

# Sisyphe

## Reference Manual

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# Contents

<b>1</b>	<b>Detail list of keywords .....</b>	<b>9</b>
1.1	ACTIVE LAYER THICKNESS	9
1.2	AD LINEAR SOLVER DERIVATIVE CONVERGENCE	9
1.3	AD LINEAR SOLVER RESET DERIVATIVES	9
1.4	AD NAMES OF DERIVATIVES	9
1.5	AD NUMBER OF DERIVATIVES	10
1.6	AD NUMBER OF DIRECTIONS	10
1.7	AD SYMBOLIC LINEAR SOLVER	10
1.8	B VALUE FOR THE BIJKER FORMULA	10
1.9	BED LOAD	10
1.10	BED ROUGHNESS PREDICTION	10
1.11	BED ROUGHNESS PREDICTOR OPTION	11
1.12	BED-LOAD TRANSPORT FORMULA	11
1.13	BETA	11
1.14	BINARY OF THE PREVIOUS SEDIMENTOLOGICAL COMPUTATION FILE	11
1.15	BOTTOM TOPOGRAPHY FILE	12
1.16	BOUNDARY CONDITIONS FILE	12
1.17	C-VSM DYNAMIC ALT MODEL	12
1.18	C-VSM FULL PRINTOUT PERIOD	12
1.19	C-VSM MAXIMUM SECTIONS	12
1.20	C-VSM PRINTOUT SELECTION	13
1.21	CHECKING THE MESH	13
1.22	COHESIVE SEDIMENTS	13
1.23	COMPUTATION CONTINUED	13
1.24	CONCENTRATION PER CLASS AT BOUNDARIES	13
1.25	CONSOLIDATION MODEL	14

1.26	CONSTANT ACTIVE LAYER THICKNESS	14
1.27	CONSTANT FLOW DISCHARGE	14
1.28	CONTROL SECTIONS	14
1.29	CORRECTION ON CONVECTION VELOCITY	14
1.30	CPU TIME	15
1.31	CRITERION TO UPDATE THE FLOW	15
1.32	CRITICAL EROSION SHEAR STRESS OF THE MUD	15
1.33	CRITICAL EVOLUTION RATIO	15
1.34	CRITICAL SHEAR VELOCITY FOR MUD DEPOSITION	15
1.35	D90	16
1.36	DEBUGGER	16
1.37	DEFAULT EXECUTABLE	16
1.38	DEFAULT PARALLEL EXECUTABLE	16
1.39	DESCRIPTION OF LIBRARIES	16
1.40	DICTIONARY	17
1.41	DIFFUSION	17
1.42	DISPERSION ACROSS THE FLOW	17
1.43	DISPERSION ALONG THE FLOW	17
1.44	EFFECT OF WAVES	17
1.45	EQUILIBRIUM INFLOW CONCENTRATION	17
1.46	FINITE VOLUMES	18
1.47	FLUXLINE	18
1.48	FLUXLINE INPUT FILE	18
1.49	FORMULA FOR DEVIATION	18
1.50	FORMULA FOR SLOPE EFFECT	18
1.51	FORMULATION FOR DEPOSITION AND EROSION	19
1.52	FORTTRAN FILE	19
1.53	FREE INTEGER 1	19
1.54	FREE INTEGER 2	19
1.55	FREE LOGICAL 1	19
1.56	FRICTION ANGLE OF THE SEDIMENT	19
1.57	FRICTION COEFFICIENT	20
1.58	GEL CONCENTRATION	20
1.59	GEOMETRY FILE	20
1.60	GEOMETRY FILE BINARY	20
1.61	GEOMETRY FILE FORMAT	20

1.62	GRAIN-FEEDING	21
1.63	GRAPHIC PRINTOUT PERIOD	21
1.64	GRAPHIC SOFTWARE	21
1.65	GRAPHIC SOFTWARE OF THE HYDRODYNAMIC COMPUTATION	21
1.66	GRAVITY ACCELERATION	21
1.67	HIDING FACTOR FOR PARTICULAR SIZE CLASS	22
1.68	HIDING FACTOR FORMULA	22
1.69	HYDRODYNAMIC CODE	22
1.70	HYDRODYNAMIC FILE	22
1.71	HYDRODYNAMIC FILE BINARY	22
1.72	HYDRODYNAMIC FILE FORMAT	23
1.73	INITIAL FRACTION FOR PARTICULAR SIZE CLASS	23
1.74	INITIAL SUSPENSION CONCENTRATIONS	23
1.75	LAW OF BOTTOM FRICTION	23
1.76	LIBRARIES	23
1.77	LIQUID BOUNDARIES FILE	24
1.78	LIST OF FILES	24
1.79	LISTING PRINTOUT PERIOD	24
1.80	MASS CONCENTRATION	25
1.81	MASS TRANSFER PER LAYER	25
1.82	MASS-BALANCE	25
1.83	MASS-LUMPING	25
1.84	MATRIX STORAGE	25
1.85	MATRIX-VECTOR PRODUCT	26
1.86	MAXIMUM CONCENTRATION	26
1.87	MAXIMUM NUMBER OF BOUNDARIES	26
1.88	MAXIMUM NUMBER OF ITERATIONS FOR ADVECTION SCHEMES	26
1.89	MAXIMUM NUMBER OF ITERATIONS FOR SOLVER	26
1.90	MAXIMUM NUMBER OF ITERATIONS FOR SOLVER FOR SUSPENSION	27
1.91	MEAN DIAMETER OF THE SEDIMENT	27
1.92	MEMORY SPACE CRAY	27
1.93	MESHING	27
1.94	MINIMAL VALUE OF THE WATER HEIGHT	27
1.95	MINIMUM DEPTH FOR BEDLOAD	28
1.96	MIXED SEDIMENT	28
1.97	MORPHOLOGICAL FACTOR	28

