDITION A LA LIMITE POUR LE SCHEMA CINETIQUE`

Possible choices:

- 1: Weak imposition,
- 2: Strong imposition.

1.309 TYPE OF SOURCES

Type :	Integer
Dimension :	1
Mnemo	OPTSOU
DEFAULT VALUE :	1
French keyword :	`TYPE DES SOURCES`

Defines how the sources are computed:

- 1: Source term multiplied by a finite element basis,
- 2: Source term multiplied by a Dirac function (recommended with high numbers of sources).

1.310 TYPE OF WEIRS

Type :	Integer
Dimension :	1
Mnemo	TYPSEUIL
DEFAULT VALUE :	1
French keyword :	`TYPE DES SEUILS`

Method for treatment of weirs. Two options:

- horizontal with same number of nodes upstream/downstream (Historical solution with the **BORD** subroutine),
- general (new solution with sources points).

1.311 VALIDATION

Type :	Logical
Dimension :	1
Mnemo	VALID
DEFAULT VALUE :	NO
French keyword :	`VALIDATION`

This option is primarily used for the validation documents. The `REFERENCE FILE` is then considered as a reference which the computation is going to be compared with. The comparison is done by the subroutine **BIEF_VALIDA**, which can be modified so as to include, for example, a comparison with an exact solution.

1.312 VALUE OF ATMOSPHERIC PRESSURE

Type : Real
Dimension : 1
Mnemo CST_PATMOS
DEFAULT VALUE : 100000.
French keyword : VALEUR DE LA PRESSION ATMOSPHERIQUE
Gives the value of atmospheric pressure when it is constant in time and space. In Pa.

1.313 VALUES OF THE TRACERS AT THE SOURCES

Type : Real
Dimension : 2
Mnemo TSCE
DEFAULT VALUE : MANDATORY
French keyword : VALEURS DES TRACEURS DES SOURCES
Values of the tracers at the sources. All sources for the first tracer, then all sources for the second tracer, etc. (see user manual). For example, if there are 3 tracers (T1, T2 and T3) and 2 sources (S1 and S2), the following syntax is used:
S1_T1;S1_T2;S1_T3;S2_T1;S2_T2;S2_T3
10.0; 10.0; 0.0; 0.0; 10.0; 10.0

1.314 VALUES OF TRACERS IN THE RAIN

Type : Real
Dimension : 2
Mnemo TRAIN
DEFAULT VALUE : MANDATORY
French keyword : VALEURS DES TRACEURS DANS LA PLUIE
Most often, this tracer is temperature, in this case this value should be modified, otherwise, default value of 0 seems reasonable.

1.315 VAPOROUS PRESSURE

Type : Real
Dimension : 1
Mnemo CST_PVAP
DEFAULT VALUE : 1000.
French keyword : PRESSION DE VAPEUR SATURANTE
Gives the value of vaporous pressure when it is constant in time and space. In Pa.

1.316 VARIABLE TIME-STEP

Type : Logical
Dimension : 1
Mnemo DTVARI
DEFAULT VALUE : NO
French keyword : PAS DE TEMPS VARIABLE
Variable time-step to get a given Courant number.

1.317 VARIABLES FOR GRAPHIC PRINTOUTS

Type :	String
Dimension :	1
Mnemo	VARDES
DEFAULT VALUE :	'U;V;H;B'
French keyword :	VARIABLES POUR LES SORTIES GRAPHIQUES

Names of variables which will be written in the results file. Each variable is represented by a letter (free separators). The possible choices are:

- U: velocity along x axis (m/s),
- V: velocity along y axis (m/s),
- C: wave celerity (m/s),
- H: water depth (m),
- S: free surface elevation (m),
- B: bottom elevation (m),
- F: Froude number,
- Q: scalar flowrate of fluid (m^2/s),
- Tn: tracer, with n the tracer number,
- K: turbulent kinetic energy in $k-\varepsilon$ model (J/kg),
- E: dissipation of turbulent energy (W/kg),
- D: turbulent viscosity (m^2/s),
- I: flowrate along x axis (m^2/s),
- J: flowrate along y axis (m^2/s),
- M: scalar velocity (m/s),
- X: wind along x axis (m/s),
- Y: wind along y axis (m/s),
- P: air pressure (Pa),
- W: friction coefficient,
- A: drift along x (m),
- G: drift along y (m),
- L: Courant number,
- MAXZ : maximum elevation (m),
- TMXZ : time of maximum elevation (s),
- MAXV : maximum velocity (m/s),

- TMXV : time of maximum velocity (s),
- US : friction velocity (m/s),
- Gn: differentiated gradient, with n the gradient reference number,
- TAU_S : TAU_S,
- 1/R : 1/R (1/m),
- OMEGA : OMEGA,
- WDIST : distance to the closest wall (m),
- ZRL : reference level for Nestor (m).

4 other variables are also available to the user to write created variables results. These user variables should be computed in **PRERES_TELEMAC2D** subroutine and their name should be written in **NOMVAR_TELEMAC2D** subroutine. These seven variables are as follows: N, O, R, Z which correspond to arrays **PRIVE(1,1)** up to **PRIVE(1,4)**. Unlike the previous variables, they are kept throughout the program, so that they can be used again. In the latter case, do not forget to provide the array `PRIVE` with sufficiently large dimensions in the FORTRAN FILE. The size of the `RESULTS FILE` can be limited with this keyword. However, if a computation must be continued, the `RESULTS FILE` should contain the appropriate information for running the code,i.e.:

- velocities U and V,
- water depth H,
- bottom elevation B.

TELEMAC-2D can compute some of these variables from others.

1.318 VARIABLES TO BE PRINTED

Type :	String
Dimension :	1
Mnemo	VARIMP
DEFAULT VALUE :	”
French keyword :	`VARIABLES A IMPRIMER`

Name of the variables that the user wants printed on screen. Same values available as graphical outputs.

1.319 VECTOR LENGTH

Type :	Integer
Dimension :	1
Mnemo	LVMAC
DEFAULT VALUE :	1
French keyword :	`LONGUEUR DU VECTEUR`

Vector length on vector machines.

1.320 VEGETATION FRICTION

Type :	Logical
Dimension :	1
Mnemo	VEGETATION
DEFAULT VALUE :	NO
French keyword :	FROTTEMENT POUR LA VEGETATION

Friction calculation of the non-submerged vegetation.

1.321 VELOCITIES OF THE SOURCES ALONG X

Type :	Real
Dimension :	2
Mnemo	USCE
DEFAULT VALUE :	MANDATORY
French keyword :	VITESSES DES SOURCES SELON X

Velocities along x at the sources. If they are not given, the velocity of the flow at this location is taken.

1.322 VELOCITIES OF THE SOURCES ALONG Y

Type :	Real
Dimension :	2
Mnemo	VSCE
DEFAULT VALUE :	MANDATORY
French keyword :	VITESSES DES SOURCES SELON Y

Velocities along y at the sources. If they are not given, the velocity of the flow at this location is taken.

1.323 VELOCITY DELWAQ FILE

Type :	String
Dimension :	1
Mnemo	T2D_FILES(T2DDL9)%NAME
DEFAULT VALUE :	”
French keyword :	FICHIER DELWAQ DE LA VITESSE

Results file for chaining with DELWAQ.

1.324 VELOCITY DIFFUSIVITY

Type :	Real
Dimension :	1
Mnemo	PROPNU
DEFAULT VALUE :	1.E-6
French keyword :	COEFFICIENT DE DIFFUSION DES VITESSES

Sets, in an even way for the whole domain, the value of the coefficient of global (dynamic+turbulent) viscosity. This value may have a significant effect both on the shapes and sizes of recirculation zones.

1.325 VELOCITY FOR DELWAQ

Type : Logical
Dimension : 1
Mnemo VELO_DEL
DEFAULT VALUE : NO
French keyword : VITESSE POUR DELWAQ
Triggers the output of velocity for DELWAQ.

1.326 VELOCITY PROFILES

Type : Integer
Dimension : 2
Mnemo PROVEL
DEFAULT VALUE : MANDATORY
French keyword : PROFILS DE VITESSE
Specifies the type of horizontal profile of velocities. Possible choices are:

- 1: constant normal profile,
- 2: u and v given in the BOUNDARY CONDITION FILE,
- 3: normal velocity given in **UBOR** in the BOUNDARY CONDITION FILE,
- 4: $\sqrt{h}$ profile,
- 5: like 4 but virtual depth based on the lowest elevation of the boundary.

1.327 VERTICAL FLUXES DELWAQ FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DDL3)%NAME
DEFAULT VALUE : ”
French keyword : FICHIER DELWAQ DES FLUX VERTICAUX
Results file for chaining with DELWAQ.

1.328 VERTICAL STRUCTURES

Type : Logical
Dimension : 1
Mnemo VERTIC
DEFAULT VALUE : NO
French keyword : STRUCTURES VERTICALES
Drag forces from vertical structures are taken into account. (subroutine **DRAGFO** must then be implemented).

1.329 VOLUMES DELWAQ FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DSOU)%NAME
DEFAULT VALUE : ”
French keyword : FICHIER DELWAQ DES VOLUMES
Results file for chaining with DELWAQ.

1.330 WAQTEL STEERING FILE

Type : String
Dimension : 1
Mnemo
DEFAULT VALUE : ”
French keyword : FICHIER DES PARAMETRES DE WAQTEL

File for physical parameters of water quality processes (local ones of TELEMAC-2D-WAQTEL not those of DELWAQ).

1.331 WATER DENSITY

Type : Real
Dimension : 1
Mnemo ROEAU
DEFAULT VALUE : 1000.
French keyword : MASSE VOLUMIQUE DE L’EAU

Sets the value of water density.

1.332 WATER DISCHARGE OF SOURCES

Type : Real
Dimension : 2
Mnemo DSCE
DEFAULT VALUE : MANDATORY
French keyword : DEBITS DES SOURCES

Specifies the discharge for every source. A positive discharge means that fluid is added.

1.333 WATER QUALITY PROCESS

Type : Integer
Dimension : 1
Mnemo WAQPROCESS
DEFAULT VALUE : 1
French keyword : PROCESSUS QUALITE D’EAU

Gives the water quality process number, defined as a multiplicative combination of prime numbers (2,3,5,7,11, 17 and 19) with 0 and 1 having a special role:

- 0: all,
- 1: none,
- 2: O2,
- 3: BIOMASS,
- 5: EUTRO,
- 7: MICROPOL,
- 11: THERMIC,
- 17: Degradation law,
- 19: Ghost process for ice modelling.

Example: 110 = 2x5x11 activate O2, EUTRO and THERMIC together. It is noted that AED2 is not available in 2D, for the time being.

1.334 WAVE DRIVEN CURRENTS

Type : Logical
Dimension : 1
Mnemo COUROU
DEFAULT VALUE : NO
French keyword : COURANTS DE HOULE
Wave driven currents are taken into account.

1.335 WAVE ENHANCED FRICTION FACTOR

Type : Logical
Dimension : 1
Mnemo FRICOU
DEFAULT VALUE : NO
French keyword : AUGMENTATION DU FROTTEMENT PAR LA HOULE
Wave friction enhancement for the calculation of the wave generated longshore current (cf OConnor and Yoo, 1988, Coast Eng.12.).

1.336 WAVE ORBITAL VELOCITY THRESHOLD FOR ALGAE 1

Type : Real
Dimension : 2
Mnemo TW1_ALGAE
DEFAULT VALUE : 2.;2.
French keyword : SEUIL DE LA VITESSE ORBITALE DE VAGUE POUR LES ALGUES 1
Wave orbital velocity 1 for algae dislodgement in m/s.

1.337 WAVE ORBITAL VELOCITY THRESHOLD FOR ALGAE 2

Type : Real
Dimension : 2
Mnemo TW2_ALGAE
DEFAULT VALUE : 0.;0.
French keyword : SEUIL DE LA VITESSE ORBITALE DE VAGUE POUR LES ALGUES 2
Wave orbital velocity 2 for algae dislodgement in m/s.

1.338 WEIRS DATA FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DSEU)%NAME
DEFAULT VALUE : ”
French keyword : FICHIER DE DONNEES DES SEUILS
Description of weirs existing in the model.

1.339 WEIRS DISCHARGE OUTPUT FILE

Type : String
Dimension : 1
Mnemo T2D_FILES(T2DWOP)%NAME
DEFAULT VALUE : ”
French keyword : FICHIER DE SORTIE DES DEBITS DES SEUILS
Output file of discharge of weirs existing in the model.

1.340 WIND

Type : Logical
Dimension : 1
Mnemo VENT
DEFAULT VALUE : NO
French keyword : VENT
Determines whether the wind effects are to be taken into account or not.

1.341 WIND VELOCITY ALONG X

Type : Real
Dimension : 1
Mnemo CST_WINDX
DEFAULT VALUE : 0.
French keyword : VITESSE DU VENT SUIVANT X
Wind velocity, component along x axis (m/s), if constant.

1.342 WIND VELOCITY ALONG Y

Type : Real
Dimension : 1
Mnemo CST_WINDY
DEFAULT VALUE : 0.
French keyword : VITESSE DU VENT SUIVANT Y
Wind velocity, component along y axis (m/s), if constant.

1.343 ZERO

Type : Real
Dimension : 1
Mnemo SLVPRO%ZERO
DEFAULT VALUE : 1.E-10
French keyword : ZERO
Not yet implemented

1.344 ZONE NUMBER IN GEOGRAPHIC SYSTEM

Type : Integer
Dimension : 1
Mnemo NUMZONE
DEFAULT VALUE : -1
French keyword : NUMERO DE FUSEAU OU PROJECTION DANS LE SYSTEME GEOGRAPHIQUE
Number of zone when using a plane projection. Indicate the geographic system in which the

numerical model is built with the keyword GEOGRAPHIC SYSTEM. Possible choices are:

- 1: Lambert 1 north,
- 2: Lambert 2 center,
- 3: Lambert 3 south,
- 4: Lambert 4 Corsica,
- 22: Lambert 22 extended,
- 93: Lambert 93,
- X: UTM zone with WGS84 (X is the number of the zone).

1.345 ZONES FILE

Type :	String
Dimension :	1
Mnemo	T2D_FILES(T2DZFI)%NAME
DEFAULT VALUE :	”
French keyword :	FICHIER DES ZONES

Zones file, with on every line:
point number zone number.

2. List of keywords classified according to type

2.1 COMPUTATION ENVIRONMENT

2.1.1 INITIALIZATION

BINARY DATA FILE 1
BINARY DATA FILE 1 FORMAT
BINARY DATA FILE 2
BINARY DATA FILE 2 FORMAT
FORMATTED DATA FILE 1
FORMATTED DATA FILE 2
INITIAL CONDITIONS
INITIAL DEPTH
INITIAL ELEVATION
TITLE

GLOBAL

CHECKING THE MESH
MAXIMUM NUMBER OF BOUNDARIES
MAXIMUM NUMBER OF SOURCES
MAXIMUM NUMBER OF TRACERS
PARALLEL PROCESSORS
SECURITY COEFFICIENT FOR SCARACT
VECTOR LENGTH

INPUT FILES

BOTTOM SMOOTHINGS
BOTTOM SMOOTHINGS AFTER USER MODIFICATIONS
BOTTOM TOPOGRAPHY FILE
BOUNDARY CONDITIONS FILE
FORTRAN FILE
GEOMETRY FILE
GEOMETRY FILE FORMAT
REFERENCE FILE
REFERENCE FILE FORMAT

VALIDATION

2.1.2 OUTPUT FILES

CONTROL SECTION

COMPATIBLE COMPUTATION OF FLUXES
CONTROL SECTIONS
FLUXLINE
FLUXLINE INPUT FILE
PRINTING CUMULATED FLOWRATES
SECTIONS INPUT FILE
SECTIONS OUTPUT FILE

FOURIER

FOURIER ANALYSIS PERIODS
TIME RANGE FOR FOURIER ANALYSIS

LISTING

INFORMATION ABOUT SOLVER
LIST OF POINTS
LISTING FOR PRINTOUT PERIOD
LISTING PRINTOUT
LISTING PRINTOUT PERIOD
MASS-BALANCE
NAMES OF POINTS
NUMBER OF FIRST TIME STEP FOR LISTING PRINTOUTS
VARIABLES TO BE PRINTED

RESULTS FILES

BINARY RESULTS FILE
BINARY RESULTS FILE FORMAT
FORMATTED RESULTS FILE
GRAPHIC PRINTOUT PERIOD
NAMES OF PRIVATE VARIABLES
NUMBER OF FIRST TIME STEP FOR GRAPHIC PRINTOUTS
NUMBER OF PRIVATE ARRAYS
RESULT FILE IN LONGITUDE-LATITUDE
RESULTS FILE
RESULTS FILE FORMAT
VARIABLES FOR GRAPHIC PRINTOUTS

2.1.3 RESTART

COMPUTATION CONTINUED
INITIAL TIME SET TO ZERO
PREVIOUS COMPUTATION FILE
PREVIOUS COMPUTATION FILE FORMAT

RECORD NUMBER FOR RESTART

2.2 COUPLING

COUPLING WITH
NAMES OF CLANDESTINE VARIABLES

2.2.1 DELWAQ

BOTTOM SURFACES DELWAQ FILE
DELWAQ PRINTOUT PERIOD
DELWAQ STEERING FILE
DIFFUSIVITY DELWAQ FILE
DIFFUSIVITY FOR DELWAQ
EXCHANGE AREAS DELWAQ FILE
EXCHANGES BETWEEN NODES DELWAQ FILE
NODES DISTANCES DELWAQ FILE
SALINITY DELWAQ FILE
SALINITY FOR DELWAQ
TEMPERATURE DELWAQ FILE
TEMPERATURE FOR DELWAQ
VELOCITY DELWAQ FILE
VELOCITY FOR DELWAQ
VERTICAL FLUXES DELWAQ FILE
VOLUMES DELWAQ FILE

2.2.2 GAIA

GAIA STEERING FILE

2.2.3 KHIONE

ICE PROCESSES
KHIONE STEERING FILE

2.2.4 NESTOR

NESTOR
NESTOR ACTION FILE
NESTOR POLYGON FILE
NESTOR RESTART FILE
NESTOR SURFACE REFERENCE FILE

2.2.5 SISYPHE

COUPLING PERIOD FOR SISYPHE
SISYPHE STEERING FILE

2.2.6 TOMAWAC

COUPLING PERIOD FOR TOMAWAC
TOMAWAC STEERING FILE

2.2.7 WAQTEL

WAQTEL STEERING FILE

2.3 GENERAL PARAMETERS

DEBUGGER

2.3.1 LOCATION

LATITUDE OF ORIGIN POINT
LONGITUDE OF ORIGIN POINT
NORTH
SPATIAL PROJECTION TYPE
SPHERICAL COORDINATES

2.3.2 TIME

CONTROL OF LIMITS
DESIRED COURANT NUMBER
DURATION
LIMIT VALUES
NUMBER OF TIME STEPS
ORIGINAL DATE OF TIME
ORIGINAL HOUR OF TIME
STOP CRITERIA
STOP IF A STEADY STATE IS REACHED
TIME STEP
VARIABLE TIME-STEP

2.4 HYDRAULIC STRUCTURES

2.4.1 BREACHES

BREACH
BREACHES DATA FILE

2.4.2 CULVERTS

CULVERTS DATA FILE
NUMBER OF CULVERTS
OPTION FOR CULVERTS

2.4.3 WEIRS

NUMBER OF WEIRS
TYPE OF WEIRS
WEIRS DATA FILE
WEIRS DISCHARGE OUTPUT FILE

2.5 HYDRO

2.5.1 BOUNDARY CONDITIONS

PRESCRIBED ELEVATIONS
PRESCRIBED FLOWRATES
PRESCRIBED VELOCITIES

2.5.2 BOUNDARY CONDITIONS OTHERS

ELEMENTS MASKED BY USER
LIQUID BOUNDARIES FILE
OPTION FOR LIQUID BOUNDARIES
STAGE-DISCHARGE CURVES
STAGE-DISCHARGE CURVES FILE
VELOCITY PROFILES

2.5.3 FLUID

CORIOLIS EFFECT

CORIOLIS
CORIOLIS COEFFICIENT

SECONDARY CURRENTS INFO

DISSIPATION COEFFICIENT FOR SECONDARY CURRENTS
PRODUCTION COEFFICIENT FOR SECONDARY CURRENTS
SECONDARY CURRENTS

TSUNAMI

OPTION FOR TSUNAMI GENERATION
PHYSICAL CHARACTERISTICS OF THE TSUNAMI

2.5.4 NUMERICAL PARAMETERS HYDRO

EQUATIONS
FINITE VOLUME SCHEME
TREATMENT OF THE LINEAR SYSTEM

2.5.5 PHYSICAL PARAMETERS HYDRO

ADVANCED-PHY

GRAVITY ACCELERATION
VERTICAL STRUCTURES
WATER DENSITY

ESTIMATION

COST FUNCTION
IDENTIFICATION METHOD
MAXIMUM NUMBER OF ITERATIONS FOR IDENTIFICATION
PARAMETER ESTIMATION
TOLERANCES FOR IDENTIFICATION

FRICTION

DEFINITION OF ZONES
DEPTH IN FRICTION TERMS
FRICTION COEFFICIENT
FRICTION DATA
FRICTION DATA FILE
LAW OF BOTTOM FRICTION
LAW OF FRICTION ON LATERAL BOUNDARIES
MANNING DEFAULT VALUE FOR COLEBROOK-WHITE LAW
MAXIMUM NUMBER OF FRICTION DOMAINS
ROUGHNESS COEFFICIENT OF BOUNDARIES
VEGETATION FRICTION
ZONES FILE

METEOROLOGY

AIR PRESSURE
AIR TEMPERATURE
ANTECEDENT MOISTURE CONDITIONS
ASCII ATMOSPHERIC DATA FILE
BINARY ATMOSPHERIC DATA FILE
BINARY ATMOSPHERIC DATA FILE FORMAT
CLOUD COVER
COEFFICIENT OF WIND INFLUENCE
COEFFICIENT OF WIND INFLUENCE VARYING WITH WIND SPEED
DURATION OF RAIN OR EVAPORATION IN HOURS
OPTION FOR INITIAL ABSTRACTION RATIO
OPTION FOR WIND
RAIN OR EVAPORATION
RAIN OR EVAPORATION IN MM PER DAY
RAINFALL-RUNOFF MODEL
SOLAR RADIATION
SPEED AND DIRECTION OF WIND
THRESHOLD DEPTH FOR WIND
VALUE OF ATMOSPHERIC PRESSURE

VAPOROUS PRESSURE
WIND
WIND VELOCITY ALONG X
WIND VELOCITY ALONG Y

SOURCES

ABSCISSAE OF SOURCES
GLOBAL NUMBERS OF SOURCE NODES
MAXIMUM NUMBER OF POINTS FOR SOURCES REGIONS
ORDINATES OF SOURCES
SOURCE REGIONS DATA FILE
SOURCES FILE
TYPE OF SOURCES
VELOCITIES OF THE SOURCES ALONG X
VELOCITIES OF THE SOURCES ALONG Y
WATER DISCHARGE OF SOURCES

WATER QUALITY INFO

WATER QUALITY PROCESS

WAVE

RECORD NUMBER IN WAVE FILE
WAVE DRIVEN CURRENTS
WAVE ENHANCED FRICTION FACTOR

2.6 INTERNAL

CONCATENATE PARTEL OUTPUT
DICTIONARY
LANGUAGE
PARTITIONING TOOL
STEERING FILE

2.7 NUMERICAL PARAMETERS

2.7.1 ADVANCED

CONVERGENCE STUDY
FINITE VOLUME SCHEME SPACE ORDER
FINITE VOLUME SCHEME TIME ORDER
FLUX LIMITOR FOR H PLUS Z
FLUX LIMITOR FOR TRACERS
FLUX LIMITOR FOR U AND V
MATRIX STORAGE
MATRIX-VECTOR PRODUCT
NEWMARK TIME INTEGRATION COEFFICIENT
OPTION OF THE HYDROSTATIC RECONSTRUCTION