1.98	MPM COEFFICIENT	28
1.99	MUD CONCENTRATION PER LAYER	28
1.100	MUD CONSOLIDATION	28
1.101	NAMES OF PRIVATE VARIABLES	29
1.102	NESTOR	29
1.103	NESTOR ACTION FILE	29
1.104	NESTOR POLYGON FILE	29
1.105	NESTOR RESTART FILE	29
1.106	NESTOR SURFACE REFERENCE FILE	29
1.107	NON COHESIVE BED POROSITY	30
1.108	NUMBER OF BED LOAD MODEL LAYERS	30
1.109	NUMBER OF CORRECTIONS OF DISTRIBUTIVE SCHEMES	30
1.110	NUMBER OF ITERATIONS FOR TELEMAT	30
1.111	NUMBER OF LAYERS OF THE CONSOLIDATION MODEL	30
1.112	NUMBER OF PRIVATE ARRAYS	31
1.113	NUMBER OF SIZE-CLASSES OF BED MATERIAL	31
1.114	NUMBER OF SUB-ITERATIONS	31
1.115	NUMBER OF SUB-STEPS OF DISTRIBUTIVE SCHEMES	31
1.116	NUMBER OF TIDES OR FLOODS	31
1.117	NUMBER OF TIME STEPS	32
1.118	OPTION FOR THE DIFFUSION OF TRACER	32
1.119	OPTION FOR THE DISPERSION	32
1.120	OPTION FOR THE TREATMENT OF NON ERODABLE BEDS	32
1.121	OPTION FOR THE TREATMENT OF TIDAL FLATS	32
1.122	ORIGIN COORDINATES	33
1.123	ORIGINAL DATE OF TIME	33
1.124	ORIGINAL HOUR OF TIME	33
1.125	PARALLEL PROCESSORS	33
1.126	PARAMETER FOR DEVIATION	33
1.127	PARTHENIADES CONSTANT	34
1.128	PARTITIONING TOOL	34
1.129	PASSWORD CRAY	34
1.130	PERMEABILITY COEFFICIENT	34
1.131	PRECONDITIONING	34
1.132	PRECONDITIONING FOR SUSPENSION	35
1.133	PRESCRIBED SOLID DISCHARGES	35

1.134	PREVIOUS SEDIMENTOLOGICAL COMPUTATION FILE	35
1.135	PREVIOUS SEDIMENTOLOGICAL COMPUTATION FILE FORMAT	35
1.136	PVM1 LIBRARY	35
1.137	PVM2 LIBRARY	36
1.138	RATIO BETWEEN SKIN FRICTION AND MEAN DIAMETER	36
1.139	REFERENCE CONCENTRATION FORMULA	36
1.140	REFERENCE FILE	36
1.141	REFERENCE FILE BINARY	36
1.142	REFERENCE FILE FORMAT	37
1.143	RELEASE	37
1.144	RESULTS FILE	37
1.145	RESULTS FILE BINARY	37
1.146	RESULTS FILE FORMAT	37
1.147	SCHEME OPTION FOR ADVECTION	38
1.148	SECONDARY CURRENTS	38
1.149	SECONDARY CURRENTS ALPHA COEFFICIENT	38
1.150	SECONDARY CURRENTS FILE	38
1.151	SECTIONS INPUT FILE	38
1.152	SECTIONS OUTPUT FILE	39
1.153	SEDIMENT DENSITY	39
1.154	SEDIMENT DIAMETERS	39
1.155	SEDIMENT SLIDE	39
1.156	SETTLING LAG	39
1.157	SETTLING VELOCITIES	39
1.158	SHIELDS PARAMETERS	40
1.159	SKIN FRICTION CORRECTION	40
1.160	SLOPE EFFECT	40
1.161	SOLVER	40
1.162	SOLVER ACCURACY	41
1.163	SOLVER ACCURACY FOR SUSPENSION	41
1.164	SOLVER FOR SUSPENSION	41
1.165	SOLVER OPTION	41
1.166	SOLVER OPTION FOR SUSPENSION	41
1.167	STARTING TIME OF THE HYDROGRAM	42
1.168	STATIONARY MODE	42
1.169	STEADY CASE	42