REFINEMENT LEVELS
TYPE OF BOUNDARY CONDITION FOR KINETIC SCHEME
ZERO

2.7.2 ADVECTION INFO

ADVECTION
ADVECTION OF H
ADVECTION OF U AND V
FREE SURFACE GRADIENT COMPATIBILITY
MASS-LUMPING FOR WEAK CHARACTERISTICS
MASS-LUMPING ON H
MASS-LUMPING ON VELOCITY
MAXIMUM NUMBER OF ITERATIONS FOR ADVECTION SCHEMES
NUMBER OF CORRECTIONS OF DISTRIBUTIVE SCHEMES
NUMBER OF GAUSS POINTS FOR WEAK CHARACTERISTICS
NUMBER OF SUB-ITERATIONS FOR NON-LINEARITIES
NUMBER OF SUB-STEPS OF DISTRIBUTIVE SCHEMES
OPTION FOR CHARACTERISTICS
SCHEME FOR ADVECTION OF VELOCITIES
SCHEME OPTION FOR ADVECTION OF VELOCITIES
SUPG OPTION
TREATMENT OF FLUXES AT THE BOUNDARIES
TYPE OF ADVECTION

2.7.3 AUTOMATIC DIFFERENTIATION

AD LINEAR SOLVER DERIVATIVE CONVERGENCE
AD LINEAR SOLVER RESET DERIVATIVES
AD NAMES OF DERIVATIVES
AD NUMBER OF DERIVATIVES
AD SYMBOLIC LINEAR SOLVER

2.7.4 DIFFUSION

DIFFUSION OF VELOCITY
IMPLICITATION FOR DIFFUSION OF VELOCITY
OPTION FOR THE DIFFUSION OF VELOCITIES

2.7.5 DISCRETISATIONS IMPLICITATION

DISCRETIZATIONS IN SPACE
IMPLICITATION FOR DEPTH
IMPLICITATION FOR VELOCITY

2.7.6 PROPAGATION INFO

INITIAL GUESS FOR H
INITIAL GUESS FOR U

LINEARIZED PROPAGATION
MEAN DEPTH FOR LINEARIZATION
PROPAGATION

2.7.7 SOLVER INFO

C-U PRECONDITIONING
CONTINUITY CORRECTION
FINITE ELEMENT ASSEMBLY
MAXIMUM NUMBER OF ITERATIONS FOR SOLVER
PRECONDITIONING
SOLVER
SOLVER ACCURACY
SOLVER OPTION

2.8 PARTICLE TRANSPORT

2.8.1 ALGAE

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ALGAE TRANSPORT MODEL
ALGAE TYPE
DENSITY OF ALGAE
DIAMETER OF ALGAE
DURATION BEFORE ALGAE RELEASE
NUMBER OF ALGAE CLASSES
RATE OF DEGRADATION FOR ALGAE
THICKNESS OF ALGAE
WAVE ORBITAL VELOCITY THRESHOLD FOR ALGAE 1
WAVE ORBITAL VELOCITY THRESHOLD FOR ALGAE 2

2.8.2 BROWNIAN MOTION

STOCHASTIC DIFFUSION MODEL

2.8.3 DROGUES

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BINARY DROGUES FILE
DROGUES FILE FORMAT
DROGUES INITIAL POSITIONING DATA FILE
FORMAT OF THE DROGUES POSITIONING DATA FILE
INITIAL DROGUES SAMPLING DENSITY
MAXIMUM NUMBER OF DROGUES
PREVIOUS DROGUES FILE
PREVIOUS DROGUES FILE FORMAT
PRINTOUT PERIOD FOR DROGUES

2.8.4 LAGRANGIAN DRIFTS

NUMBER OF LAGRANGIAN DRIFTS

2.8.5 OIL SPILL

OIL SPILL MODEL
OIL SPILL STEERING FILE

2.9 TIDAL FLATS INFO

H CLIPPING
MINIMUM VALUE OF DEPTH
OPTION FOR THE TREATMENT OF TIDAL FLATS
THRESHOLD DEPTH FOR RECEDING PROCEDURE
THRESHOLD FOR NEGATIVE DEPTHS
TIDAL FLATS
TREATMENT OF NEGATIVE DEPTHS

2.10 TIDES

BINARY DATABASE 1 FOR TIDE
BINARY DATABASE 2 FOR TIDE
COEFFICIENT TO CALIBRATE SEA LEVEL
GEOGRAPHIC SYSTEM
GLOBAL NUMBER OF THE POINT TO CALIBRATE HIGH WATER
INITIAL VELOCITIES COMPUTED BY TPXO
LAMBERT 93 CONVERSION FILE
MINIMUM DEPTH TO COMPUTE TIDAL VELOCITIES BOUNDARY CONDITIONS
MINIMUM DEPTH TO COMPUTE TIDAL VELOCITIES INITIAL CONDITIONS
MINOR CONSTITUENTS INFERENCE
ZONE NUMBER IN GEOGRAPHIC SYSTEM

2.10.1 BOUNDARY CONDITIONS

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COEFFICIENT TO CALIBRATE TIDAL RANGE
COEFFICIENT TO CALIBRATE TIDAL VELOCITIES
HARMONIC CONSTANTS FILE
LOCAL NUMBER OF THE POINT TO CALIBRATE HIGH WATER
OPTION FOR TIDAL BOUNDARY CONDITIONS
TIDAL DATA BASE
TIDAL MODEL FILE
TIDAL MODEL FILE FORMAT

2.10.2 PHYSICAL PARAMETERS

TIDE GENERATING FORCE

2.11 TRACERS

2.11.1 ACCURACY TRA

ACCURACY FOR DIFFUSION OF TRACERS
MAXIMUM NUMBER OF ITERATIONS FOR DIFFUSION OF TRACERS

2.11.2 BOUNDARY CONDITIONS FOR TRACERS

PRESCRIBED TRACERS VALUES

2.11.3 METEOROLOGY TRA

VALUES OF TRACERS IN THE RAIN

2.11.4 NUMERICAL

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COEFFICIENT FOR DIFFUSION OF TRACERS
DIFFUSION OF TRACERS
IMPLICITATION COEFFICIENT OF TRACERS
MASS-LUMPING ON TRACERS
OPTION FOR THE DIFFUSION OF TRACERS
SCHEME FOR ADVECTION OF TRACERS
SCHEME OPTION FOR ADVECTION OF TRACERS

2.11.5 SETTING

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INITIAL VALUES OF TRACERS
MEAN TEMPERATURE
NAMES OF TRACERS
NUMBER OF TRACERS

2.11.6 SOLVER TRA

PRECONDITIONING FOR DIFFUSION OF TRACERS
SOLVER FOR DIFFUSION OF TRACERS
SOLVER OPTION FOR TRACERS DIFFUSION

2.11.7 SOURCES TRA

VALUES OF THE TRACERS AT THE SOURCES

2.12 TURBULENCE

ACCURACY OF SPALART-ALLMARAS
INFORMATION ABOUT SPALART-ALLMARAS MODEL
TURBULENCE MODEL
VELOCITY DIFFUSIVITY

2.12.1 ACCURACY

ACCURACY OF EPSILON
ACCURACY OF K
MAXIMUM NUMBER OF ITERATIONS FOR K AND EPSILON

2.12.2 ADVANCED

ADVECTION OF K AND EPSILON
INFORMATION ABOUT K-EPSILON MODEL
MIXING LENGTH MODEL COEFFICIENTS
NON-DIMENSIONAL DISPERSION COEFFICIENTS
SCHEME FOR ADVECTION OF K-EPSILON
SCHEME OPTION FOR ADVECTION OF K-EPSILON
TURBULENCE REGIME FOR SOLID BOUNDARIES

2.12.3 SOLVER INFO

OPTION FOR THE SOLVER FOR K-EPSILON MODEL
PRECONDITIONING FOR K-EPSILON MODEL
SOLVER FOR K-EPSILON MODEL

3. Glossary

3.1 English/French glossary

ABSCISSAE OF SOURCES	ABSCISSES DES SOURCES
ACCURACY FOR DIFFUSION OF TRACERS	PRECISION POUR LA DIFFUSION DES TRACEURS
ACCURACY OF EPSILON	PRECISION SUR EPSILON
ACCURACY OF K	PRECISION SUR K
ACCURACY OF SPALART-ALLMARAS	PRECISION SUR SPALART-ALLMARAS
AD LINEAR SOLVER DERIVATIVE CONVERGENCE	AD CONVERGENCE DES DERIVEES POUR LE SOLVEUR LINEAIRE
AD LINEAR SOLVER RESET DERIVATIVES	AD REMISE A ZERO DES DERIVEES DU SOLVEUR LINEAIRE
AD NAMES OF DERIVATIVES	AD NOMS DES DERIVEES
AD NUMBER OF DERIVATIVES	AD NOMBRE DE DERIVEES
AD SYMBOLIC LINEAR SOLVER	AD SOLVEUR LINEAIRE SYMBOLIQUE
ADVECTION	CONVECTION
ADVECTION OF H	CONVECTION DE H
ADVECTION OF K AND EPSILON	CONVECTION DE K ET EPSILON
ADVECTION OF TRACERS	CONVECTION DES TRACEURS
ADVECTION OF U AND V	CONVECTION DE U ET V
AIR PRESSURE	PRESSION ATMOSPHERIQUE
AIR TEMPERATURE	TEMPERATURE DE L'AIR
ALGAE RELEASE TYPE	TYPE DE RELACHE DES ALGUES
ALGAE TRANSPORT MODEL	MODELE DE TRANSPORT DES ALGUES
ALGAE TYPE	TYPE DES ALGUES
ANTECEDENT MOISTURE CONDITIONS	CONDITIONS D'HUMIDITE PRECEDENTE
ASCII ATMOSPHERIC DATA FILE	FICHIER ASCII DE DONNEES ATMOSPHERIQUES
ASCII DATABASE FOR TIDE	BASE ASCII DE DONNEES DE MAREE
ASCII DROGUES FILE	FICHIER ASCII DES FLOTTEURS
BINARY ATMOSPHERIC DATA FILE	FICHIER BINAIRE DE DONNEES ATMOSPHERIQUES

BINARY ATMOSPHERIC DATA FILE FORMAT	FORMAT DU FICHIER BINAIRE DE DONNEES ATMOSPHERIQUES
BINARY DATA FILE 1	FICHIER DE DONNEES BINAIRE 1
BINARY DATA FILE 1 FORMAT	FORMAT DU FICHIER DE DONNEES BINAIRE 1
BINARY DATA FILE 2	FICHIER DE DONNEES BINAIRE 2
BINARY DATA FILE 2 FORMAT	FORMAT DU FICHIER DE DONNEES BINAIRE 2
BINARY DATABASE 1 FOR TIDE	BASE BINAIRE 1 DE DONNEES DE MAREE
BINARY DATABASE 2 FOR TIDE	BASE BINAIRE 2 DE DONNEES DE MAREE
BINARY DROGUES FILE	FICHIER BINAIRE DES FLOTTEURS
BINARY RESULTS FILE	FICHIER DE RESULTATS BINAIRE
BINARY RESULTS FILE FORMAT	FORMAT DU FICHIER DE RESULTATS BINAIRE
BOTTOM SMOOTHINGS	LISSAGES DU FOND
BOTTOM SMOOTHINGS AFTER USER MODIFICATIONS	LISSAGES DU FOND APRES MODIFICATIONS UTILISATEUR
BOTTOM SURFACES DELWAQ FILE	FICHIER DELWAQ DES SURFACES DU FOND
BOTTOM TOPOGRAPHY FILE	FICHIER DES FONDS
BOUNDARY CONDITIONS FILE	FICHIER DES CONDITIONS AUX LIMITES
BREACH	BRECHE
BREACHES DATA FILE	FICHIER DE DONNEES DES BRECHES
C-U PRECONDITIONING	PRECONDITIONNEMENT C-U
CHECKING THE MESH	VERIFICATION DU MAILLAGE
CLOUD COVER	NEBULOSITE
COEFFICIENT FOR DIFFUSION OF TRACERS	COEFFICIENT DE DIFFUSION DES TRACEURS
COEFFICIENT OF WIND INFLUENCE	COEFFICIENT D'INFLUENCE DU VENT
COEFFICIENT OF WIND INFLUENCE VARYING WITH WIND SPEED	COEFFICIENT D'INFLUENCE DU VENT DEPENDANT DE LA VITESSE DU VENT
COEFFICIENT TO CALIBRATE SEA LEVEL	COEFFICIENT DE CALAGE DU NIVEAU DE MER
COEFFICIENT TO CALIBRATE TIDAL RANGE	COEFFICIENT DE CALAGE DU MARNAGE
COEFFICIENT TO CALIBRATE TIDAL VELOCITIES	COEFFICIENT DE CALAGE DES VITESSES DE COURANT
COMPATIBLE COMPUTATION OF FLUXES	CALCUL COMPATIBLE DES FLUX
COMPUTATION CONTINUED	SUITE DE CALCUL
CONCATENATE PARTEL OUTPUT	CONCATENATION SORTIE PARTEL
CONTINUITY CORRECTION	CORRECTION DE CONTINUITE
CONTROL OF LIMITS	CONTROLE DES LIMITES
CONTROL SECTIONS	SECTIONS DE CONTROLE

CONVERGENCE STUDY	ETUDE DE CONVERGENCE
CORIOLIS	CORIOLIS
CORIOLIS COEFFICIENT	COEFFICIENT DE CORIOLIS
COST FUNCTION	FONCTION COUT
COUPLING PERIOD FOR SISYPHE	PERIODE DE COUPLAGE POUR SISYPHE
COUPLING PERIOD FOR TOMAWAC	PERIODE DE COUPLAGE POUR TOMAWAC
COUPLING WITH	COUPLAGE AVEC
CULVERTS DATA FILE	FICHIER DE DONNEES DES BUSES
DEBUGGER	DEBUGGER
DEFINITION OF ZONES	DEFINITION DE ZONES
DELWAQ PRINTOUT PERIOD	PERIODE DE SORTIE POUR DELWAQ
DELWAQ STEERING FILE	FICHIER DE COMMANDE DELWAQ
DENSITY EFFECTS	EFFETS DE DENSITE
DENSITY OF ALGAE	MASSE VOLUMIQUE DES ALGUES
DEPTH IN FRICTION TERMS	HAUTEUR DANS LES TERMES DE FROTTEMENT
DESIRED COURANT NUMBER	NOMBRE DE COURANT SOUHAITE
DIAMETER OF ALGAE	DIAMETRE DES ALGUES
DICTIONARY	DICTIONNAIRE
DIFFUSION OF TRACERS	DIFFUSION DES TRACEURS
DIFFUSION OF VELOCITY	DIFFUSION DES VITESSES
DIFFUSIVITY DELWAQ FILE	FICHIER DELWAQ DE LA DIFFUSION
DIFFUSIVITY FOR DELWAQ	DIFFUSION POUR DELWAQ
DISCRETIZATIONS IN SPACE	DISCRETISATIONS EN ESPACE
DISSIPATION COEFFICIENT FOR SECONDARY CURRENTS	COEFFICIENT DE DISSIPATION POUR COURANTS SECONDAIRES
DROGUES FILE FORMAT	FORMAT DU FICHIER DES FLOTTEURS
DROGUES INITIAL POSITIONING DATA FILE	FICHIER POSITIONNANT LES DROGUES INITIALES
DURATION	DUREE DU CALCUL
DURATION BEFORE ALGAE RELEASE	DUREE AVANT RELACHE DES ALGUES
DURATION OF RAIN OR EVAPORATION IN HOURS	DUREE DE LA PLUIE OU EVAPORATION EN HEURES
ELEMENTS MASKED BY USER	ELEMENTS MASQUES PAR L'UTILISATEUR
EQUATIONS	EQUATIONS
EXCHANGE AREAS DELWAQ FILE	FICHIER DELWAQ DES SURFACES DE FLUX
EXCHANGES BETWEEN NODES DELWAQ FILE	FICHIER DELWAQ DES ECHANGES ENTRE NOEUDS
FINITE ELEMENT ASSEMBLY	ASSEMBLAGE EN ELEMENTS FINIS
FINITE VOLUME SCHEME	SCHEMA EN VOLUMES FINIS
FINITE VOLUME SCHEME SPACE ORDER	ORDRE EN ESPACE DU SCHEMA VOLUME FINIS

FINITE VOLUME SCHEME TIME ORDER	ORDRE EN TEMPS DU SCHEMA VOLUME FINIS
FLUX LIMITOR FOR H PLUS Z	LIMITEUR DE FLUX POUR H PLUS Z
FLUX LIMITOR FOR TRACERS	LIMITEUR DE FLUX POUR LES TRACEURS
FLUX LIMITOR FOR U AND V	LIMITEUR DE FLUX POUR U ET V
FLUXLINE	FLUXLINE
FLUXLINE INPUT FILE	FICHIER DE FLUXLINE
FORMAT OF THE DROGUES POSITIONING DATA FILE	FORMAT DU FICHIER POSITIONNANT LES DROGUES
FORMATTED DATA FILE 1	FICHIER DE DONNEES FORMATE 1
FORMATTED DATA FILE 2	FICHIER DE DONNEES FORMATE 2
FORMATTED RESULTS FILE	FICHIER DE RESULTATS FORMATE
FORTRAN FILE	FICHIER FORTRAN
FOURIER ANALYSIS PERIODS	PERIODES D'ANALYSE DE FOURIER
FREE SURFACE GRADIENT COMPATIBILITY	COMPATIBILITE DU GRADIENT DE SURFACE LIBRE
FRICTION COEFFICIENT	COEFFICIENT DE FROTTEMENT
FRICTION DATA	DONNEES POUR LE FROTTEMENT
FRICTION DATA FILE	FICHIER DE DONNEES POUR LE FROTTEMENT
GAIA STEERING FILE	FICHIER DES PARAMETRES DE GAIA
GEOGRAPHIC SYSTEM	SYSTEME GEOGRAPHIQUE
GEOMETRY FILE	FICHIER DE GEOMETRIE
GEOMETRY FILE FORMAT	FORMAT DU FICHIER DE GEOMETRIE
GLOBAL NUMBER OF THE POINT TO CALIBRATE HIGH WATER	NUMERO GLOBAL DU POINT POUR CALER LA PLEINE MER
GLOBAL NUMBERS OF SOURCE NODES	NUMEROS GLOBAUX DES NOEUDS DES SOURCES
GRAPHIC PRINTOUT PERIOD	PERIODE POUR LES SORTIES GRAPHIQUES
GRAVITY ACCELERATION	ACCELERATION DE LA PESANTEUR
H CLIPPING	CLIPPING DE H
HARMONIC CONSTANTS FILE	FICHIER DES CONSTANTES HARMONIQUES
ICE PROCESSES	PROCESSUS LIES AUX GLACES
IDENTIFICATION METHOD	METHODE D'IDENTIFICATION
IMPLICITATION COEFFICIENT OF TRACERS	COEFFICIENT D'IMPLICITATION DES TRACEURS
IMPLICITATION FOR DEPTH	IMPLICITATION POUR LA HAUTEUR
IMPLICITATION FOR DIFFUSION OF VELOCITY	IMPLICITATION POUR LA DIFFUSION DES VITESSES
IMPLICITATION FOR VELOCITY	IMPLICITATION POUR LA VITESSE
INFORMATION ABOUT K-EPSILON MODEL	INFORMATIONS SUR LE MODELE K-EPSILON
INFORMATION ABOUT SOLVER	INFORMATIONS SUR LE SOLVEUR

INFORMATION ABOUT SPALART-ALLMARAS MODEL	INFORMATION SUR LE MODELE SPALART-ALLMARAS
INITIAL CONDITIONS	CONDITIONS INITIALES
INITIAL DEPTH	HAUTEUR INITIALE
INITIAL DROGUES SAMPLING DENSITY	DENSITE INITIALE DE REPARTITION DES FLOTTEURS
INITIAL ELEVATION	COTE INITIALE
INITIAL GUESS FOR H	ORDRE DU TIR INITIAL POUR H
INITIAL GUESS FOR U	ORDRE DU TIR INITIAL POUR U
INITIAL TIME SET TO ZERO	REMISE A ZERO DU TEMPS
INITIAL VALUES OF TRACERS	VALEURS INITIALES DES TRACEURS
INITIAL VELOCITIES COMPUTED BY TPXO	VITESSES INITIALES CALCULEES PAR TPXO
KHIONE STEERING FILE	FICHIER DES PARAMETRES DE KHIONE
LAMBERT 93 CONVERSION FILE	FICHIER DE CONVERSION LAMBERT 93
LANGUAGE	LANGUE
LATITUDE OF ORIGIN POINT	LATITUDE DU POINT ORIGINE
LAW OF BOTTOM FRICTION	LOI DE FROTTEMENT SUR LE FOND
LAW OF FRICTION ON LATERAL BOUNDARIES	LOI DE FROTTEMENT SUR LES PAROIS LATERALES
LIMIT VALUES	VALEURS LIMITES
LINEARIZED PROPAGATION	PROPAGATION LINEARISEE
LIQUID BOUNDARIES FILE	FICHIER DES FRONTIERES LIQUIDES
LIST OF POINTS	LISTE DE POINTS
LISTING FOR PRINTOUT PERIOD	PERIODE POUR LES SORTIES LISTING
LISTING PRINTOUT	SORTIE LISTING
LISTING PRINTOUT PERIOD	PERIODE DE SORTIE LISTING
LOCAL NUMBER OF THE POINT TO CALIBRATE HIGH WATER	NUMERO LOCAL DU POINT POUR CALER LA PLEINE MER
LONGITUDE OF ORIGIN POINT	LONGITUDE DU POINT ORIGINE
MANNING DEFAULT VALUE FOR COLEBROOK-WHITE LAW	VALEUR PAR DEFAUT DU MANNING POUR LA LOI DE COLEBROOK-WHITE
MASS-BALANCE	BILAN DE MASSE
MASS-LUMPING FOR WEAK CHARACTERISTICS	MASS-LUMPING POUR LES CARACTERISTIQUES FAIBLES
MASS-LUMPING ON H	MASS-LUMPING SUR H
MASS-LUMPING ON TRACERS	MASS-LUMPING SUR LES TRACEURS
MASS-LUMPING ON VELOCITY	MASS-LUMPING SUR LA VITESSE
MATRIX STORAGE	STOCKAGE DES MATRICES
MATRIX-VECTOR PRODUCT	PRODUIT MATRICE-VECTEUR
MAXIMUM NUMBER OF BOUNDARIES	NOMBRE MAXIMUM DE FRONTIERES
MAXIMUM NUMBER OF DROGUES	NOMBRE MAXIMAL DE FLOTTEURS
MAXIMUM NUMBER OF FRICTION DOMAINS	NOMBRE MAXIMUM DE DOMAINES DE FROTTEMENT

MAXIMUM NUMBER OF ITERATIONS FOR ADVECTION SCHEMES	MAXIMUM D'ITERATIONS POUR LES SCHEMAS DE CONVECTION
MAXIMUM NUMBER OF ITERATIONS FOR DIFFUSION OF TRACERS	MAXIMUM D'ITERATIONS POUR LA DIFFUSION DES TRACEURS
MAXIMUM NUMBER OF ITERATIONS FOR IDENTIFICATION	MAXIMUM D'ITERATIONS POUR L'IDENTIFICATION
MAXIMUM NUMBER OF ITERATIONS FOR K AND EPSILON	MAXIMUM D'ITERATIONS POUR K ET EPSILON
MAXIMUM NUMBER OF ITERATIONS FOR SOLVER	MAXIMUM D'ITERATIONS POUR LE SOLVEUR
MAXIMUM NUMBER OF POINTS FOR SOURCES REGIONS	NOMBRE MAXIMUM DE POINTS POUR DEFINIR DES SOURCES
MAXIMUM NUMBER OF SOURCES	NOMBRE MAXIMUM DE SOURCES
MAXIMUM NUMBER OF TRACERS	NOMBRE MAXIMUM DE TRACEURS
MEAN DEPTH FOR LINEARIZATION	PROFONDEUR MOYENNE POUR LA LINEARISATION
MEAN TEMPERATURE	TEMPERATURE MOYENNE
MINIMUM DEPTH TO COMPUTE TIDAL VELOCITIES BOUNDARY CONDITIONS	HAUTEUR MINIMALE POUR LES CONDITIONS AUX LIMITES DE COURANTS
MINIMUM DEPTH TO COMPUTE TIDAL VELOCITIES INITIAL CONDITIONS	HAUTEUR MINIMALE POUR LES CONDITIONS INITIALES DE COURANTS
MINIMUM VALUE OF DEPTH	VALEUR MINIMUM DE H
MINOR CONSTITUENTS INFERENCE	INTERPOLATION DE COMPOSANTES MINEURES
MIXING LENGTH MODEL COEFFICIENTS	COEFFICIENTS DU MODELE DE LONGUEUR DE MELANGE
NAMES OF CLANDESTINE VARIABLES	NOMS DES VARIABLES CLANDESTINES
NAMES OF POINTS	NOMS DES POINTS
NAMES OF PRIVATE VARIABLES	NOMS DES VARIABLES PRIVEES
NAMES OF TRACERS	NOMS DES TRACEURS
NESTOR	NESTOR
NESTOR ACTION FILE	FICHIER DES PARAMETRES DE NESTOR
NESTOR POLYGON FILE	FICHIER DE POLYGONES DE NESTOR
NESTOR RESTART FILE	FICHIER DE REPRISE DE NESTOR
NESTOR SURFACE REFERENCE FILE	FICHIER DE SURFACE REFERENCE DE NESTOR
NEWMARK TIME INTEGRATION COEFFICIENT	COEFFICIENT D'INTEGRATION EN TEMPS DE NEWMARK
NODES DISTANCES DELWAQ FILE	FICHIER DELWAQ DES DISTANCES ENTRE NOEUDS
NON-DIMENSIONAL DISPERSION COEFFICIENTS	COEFFICIENTS ADIMENSIONNELS DE DISPERSION
NORTH	NORD
NUMBER OF ALGAE CLASSES	NOMBRE DE CLASSES D'ALGUES

NUMBER OF CORRECTIONS OF DISTRIBUTIVE SCHEMES	NOMBRE DE CORRECTIONS DES SCHEMAS DISTRIBUTIFS
NUMBER OF CULVERTS	NOMBRE DE BUSES
NUMBER OF FIRST TIME STEP FOR GRAPHIC PRINTOUTS	NUMERO DU PREMIER PAS DE TEMPS POUR LES SORTIES GRAPHIQUES
NUMBER OF FIRST TIME STEP FOR LISTING PRINTOUTS	NUMERO DU PREMIER PAS DE TEMPS POUR LES SORTIES LISTING
NUMBER OF GAUSS POINTS FOR WEAK CHARACTERISTICS	NOMBRE DE POINTS DE GAUSS POUR LES CARACTERISTIQUES FAIBLES
NUMBER OF LAGRANGIAN DRIFTS	NOMBRE DE DERIVES LAGRANGIENNES
NUMBER OF PRIVATE ARRAYS	NOMBRE DE TABLEAUX PRIVES
NUMBER OF SUB-ITERATIONS FOR NON-LINEARITIES	NOMBRE DE SOUS-ITERATIONS POUR LES NON-LINEARITES
NUMBER OF SUB-STEPS OF DISTRIBUTIVE SCHEMES	NOMBRE DE SOUS-PAS DES SCHEMAS DISTRIBUTIFS
NUMBER OF TIME STEPS	NOMBRE DE PAS DE TEMPS
NUMBER OF TRACERS	NOMBRE DE TRACEURS
NUMBER OF WEIRS	NOMBRE DE SEUILS
OIL SPILL MODEL	MODELE DE NAPPES D'HYDROCARBURES
OIL SPILL STEERING FILE	FICHIER DE COMMANDES HYDROCARBURES
OPTION FOR CHARACTERISTICS	OPTION POUR LES CARACTERISTIQUES
OPTION FOR CULVERTS	OPTION POUR LES BUSES
OPTION FOR INITIAL ABSTRACTION RATIO	OPTION POUR RATIO DES PERTES INITIALES
OPTION FOR LIQUID BOUNDARIES	OPTION POUR LES FRONTIERES LIQUIDES
OPTION FOR THE DIFFUSION OF TRACERS	OPTION POUR LA DIFFUSION DES TRACEURS
OPTION FOR THE DIFFUSION OF VELOCITIES	OPTION POUR LA DIFFUSION DES VITESSES
OPTION FOR THE SOLVER FOR K-EPSILON MODEL	OPTION DU SOLVEUR POUR LE MODELE K-EPSILON
OPTION FOR THE TREATMENT OF TIDAL FLATS	OPTION DE TRAITEMENT DES BANCS DECOUVRANTS
OPTION FOR TIDAL BOUNDARY CONDITIONS	OPTION POUR LES CONDITIONS AUX LIMITES DE MAREE
OPTION FOR TSUNAMI GENERATION	OPTION POUR LA GENERATION DE TSUNAMI
OPTION FOR WIND	OPTION DU VENT
OPTION OF THE HYDROSTATIC RECONSTRUCTION	OPTION DE LA RECONSTRUCTION HYDROSTATIQUE
ORDINATES OF SOURCES	ORDONNEES DES SOURCES
ORIGINAL DATE OF TIME	DATE DE L'ORIGINE DES TEMPS
ORIGINAL HOUR OF TIME	HEURE DE L'ORIGINE DES TEMPS

PARALLEL PROCESSORS	PROCESSEURS PARALLELES
PARAMETER ESTIMATION	ESTIMATION DE PARAMETRE
PARTITIONING TOOL	PARTITIONNEUR
PHYSICAL CHARACTERISTICS OF THE TSUNAMI	PARAMETRES PHYSIQUES DU TSUNAMI
PRECONDITIONING	PRECONDITIONNEMENT
PRECONDITIONING FOR DIFFUSION OF TRACERS	PRECONDITIONNEMENT POUR LA DIFFUSION DES TRACEURS
PRECONDITIONING FOR K-EPSILON MODEL	PRECONDITIONNEMENT POUR LE MODELE K-EPSILON
PRESCRIBED ELEVATIONS	COTES IMPOSEES
PRESCRIBED FLOWRATES	DEBITS IMPOSES
PRESCRIBED TRACERS VALUES	VALEURS IMPOSEES DES TRACEURS
PRESCRIBED VELOCITIES	VITESSES IMPOSEES
PREVIOUS COMPUTATION FILE	FICHIER DU CALCUL PRECEDENT
PREVIOUS COMPUTATION FILE FORMAT	FORMAT DU FICHIER DU CALCUL PRECEDENT
PREVIOUS DROGUES FILE	FICHIER DES FLOTTEURS PRECEDENT
PREVIOUS DROGUES FILE FORMAT	FORMAT DU FICHIER DES FLOTTEURS PRECEDENT
PRINTING CUMULATED FLOWRATES	IMPRESSION DU CUMUL DES FLUX
PRINTOUT PERIOD FOR DROGUES	PERIODE POUR LES SORTIES DE FLOTTEURS
PRODUCTION COEFFICIENT FOR SECONDARY CURRENTS	COEFFICIENT DE PRODUCTION POUR COURANTS SECONDAIRES
PROPAGATION	PROPAGATION
RAIN OR EVAPORATION	PLUIE OU EVAPORATION
RAIN OR EVAPORATION IN MM PER DAY	PLUIE OU EVAPORATION EN MM PAR JOUR
RAINFALL-RUNOFF MODEL	MODELE PLUIE-DEBIT
RATE OF DEGRADATION FOR ALGAE	TAUX DE DEGRADATION POUR LES ALGUES
RECORD NUMBER FOR RESTART	ENREGISTREMENT POUR SUITE DE CALCUL
RECORD NUMBER IN WAVE FILE	NUMERO DE L'ENREGISTREMENT DANS LE FICHIER DE HOULE
REFERENCE FILE	FICHIER DE REFERENCE
REFERENCE FILE FORMAT	FORMAT DU FICHIER DE REFERENCE
REFINEMENT LEVELS	NIVEAUX DE RAFFINEMENT
RESULT FILE IN LONGITUDE-LATITUDE	FICHIER RESULTAT EN LONGITUDE-LATITUDE
RESULTS FILE	FICHIER DES RESULTATS
RESULTS FILE FORMAT	FORMAT DU FICHIER DES RESULTATS
ROUGHNESS COEFFICIENT OF BOUNDARIES	COEFFICIENT DE RUGOSITE DES BORDS
SALINITY DELWAQ FILE	FICHIER DELWAQ DE LA SALINITE
SALINITY FOR DELWAQ	SALINITE POUR DELWAQ

SCHEME FOR ADVECTION OF K-EPSILON	SCHEMA POUR LA CONVECTION DU K-EPSILON
SCHEME FOR ADVECTION OF TRACERS	SCHEMA POUR LA CONVECTION DES TRACEURS
SCHEME FOR ADVECTION OF VELOCITIES	SCHEMA POUR LA CONVECTION DES VITESSES
SCHEME OPTION FOR ADVECTION OF K-EPSILON	OPTION DU SCHEMA POUR LA CONVECTION DU K-EPSILON
SCHEME OPTION FOR ADVECTION OF TRACERS	OPTION DU SCHEMA POUR LA CONVECTION DES TRACEURS
SCHEME OPTION FOR ADVECTION OF VELOCITIES	OPTION DU SCHEMA POUR LA CONVECTION DES VITESSES
SECONDARY CURRENTS	COURANTS SECONDAIRES
SECTIONS INPUT FILE	FICHIER DES SECTIONS DE CONTROLE
SECTIONS OUTPUT FILE	FICHIER DE SORTIE DES SECTIONS DE CONTROLE
SECURITY COEFFICIENT FOR SCARACT	COEFFICIENT DE SECURITE POUR SCARACT
SISYPHE STEERING FILE	FICHIER DES PARAMETRES DE SISYPHE
SOLAR RADIATION	RAYONNEMENT SOLAIRE
SOLVER	SOLVEUR
SOLVER ACCURACY	PRECISION DU SOLVEUR
SOLVER FOR DIFFUSION OF TRACERS	SOLVEUR POUR LA DIFFUSION DES TRACEURS
SOLVER FOR K-EPSILON MODEL	SOLVEUR POUR LE MODELE K-EPSILON
SOLVER OPTION	OPTION DU SOLVEUR
SOLVER OPTION FOR TRACERS DIFFUSION	OPTION DU SOLVEUR POUR LA DIFFUSION DES TRACEURS
SOURCE REGIONS DATA FILE	FICHIER DES REGIONS DES SOURCES
SOURCES FILE	FICHIER DES SOURCES
SPATIAL PROJECTION TYPE	TYPE DE PROJECTION SPATIALE
SPEED AND DIRECTION OF WIND	VITESSE ET DIRECTION DU VENT
SPHERICAL COORDINATES	COORDONNEES SPHERIQUES
STAGE-DISCHARGE CURVES	COURBES DE TARAGE
STAGE-DISCHARGE CURVES FILE	FICHIER DES COURBES DE TARAGE
STEERING FILE	FICHIER DES PARAMETRES
STOCHASTIC DIFFUSION MODEL	MODELE DE DIFFUSION STOCHASTIQUE
STOP CRITERIA	CRITERES D'ARRET
STOP IF A STEADY STATE IS REACHED	ARRET SI UN ETAT PERMANENT EST ATTEINT
SUPG OPTION	OPTION DE SUPG
TEMPERATURE DELWAQ FILE	FICHIER DELWAQ DE LA TEMPERATURE

TEMPERATURE FOR DELWAQ	TEMPERATURE POUR DELWAQ
THICKNESS OF ALGAE	EPAISSEUR DES ALGUES
THRESHOLD DEPTH FOR RECEDING PROCEDURE	PROFONDEUR LIMITE POUR PROCEDURE DE RESSUYAGE
THRESHOLD DEPTH FOR WIND	PROFONDEUR LIMITE POUR LE VENT
THRESHOLD FOR NEGATIVE DEPTHS	SEUIL POUR LES PROFONDEURS NEGATIVES
TIDAL DATA BASE	BASE DE DONNEES DE MAREE
TIDAL FLATS	BANCS DECOUVRANTS
TIDAL MODEL FILE	FICHIER DU MODELE DE MAREE
TIDAL MODEL FILE FORMAT	FORMAT DU FICHIER DU MODELE DE MAREE
TIDE GENERATING FORCE	FORCE GENERATRICE DE LA MAREE
TIME RANGE FOR FOURIER ANALYSIS	BORNES EN TEMPS POUR L'ANALYSE DE FOURIER
TIME STEP	PAS DE TEMPS
TITLE	TITRE
TOLERANCES FOR IDENTIFICATION	PRECISIONS POUR L'IDENTIFICATION
TOMAWAC STEERING FILE	FICHIER DES PARAMETRES DE TOMAWAC
TREATMENT OF FLUXES AT THE BOUNDARIES	TRAITEMENT DES FLUX AUX FRONTIERES
TREATMENT OF NEGATIVE DEPTHS	TRAITEMENT DES HAUTEURS NEGATIVES
TREATMENT OF THE LINEAR SYSTEM	TRAITEMENT DU SYSTEME LINEAIRE
TURBULENCE MODEL	MODELE DE TURBULENCE
TURBULENCE REGIME FOR SOLID BOUNDARIES	REGIME DE TURBULENCE POUR LES PAROIS
TYPE OF ADVECTION	FORME DE LA CONVECTION
TYPE OF BOUNDARY CONDITION FOR KINETIC SCHEME	TYPE DE CONDITION A LA LIMITE POUR LE SCHEMA CINETIQUE
TYPE OF SOURCES	TYPE DES SOURCES
TYPE OF WEIRS	TYPE DES SEUILS
VALIDATION	VALIDATION
VALUE OF ATMOSPHERIC PRESSURE	VALEUR DE LA PRESSION ATMOSPHERIQUE
VALUES OF THE TRACERS AT THE SOURCES	VALEURS DES TRACEURS DES SOURCES
VALUES OF TRACERS IN THE RAIN	VALEURS DES TRACEURS DANS LA PLUIE
VAPOROUS PRESSURE	PRESSION DE VAPEUR SATURANTE
VARIABLE TIME-STEP	PAS DE TEMPS VARIABLE
VARIABLES FOR GRAPHIC PRINTOUTS	VARIABLES POUR LES SORTIES GRAPHIQUES
VARIABLES TO BE PRINTED	VARIABLES A IMPRIMER
VECTOR LENGTH	LONGUEUR DU VECTEUR

VEGETATION FRICTION	FROTTEMENT POUR LA VEGETATION
VELOCITIES OF THE SOURCES ALONG X	VITESSES DES SOURCES SELON X
VELOCITIES OF THE SOURCES ALONG Y	VITESSES DES SOURCES SELON Y
VELOCITY DELWAQ FILE	FICHIER DELWAQ DE LA VITESSE
VELOCITY DIFFUSIVITY	COEFFICIENT DE DIFFUSION DES VITESSES
VELOCITY FOR DELWAQ	VITESSE POUR DELWAQ
VELOCITY PROFILES	PROFILS DE VITESSE
VERTICAL FLUXES DELWAQ FILE	FICHIER DELWAQ DES FLUX VERTICAUX
VERTICAL STRUCTURES	STRUCTURES VERTICALES
VOLUMES DELWAQ FILE	FICHIER DELWAQ DES VOLUMES
WAQTEL STEERING FILE	FICHIER DES PARAMETRES DE WAQTEL
WATER DENSITY	MASSE VOLUMIQUE DE L'EAU
WATER DISCHARGE OF SOURCES	DEBITS DES SOURCES
WATER QUALITY PROCESS	PROCESSUS QUALITE D'EAU
WAVE DRIVEN CURRENTS	COURANTS DE HOULE
WAVE ENHANCED FRICTION FACTOR	AUGMENTATION DU FROTTEMENT PAR LA HOULE
WAVE ORBITAL VELOCITY THRESHOLD FOR ALGAE 1	SEUIL DE LA VITESSE ORBITALE DE VAGUE POUR LES ALGUES 1
WAVE ORBITAL VELOCITY THRESHOLD FOR ALGAE 2	SEUIL DE LA VITESSE ORBITALE DE VAGUE POUR LES ALGUES 2
WEIRS DATA FILE	FICHIER DE DONNEES DES SEUILS
WEIRS DISCHARGE OUTPUT FILE	FICHIER DE SORTIE DES DEBITS DES SEUILS
WIND	VENT
WIND VELOCITY ALONG X	VITESSE DU VENT SUIVANT X
WIND VELOCITY ALONG Y	VITESSE DU VENT SUIVANT Y
ZERO	ZERO
ZONE NUMBER IN GEOGRAPHIC SYSTEM	NUMERO DE FUSEAU OU PROJECTION DANS LE SYSTEME GEOGRAPHIQUE
ZONES FILE	FICHIER DES ZONES

3.2 French/English glossary

ABSCISSES DES SOURCES	ABSCISSAE OF SOURCES
ACCELERATION DE LA PESANTEUR	GRAVITY ACCELERATION
AD CONVERGENCE DES DERIVEES POUR LE SOLVEUR LINEAIRE	AD LINEAR SOLVER DERIVATIVE CONVERGENCE
AD NOMBRE DE DERIVEES	AD NUMBER OF DERIVATIVES
AD NOMS DES DERIVEES	AD NAMES OF DERIVATIVES
AD REMISE A ZERO DES DERIVEES DU SOLVEUR LINEAIRE	AD LINEAR SOLVER RESET DERIVATIVES
AD SOLVEUR LINEAIRE SYMBOLIQUE	AD SYMBOLIC LINEAR SOLVER

ARRET SI UN ETAT PERMANENT EST ATTEINT	STOP IF A STEADY STATE IS REACHED
ASSEMBLAGE EN ELEMENTS FINIS	FINITE ELEMENT ASSEMBLY
AUGMENTATION DU FROTTEMENT PAR LA HOULE	WAVE ENHANCED FRICTION FACTOR
BANCS DECOUVRANTS	TIDAL FLATS
BASE ASCII DE DONNEES DE MAREE	ASCII DATABASE FOR TIDE
BASE BINAIRE 1 DE DONNEES DE MAREE	BINARY DATABASE 1 FOR TIDE
BASE BINAIRE 2 DE DONNEES DE MAREE	BINARY DATABASE 2 FOR TIDE
BASE DE DONNEES DE MAREE	TIDAL DATA BASE
BILAN DE MASSE	MASS-BALANCE
BORNES EN TEMPS POUR L'ANALYSE DE FOURIER	TIME RANGE FOR FOURIER ANALYSIS
BRECHE	BREACH
CALCUL COMPATIBLE DES FLUX	COMPATIBLE COMPUTATION OF FLUXES
CLIPPING DE H	H CLIPPING
COEFFICIENT D'IMPLICITATION DES TRACEURS	IMPLICITATION COEFFICIENT OF TRACERS
COEFFICIENT D'INFLUENCE DU VENT	COEFFICIENT OF WIND INFLUENCE
COEFFICIENT D'INFLUENCE DU VENT DEPENDANT DE LA VITESSE DU VENT	COEFFICIENT OF WIND INFLUENCE VARYING WITH WIND SPEED
COEFFICIENT D'INTEGRATION EN TEMPS DE NEWMARK	NEWMARK TIME INTEGRATION COEFFICIENT
COEFFICIENT DE CALAGE DES VITESSES DE COURANT	COEFFICIENT TO CALIBRATE TIDAL VELOCITIES
COEFFICIENT DE CALAGE DU MARNAGE	COEFFICIENT TO CALIBRATE TIDAL RANGE
COEFFICIENT DE CALAGE DU NIVEAU DE MER	COEFFICIENT TO CALIBRATE SEA LEVEL
COEFFICIENT DE CORIOLIS	CORIOLIS COEFFICIENT
COEFFICIENT DE DIFFUSION DES TRACEURS	COEFFICIENT FOR DIFFUSION OF TRACERS
COEFFICIENT DE DIFFUSION DES VITESSES	VELOCITY DIFFUSIVITY
COEFFICIENT DE DISSIPATION POUR COURANTS SECONDAIRES	DISSIPATION COEFFICIENT FOR SECONDARY CURRENTS
COEFFICIENT DE FROTTEMENT	FRICTION COEFFICIENT
COEFFICIENT DE PRODUCTION POUR COURANTS SECONDAIRES	PRODUCTION COEFFICIENT FOR SECONDARY CURRENTS
COEFFICIENT DE RUGOSITE DES BORDS	ROUGHNESS COEFFICIENT OF BOUNDARIES
COEFFICIENT DE SECURITE POUR SCARACT	SECURITY COEFFICIENT FOR SCARACT

COEFFICIENTS ADIMENSIONNELS DE DISPERSION	NON-DIMENSIONAL DISPERSION COEFFICIENTS
COEFFICIENTS DU MODELE DE LONGUEUR DE MELANGE	MIXING LENGTH MODEL COEFFICIENTS
COMPATIBILITE DU GRADIENT DE SURFACE LIBRE	FREE SURFACE GRADIENT COMPATIBILITY
CONCATENATION SORTIE PARTEL	CONCATENATE PARTEL OUTPUT
CONDITIONS D'HUMIDITE PRECEDENTE	ANTECEDENT MOISTURE CONDITIONS
CONDITIONS INITIALES	INITIAL CONDITIONS
CONTROLE DES LIMITES	CONTROL OF LIMITS
CONVECTION	ADVECTION
CONVECTION DE H	ADVECTION OF H
CONVECTION DE K ET EPSILON	ADVECTION OF K AND EPSILON
CONVECTION DE U ET V	ADVECTION OF U AND V
CONVECTION DES TRACEURS	ADVECTION OF TRACERS
COORDONNEES SPHERIQUES	SPHERICAL COORDINATES
CORIOLIS	CORIOLIS
CORRECTION DE CONTINUITE	CONTINUITY CORRECTION
COTE INITIALE	INITIAL ELEVATION
COTES IMPOSEES	PRESCRIBED ELEVATIONS
COUPLAGE AVEC	COUPLING WITH
COURANTS DE HOULE	WAVE DRIVEN CURRENTS
COURANTS SECONDAIRES	SECONDARY CURRENTS
COURBES DE TARAGE	STAGE-DISCHARGE CURVES
CRITERES D'ARRET	STOP CRITERIA
DATE DE L'ORIGINE DES TEMPS	ORIGINAL DATE OF TIME
DEBITS DES SOURCES	WATER DISCHARGE OF SOURCES
DEBITS IMPOSES	PRESCRIBED FLOWRATES
DEBUGGER	DEBUGGER
DEFINITION DE ZONES	DEFINITION OF ZONES
DENSITE INITIALE DE REPARTITION DES FLOTTEURS	INITIAL DROGUES SAMPLING DENSITY
DIAMETRE DES ALGUES	DIAMETER OF ALGAE
DICTIONNAIRE	DICTIONARY
DIFFUSION DES TRACEURS	DIFFUSION OF TRACERS
DIFFUSION DES VITESSES	DIFFUSION OF VELOCITY
DIFFUSION POUR DELWAQ	DIFFUSIVITY FOR DELWAQ
DISCRETISATIONS EN ESPACE	DISCRETIZATIONS IN SPACE
DONNEES POUR LE FROTTEMENT	FRICTION DATA
DUREE AVANT RELACHE DES ALGUES	DURATION BEFORE ALGAE RELEASE
DUREE DE LA PLUIE OU EVAPORATION EN HEURES	DURATION OF RAIN OR EVAPORATION IN HOURS
DUREE DU CALCUL	DURATION
EFFETS DE DENSITE	DENSITY EFFECTS
ELEMENTS MASQUES PAR L'UTILISATEUR	ELEMENTS MASKED BY USER

ENREGISTREMENT POUR SUITE DE CALCUL	RECORD NUMBER FOR RESTART
EPAISSEUR DES ALGUES	THICKNESS OF ALGAE
EQUATIONS	EQUATIONS
ESTIMATION DE PARAMETRE	PARAMETER ESTIMATION
ETUDE DE CONVERGENCE	CONVERGENCE STUDY
FICHIER ASCII DE DONNEES ATMOSPHERIQUES	ASCII ATMOSPHERIC DATA FILE
FICHIER ASCII DES FLOTTEURS	ASCII DROGUES FILE
FICHIER BINAIRE DE DONNEES ATMOSPHERIQUES	BINARY ATMOSPHERIC DATA FILE
FICHIER BINAIRE DES FLOTTEURS	BINARY DROGUES FILE
FICHIER DE COMMANDE DELWAQ	DELWAQ STEERING FILE
FICHIER DE COMMANDES HYDROCARBURES	OIL SPILL STEERING FILE
FICHIER DE CONVERSION LAMBERT 93	LAMBERT 93 CONVERSION FILE
FICHIER DE DONNEES BINAIRE 1	BINARY DATA FILE 1
FICHIER DE DONNEES BINAIRE 2	BINARY DATA FILE 2
FICHIER DE DONNEES DES BRECHES	BREACHES DATA FILE
FICHIER DE DONNEES DES BUSES	CULVERTS DATA FILE
FICHIER DE DONNEES DES SEUILS	WEIRS DATA FILE
FICHIER DE DONNEES FORMATE 1	FORMATTED DATA FILE 1
FICHIER DE DONNEES FORMATE 2	FORMATTED DATA FILE 2
FICHIER DE DONNEES POUR LE FROTTEMENT	FRICTION DATA FILE
FICHIER DE FLUXLINE	FLUXLINE INPUT FILE
FICHIER DE GEOMETRIE	GEOMETRY FILE
FICHIER DE POLYGONES DE NESTOR	NESTOR POLYGON FILE
FICHIER DE REFERENCE	REFERENCE FILE
FICHIER DE REPRISE DE NESTOR	NESTOR RESTART FILE
FICHIER DE RESULTATS BINAIRE	BINARY RESULTS FILE
FICHIER DE RESULTATS FORMATE	FORMATTED RESULTS FILE
FICHIER DE SORTIE DES DEBITS DES SEUILS	WEIRS DISCHARGE OUTPUT FILE
FICHIER DE SORTIE DES SECTIONS DE CONTROLE	SECTIONS OUTPUT FILE
FICHIER DE SURFACE REFERENCE DE NESTOR	NESTOR SURFACE REFERENCE FILE
FICHIER DELWAQ DE LA DIFFUSION	DIFFUSIVITY DELWAQ FILE
FICHIER DELWAQ DE LA SALINITE	SALINITY DELWAQ FILE
FICHIER DELWAQ DE LA TEMPERATURE	TEMPERATURE DELWAQ FILE
FICHIER DELWAQ DE LA VITESSE	VELOCITY DELWAQ FILE
FICHIER DELWAQ DES DISTANCES ENTRE NOEUDS	NODES DISTANCES DELWAQ FILE

FICHIER DELWAQ DES ECHANGES ENTRE NOEUDS	EXCHANGES BETWEEN NODES DELWAQ FILE
FICHIER DELWAQ DES FLUX VERTICAUX	VERTICAL FLUXES DELWAQ FILE
FICHIER DELWAQ DES SURFACES DE FLUX	EXCHANGE AREAS DELWAQ FILE
FICHIER DELWAQ DES SURFACES DU FOND	BOTTOM SURFACES DELWAQ FILE
FICHIER DELWAQ DES VOLUMES	VOLUMES DELWAQ FILE
FICHIER DES CONDITIONS AUX LIMITES	BOUNDARY CONDITIONS FILE
FICHIER DES CONSTANTES HARMONIQUES	HARMONIC CONSTANTS FILE
FICHIER DES COURBES DE TARAGE	STAGE-DISCHARGE CURVES FILE
FICHIER DES FLOTTEURS PRECEDENT	PREVIOUS DROGUES FILE
FICHIER DES FONDS	BOTTOM TOPOGRAPHY FILE
FICHIER DES FRONTIERES LIQUIDES	LIQUID BOUNDARIES FILE
FICHIER DES PARAMETRES	STEERING FILE
FICHIER DES PARAMETRES DE GAIA	GAIA STEERING FILE
FICHIER DES PARAMETRES DE KHIONE	KHIONE STEERING FILE
FICHIER DES PARAMETRES DE NESTOR	NESTOR ACTION FILE
FICHIER DES PARAMETRES DE SISYPHE	SISYPHE STEERING FILE
FICHIER DES PARAMETRES DE TOMAWAC	TOMAWAC STEERING FILE
FICHIER DES PARAMETRES DE WAQTEL	WAQTEL STEERING FILE
FICHIER DES REGIONS DES SOURCES	SOURCE REGIONS DATA FILE
FICHIER DES RESULTATS	RESULTS FILE
FICHIER DES SECTIONS DE CONTROLE	SECTIONS INPUT FILE
FICHIER DES SOURCES	SOURCES FILE
FICHIER DES ZONES	ZONES FILE
FICHIER DU CALCUL PRECEDENT	PREVIOUS COMPUTATION FILE
FICHIER DU MODELE DE MAREE	TIDAL MODEL FILE
FICHIER FORTRAN	FORTRAN FILE
FICHIER POSITIONNANT LES DROGUES INITIALES	DROGUES INITIAL POSITIONING DATA FILE
FICHIER RESULTAT EN LONGITUDE-LATITUDE	RESULT FILE IN LONGITUDE-LATITUDE
FLUXLINE	FLUXLINE
FONCTION COUT	COST FUNCTION
FORCE GENERATRICE DE LA MAREE	TIDE GENERATING FORCE
FORMAT DU FICHIER BINAIRE DE DONNEES ATMOSPHERIQUES	BINARY ATMOSPHERIC DATA FILE FORMAT

FORMAT DU FICHIER DE DONNEES BINAIRE 1	BINARY DATA FILE 1 FORMAT
FORMAT DU FICHIER DE DONNEES BINAIRE 2	BINARY DATA FILE 2 FORMAT
FORMAT DU FICHIER DE GEOMETRIE	GEOMETRY FILE FORMAT
FORMAT DU FICHIER DE REFERENCE	REFERENCE FILE FORMAT
FORMAT DU FICHIER DE RESULTATS BINAIRE	BINARY RESULTS FILE FORMAT
FORMAT DU FICHIER DES FLOTTEURS	DROGUES FILE FORMAT
FORMAT DU FICHIER DES FLOTTEURS PRECEDENT	PREVIOUS DROGUES FILE FORMAT
FORMAT DU FICHIER DES RESULTATS	RESULTS FILE FORMAT
FORMAT DU FICHIER DU CALCUL PRECEDENT	PREVIOUS COMPUTATION FILE FORMAT
FORMAT DU FICHIER DU MODELE DE MAREE	TIDAL MODEL FILE FORMAT
FORMAT DU FICHIER POSITIONNANT LES DROGUES	FORMAT OF THE DROGUES POSITIONING DATA FILE
FORME DE LA CONVECTION	TYPE OF ADVECTION
FROTTEMENT POUR LA VEGETATION	VEGETATION FRICTION
HAUTEUR DANS LES TERMES DE FROTTEMENT	DEPTH IN FRICTION TERMS
HAUTEUR INITIALE	INITIAL DEPTH
HAUTEUR MINIMALE POUR LES CONDITIONS AUX LIMITES DE COURANTS	MINIMUM DEPTH TO COMPUTE TIDAL VELOCITIES BOUNDARY CONDITIONS
HAUTEUR MINIMALE POUR LES CONDITIONS INITIALES DE COURANTS	MINIMUM DEPTH TO COMPUTE TIDAL VELOCITIES INITIAL CONDITIONS
HEURE DE L'ORIGINE DES TEMPS	ORIGINAL HOUR OF TIME
IMPLICITATION POUR LA DIFFUSION DES VITESSES	IMPLICITATION FOR DIFFUSION OF VELOCITY
IMPLICITATION POUR LA HAUTEUR	IMPLICITATION FOR DEPTH
IMPLICITATION POUR LA VITESSE	IMPLICITATION FOR VELOCITY
IMPRESSION DU CUMUL DES FLUX	PRINTING CUMULATED FLOWRATES
INFORMATION SUR LE MODELE SPALART-ALLMARAS	INFORMATION ABOUT SPALART-ALLMARAS MODEL
INFORMATIONS SUR LE MODELE K-EPSILON	INFORMATION ABOUT K-EPSILON MODEL
INFORMATIONS SUR LE SOLVEUR	INFORMATION ABOUT SOLVER
INTERPOLATION DE COMPOSANTES MINEURES	MINOR CONSTITUENTS INFERENCE
LANGUE	LANGUAGE
LATITUDE DU POINT ORIGINE	LATITUDE OF ORIGIN POINT
LIMITEUR DE FLUX POUR H PLUS Z	FLUX LIMITOR FOR H PLUS Z
LIMITEUR DE FLUX POUR LES TRACEURS	FLUX LIMITOR FOR TRACERS

LIMITEUR DE FLUX POUR U ET V	FLUX LIMITOR FOR U AND V
LISSAGES DU FOND	BOTTOM SMOOTHINGS
LISSAGES DU FOND APRES MODIFICATIONS UTILISATEUR	BOTTOM SMOOTHINGS AFTER USER MODIFICATIONS
LISTE DE POINTS	LIST OF POINTS
LOI DE FROTTEMENT SUR LE FOND	LAW OF BOTTOM FRICTION
LOI DE FROTTEMENT SUR LES PAROIS LATERALES	LAW OF FRICTION ON LATERAL BOUNDARIES
LONGITUDE DU POINT ORIGINE	LONGITUDE OF ORIGIN POINT
LONGUEUR DU VECTEUR	VECTOR LENGTH
MASS-LUMPING POUR LES CARACTERISTIQUES FAIBLES	MASS-LUMPING FOR WEAK CHARACTERISTICS
MASS-LUMPING SUR H	MASS-LUMPING ON H
MASS-LUMPING SUR LA VITESSE	MASS-LUMPING ON VELOCITY
MASS-LUMPING SUR LES TRACEURS	MASS-LUMPING ON TRACERS
MASSE VOLUMIQUE DE L'EAU	WATER DENSITY
MASSE VOLUMIQUE DES ALGUES	DENSITY OF ALGAE
MAXIMUM D'ITERATIONS POUR K ET EPSILON	MAXIMUM NUMBER OF ITERATIONS FOR K AND EPSILON
MAXIMUM D'ITERATIONS POUR L'IDENTIFICATION	MAXIMUM NUMBER OF ITERATIONS FOR IDENTIFICATION
MAXIMUM D'ITERATIONS POUR LA DIFFUSION DES TRACEURS	MAXIMUM NUMBER OF ITERATIONS FOR DIFFUSION OF TRACERS
MAXIMUM D'ITERATIONS POUR LE SOLVEUR	MAXIMUM NUMBER OF ITERATIONS FOR SOLVER
MAXIMUM D'ITERATIONS POUR LES SCHEMAS DE CONVECTION	MAXIMUM NUMBER OF ITERATIONS FOR ADVECTION SCHEMES
METHODE D'IDENTIFICATION	IDENTIFICATION METHOD
MODELE DE DIFFUSION STOCHASTIQUE	STOCHASTIC DIFFUSION MODEL
MODELE DE NAPPES D'HYDROCARBURES	OIL SPILL MODEL
MODELE DE TRANSPORT DES ALGUES	ALGAE TRANSPORT MODEL
MODELE DE TURBULENCE	TURBULENCE MODEL
MODELE PLUIE-DEBIT	RAINFALL-RUNOFF MODEL
NEBULOSITE	CLOUD COVER
NESTOR	NESTOR
NIVEAUX DE RAFFINEMENT	REFINEMENT LEVELS
NOMBRE DE BUSES	NUMBER OF CULVERTS
NOMBRE DE CLASSES D'ALGUES	NUMBER OF ALGAE CLASSES
NOMBRE DE CORRECTIONS DES SCHEMAS DISTRIBUTIFS	NUMBER OF CORRECTIONS OF DISTRIBUTIVE SCHEMES
NOMBRE DE COURANT SOUHAITE	DESIRED COURANT NUMBER
NOMBRE DE DERIVES LAGRANGIENNES	NUMBER OF LAGRANGIAN DRIFTS
NOMBRE DE PAS DE TEMPS	NUMBER OF TIME STEPS
NOMBRE DE POINTS DE GAUSS POUR LES CARACTERISTIQUES FAIBLES	NUMBER OF GAUSS POINTS FOR WEAK CHARACTERISTICS

NOMBRE DE SEUILS	NUMBER OF WEIRS
NOMBRE DE SOUS-ITERATIONS POUR LES NON-LINEARITES	NUMBER OF SUB-ITERATIONS FOR NON-LINEARITIES
NOMBRE DE SOUS-PAS DES SCHEMAS DISTRIBUTIFS	NUMBER OF SUB-STEPS OF DISTRIBUTIVE SCHEMES
NOMBRE DE TABLEAUX PRIVES	NUMBER OF PRIVATE ARRAYS
NOMBRE DE TRACEURS	NUMBER OF TRACERS
NOMBRE MAXIMAL DE FLOTTEURS	MAXIMUM NUMBER OF DROGUES
NOMBRE MAXIMUM DE DOMAINES DE FROTTEMENT	MAXIMUM NUMBER OF FRICTION DOMAINS
NOMBRE MAXIMUM DE FRONTIERES	MAXIMUM NUMBER OF BOUNDARIES
NOMBRE MAXIMUM DE POINTS POUR DEFINIR DES SOURCES	MAXIMUM NUMBER OF POINTS FOR SOURCES REGIONS
NOMBRE MAXIMUM DE SOURCES	MAXIMUM NUMBER OF SOURCES
NOMBRE MAXIMUM DE TRACEURS	MAXIMUM NUMBER OF TRACERS
NOMS DES POINTS	NAMES OF POINTS
NOMS DES TRACEURS	NAMES OF TRACERS
NOMS DES VARIABLES CLANDESTINES	NAMES OF CLANDESTINE VARIABLES
NOMS DES VARIABLES PRIVEES	NAMES OF PRIVATE VARIABLES
NORD	NORTH
NUMERO DE FUSEAU OU PROJECTION DANS LE SYSTEME GEOGRAPHIQUE	ZONE NUMBER IN GEOGRAPHIC SYSTEM
NUMERO DE L'ENREGISTREMENT DANS LE FICHIER DE HOULE	RECORD NUMBER IN WAVE FILE
NUMERO DU PREMIER PAS DE TEMPS POUR LES SORTIES GRAPHIQUES	NUMBER OF FIRST TIME STEP FOR GRAPHIC PRINTOUTS
NUMERO DU PREMIER PAS DE TEMPS POUR LES SORTIES LISTING	NUMBER OF FIRST TIME STEP FOR LISTING PRINTOUTS
NUMERO GLOBAL DU POINT POUR CALER LA PLEINE MER	GLOBAL NUMBER OF THE POINT TO CALIBRATE HIGH WATER
NUMERO LOCAL DU POINT POUR CALER LA PLEINE MER	LOCAL NUMBER OF THE POINT TO CALIBRATE HIGH WATER
NUMEROS GLOBAUX DES NOEUDS DES SOURCES	GLOBAL NUMBERS OF SOURCE NODES
OPTION DE LA RECONSTRUCTION HYDROSTATIQUE	OPTION OF THE HYDROSTATIC RECONSTRUCTION
OPTION DE SUPG	SUPG OPTION
OPTION DE TRAITEMENT DES BANCS DECOUVRANTS	OPTION FOR THE TREATMENT OF TIDAL FLATS
OPTION DU SCHEMA POUR LA CONVECTION DES TRACEURS	SCHEME OPTION FOR ADVECTION OF TRACERS
OPTION DU SCHEMA POUR LA CONVECTION DES VITESSES	SCHEME OPTION FOR ADVECTION OF VELOCITIES
OPTION DU SCHEMA POUR LA CONVECTION DU K-EPSILON	SCHEME OPTION FOR ADVECTION OF K-EPSILON
OPTION DU SOLVEUR	SOLVER OPTION

OPTION DU SOLVEUR POUR LA DIFFUSION DES TRACEURS	SOLVER OPTION FOR TRACERS DIFFUSION
OPTION DU SOLVEUR POUR LE MODELE K-EPSILON	OPTION FOR THE SOLVER FOR K-EPSILON MODEL
OPTION DU VENT	OPTION FOR WIND
OPTION POUR LA DIFFUSION DES TRACEURS	OPTION FOR THE DIFFUSION OF TRACERS
OPTION POUR LA DIFFUSION DES VITESSES	OPTION FOR THE DIFFUSION OF VELOCITIES
OPTION POUR LA GENERATION DE TSUNAMI	OPTION FOR TSUNAMI GENERATION
OPTION POUR LES BUSES	OPTION FOR CULVERTS
OPTION POUR LES CARACTERISTIQUES	OPTION FOR CHARACTERISTICS
OPTION POUR LES CONDITIONS AUX LIMITES DE MAREE	OPTION FOR TIDAL BOUNDARY CONDITIONS
OPTION POUR LES FRONTIERES LIQUIDES	OPTION FOR LIQUID BOUNDARIES
OPTION POUR RATIO DES PERTES INITIALES	OPTION FOR INITIAL ABSTRACTION RATIO
ORDONNEES DES SOURCES	ORDINATES OF SOURCES
ORDRE DU TIR INITIAL POUR H	INITIAL GUESS FOR H
ORDRE DU TIR INITIAL POUR U	INITIAL GUESS FOR U
ORDRE EN ESPACE DU SCHEMA VOLUME FINIS	FINITE VOLUME SCHEME SPACE ORDER
ORDRE EN TEMPS DU SCHEMA VOLUME FINIS	FINITE VOLUME SCHEME TIME ORDER
PARAMETRES PHYSIQUES DU TSUNAMI	PHYSICAL CHARACTERISTICS OF THE TSUNAMI
PARTITIONNEUR	PARTITIONING TOOL
PAS DE TEMPS	TIME STEP
PAS DE TEMPS VARIABLE	VARIABLE TIME-STEP
PERIODE DE COUPLAGE POUR SISYPHE	COUPLING PERIOD FOR SISYPHE
PERIODE DE COUPLAGE POUR TOMAWAC	COUPLING PERIOD FOR TOMAWAC
PERIODE DE SORTIE LISTING	LISTING PRINTOUT PERIOD
PERIODE DE SORTIE POUR DELWAQ	DELWAQ PRINTOUT PERIOD
PERIODE POUR LES SORTIES DE FLOTTEURS	PRINTOUT PERIOD FOR DROGUES
PERIODE POUR LES SORTIES GRAPHIQUES	GRAPHIC PRINTOUT PERIOD
PERIODE POUR LES SORTIES LISTING	LISTING FOR PRINTOUT PERIOD
PERIODES D'ANALYSE DE FOURIER	FOURIER ANALYSIS PERIODS
PLUIE OU EVAPORATION	RAIN OR EVAPORATION

PLUIE OU EVAPORATION EN MM PAR JOUR	RAIN OR EVAPORATION IN MM PER DAY
PRECISION DU SOLVEUR	SOLVER ACCURACY
PRECISION POUR LA DIFFUSION DES TRACEURS	ACCURACY FOR DIFFUSION OF TRACERS
PRECISION SUR EPSILON	ACCURACY OF EPSILON
PRECISION SUR K	ACCURACY OF K
PRECISION SUR SPALART-ALLMARAS	ACCURACY OF SPALART-ALLMARAS
PRECISIONS POUR L'IDENTIFICATION	TOLERANCES FOR IDENTIFICATION
PRECONDITIONNEMENT	PRECONDITIONING
PRECONDITIONNEMENT C-U	C-U PRECONDITIONING
PRECONDITIONNEMENT POUR LA DIFFUSION DES TRACEURS	PRECONDITIONING FOR DIFFUSION OF TRACERS
PRECONDITIONNEMENT POUR LE MODELE K-EPSILON	PRECONDITIONING FOR K-EPSILON MODEL
PRESSION ATMOSPHERIQUE	AIR PRESSURE
PRESSION DE VAPEUR SATURANTE	VAPOROUS PRESSURE
PROCESSEURS PARALLELES	PARALLEL PROCESSORS
PROCESSUS LIES AUX GLACES	ICE PROCESSES
PROCESSUS QUALITE D'EAU	WATER QUALITY PROCESS
PRODUIT MATRICE-VECTEUR	MATRIX-VECTOR PRODUCT
PROFILS DE VITESSE	VELOCITY PROFILES
PROFONDEUR LIMITE POUR LE VENT	THRESHOLD DEPTH FOR WIND
PROFONDEUR LIMITE POUR PROCEDURE DE RESSUYAGE	THRESHOLD DEPTH FOR RECEDING PROCEDURE
PROFONDEUR MOYENNE POUR LA LINEARISATION	MEAN DEPTH FOR LINEARIZATION
PROPAGATION	PROPAGATION
PROPAGATION LINEARISEE	LINEARIZED PROPAGATION
RAYONNEMENT SOLAIRE	SOLAR RADIATION
REGIME DE TURBULENCE POUR LES PAROIS	TURBULENCE REGIME FOR SOLID BOUNDARIES
REMISE A ZERO DU TEMPS	INITIAL TIME SET TO ZERO
SALINITE POUR DELWAQ	SALINITY FOR DELWAQ
SCHEMA EN VOLUMES FINIS	FINITE VOLUME SCHEME
SCHEMA POUR LA CONVECTION DES TRACEURS	SCHEME FOR ADVECTION OF TRACERS
SCHEMA POUR LA CONVECTION DES VITESSES	SCHEME FOR ADVECTION OF VELOCITIES
SCHEMA POUR LA CONVECTION DU K-EPSILON	SCHEME FOR ADVECTION OF K-EPSILON
SECTIONS DE CONTROLE	CONTROL SECTIONS
SEUIL DE LA VITESSE ORBITALE DE VAGUE POUR LES ALGUES 1	WAVE ORBITAL VELOCITY THRESHOLD FOR ALGAE 1
SEUIL DE LA VITESSE ORBITALE DE VAGUE POUR LES ALGUES 2	WAVE ORBITAL VELOCITY THRESHOLD FOR ALGAE 2

SEUIL POUR LES PROFONDEURS NEGATIVES	THRESHOLD FOR NEGATIVE DEPTHS
SOLVEUR	SOLVER
SOLVEUR POUR LA DIFFUSION DES TRACEURS	SOLVER FOR DIFFUSION OF TRACERS
SOLVEUR POUR LE MODELE K-EPSILON	SOLVER FOR K-EPSILON MODEL
SORTIE LISTING	LISTING PRINTOUT
STOCKAGE DES MATRICES	MATRIX STORAGE
STRUCTURES VERTICALES	VERTICAL STRUCTURES
SUITE DE CALCUL	COMPUTATION CONTINUED
SYSTEME GEOGRAPHIQUE	GEOGRAPHIC SYSTEM
TAUX DE DEGRADATION POUR LES ALGUES	RATE OF DEGRADATION FOR ALGAE
TEMPERATURE DE L'AIR	AIR TEMPERATURE
TEMPERATURE MOYENNE	MEAN TEMPERATURE
TEMPERATURE POUR DELWAQ	TEMPERATURE FOR DELWAQ
TITRE	TITLE
TRAITEMENT DES FLUX AUX FRONTIERES	TREATMENT OF FLUXES AT THE BOUNDARIES
TRAITEMENT DES HAUTEURS NEGATIVES	TREATMENT OF NEGATIVE DEPTHS
TRAITEMENT DU SYSTEME LINEAIRE	TREATMENT OF THE LINEAR SYSTEM
TYPE DE CONDITION A LA LIMITE POUR LE SCHEMA CINETIQUE	TYPE OF BOUNDARY CONDITION FOR KINETIC SCHEME
TYPE DE PROJECTION SPATIALE	SPATIAL PROJECTION TYPE
TYPE DE RELACHE DES ALGUES	ALGAE RELEASE TYPE
TYPE DES ALGUES	ALGAE TYPE
TYPE DES SEUILS	TYPE OF WEIRS
TYPE DES SOURCES	TYPE OF SOURCES
VALEUR DE LA PRESSION ATMOSPHERIQUE	VALUE OF ATMOSPHERIC PRESSURE
VALEUR MINIMUM DE H	MINIMUM VALUE OF DEPTH
VALEUR PAR DEFAUT DU MANNING POUR LA LOI DE COLEBROOK-WHITE	MANNING DEFAULT VALUE FOR COLEBROOK-WHITE LAW
VALEURS DES TRACEURS DANS LA PLUIE	VALUES OF TRACERS IN THE RAIN
VALEURS DES TRACEURS DES SOURCES	VALUES OF THE TRACERS AT THE SOURCES
VALEURS IMPOSEES DES TRACEURS	PRESCRIBED TRACERS VALUES
VALEURS INITIALES DES TRACEURS	INITIAL VALUES OF TRACERS
VALEURS LIMITES	LIMIT VALUES
VALIDATION	VALIDATION
VARIABLES A IMPRIMER	VARIABLES TO BE PRINTED
VARIABLES POUR LES SORTIES GRAPHIQUES	VARIABLES FOR GRAPHIC PRINTOUTS
VENT	WIND

VERIFICATION DU MAILLAGE	CHECKING THE MESH
VITESSE DU VENT SUIVANT X	WIND VELOCITY ALONG X
VITESSE DU VENT SUIVANT Y	WIND VELOCITY ALONG Y
VITESSE ET DIRECTION DU VENT	SPEED AND DIRECTION OF WIND
VITESSE POUR DELWAQ	VELOCITY FOR DELWAQ
VITESSES DES SOURCES SELON X	VELOCITIES OF THE SOURCES ALONG X
VITESSES DES SOURCES SELON Y	VELOCITIES OF THE SOURCES ALONG Y
VITESSES IMPOSEES	PRESCRIBED VELOCITIES
VITESSES INITIALES CALCULEES PAR TPXO	INITIAL VELOCITIES COMPUTED BY TPXO
ZERO	ZERO

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[1] J-M. HERVOUET. *Hydrodynamics of free surface flows. Modelling with the finite element method.* John Wiley & Sons, Ltd, Paris, 2007.