1.170	STEERING FILE	42
1.171	SUPG OPTION	42
1.172	SUSPENSION	43
1.173	TETA	43
1.174	TETA SUSPENSION	43
1.175	TIDAL FLATS	43
1.176	TIDE PERIOD	43
1.177	TIME STEP	44
1.178	TITLE	44
1.179	TREATMENT OF FLUXES AT THE BOUNDARIES	44
1.180	TYPE OF ADVECTION	44
1.181	USER CRAY	44
1.182	VALIDATION	45
1.183	VARIABLES FOR GRAPHIC PRINTOUTS	45
1.184	VARIABLES TO BE PRINTED	45
1.185	VECTOR LENGTH	45
1.186	VERTICAL GRAIN SORTING MODEL	45
1.187	WATER DENSITY	46
1.188	WATER VISCOSITY	46
1.189	WAVE FILE	46
1.190	WAVE FILE FORMAT	46
1.191	ZERO	46
<b>2</b>	<b>List of keywords classified according to type .....</b>	<b>47</b>
2.1	BED MATERIAL	47
2.1.1	C-VSM .....	47
2.2	BED-LOAD	47
2.3	COHESIVE SEDIMENT	47
2.4	COMPUTATIONAL INFORMATION	48
2.4.1	GENERAL .....	48
2.5	CONSOLIDATION	48
2.6	DATA FILES	48
2.7	EQUATIONS, ADVECTION	48
2.7.1	GENERAL .....	48
2.8	EQUATIONS, BOUNDARY CONDITIONS	48
2.9	FRICTION	48
2.10	GENERAL	49

<b>2.11</b>	<b>INITIAL CONDITIONS</b>	<b>49</b>
<b>2.12</b>	<b>INPUT-OUTPUT, FILES</b>	<b>49</b>
2.12.1	NAMES .....	49
<b>2.13</b>	<b>INPUT-OUTPUT, GRAPHICS AND LISTING</b>	<b>49</b>
<b>2.14</b>	<b>INPUT-OUTPUT, INFORMATION</b>	<b>50</b>
2.14.1	COMPUTATION ENVIRONMENT .....	50
2.14.2	COMPUTATIONAL INFORMATION .....	50
2.14.3	MESH GENERATOR .....	50
<b>2.15</b>	<b>MISCELLANEOUS</b>	<b>50</b>
<b>2.16</b>	<b>NUMERICAL</b>	<b>50</b>
<b>2.17</b>	<b>NUMERICAL PARAMETERS</b>	<b>50</b>
2.17.1	AUTOMATIC DIFFERENTIATION .....	51
2.17.2	GENERAL .....	51
2.17.3	SOLVER .....	51
<b>2.18</b>	<b>PHYSICS</b>	<b>51</b>
<b>2.19</b>	<b>RESULTS</b>	<b>51</b>
<b>2.20</b>	<b>SEDIMENT TRANSPORT</b>	<b>51</b>
2.20.1	NONEQUILIBRIUM BED LOAD .....	51
<b>2.21</b>	<b>SEDIMENTOLOGY</b>	<b>52</b>
2.21.1	GENERAL .....	52
<b>2.22</b>	<b>SLOPE EFFECT</b>	<b>52</b>
<b>2.23</b>	<b>SOLVER</b>	<b>52</b>
<b>2.24</b>	<b>SUSPENSION</b>	<b>52</b>
<b>2.25</b>	<b>TIME</b>	<b>53</b>
<b>2.26</b>	<b>USELESS</b>	<b>53</b>
<b>3</b>	<b>glossary .....</b>	<b>54</b>
<b>3.1</b>	<b>english/french glossary</b>	<b>54</b>
<b>3.2</b>	<b>French/English glossary</b>	<b>59</b>
	<b>Bibliography .....</b>	<b>65</b>



# 1. Detail list of keywords

## 1.1 ACTIVE LAYER THICKNESS

Type : Real  
Dimension : 0  
Mnemo ELAY0  
DEFAULT VALUE : 10000

French keyword : EPAISSEUR DE COUCHE ACTIVE

Thickness for bed stratification. Composition of first layer is used to compute bed load transport rate. If you do not want a stratification, use a large value

## 1.2 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.

## 1.3 AD LINEAR SOLVER RESET DERIVATIVES

Type : Logical  
Dimension : 1  
Mnemo AD\_LINSOLV\_RESETERIV  
DEFAULT VALUE : YES

French keyword : AD REMISE A ZERO DES DERIVEES DU SOLVEUR LINEAIRE

Resets the derivatives for AD.

## 1.4 AD NAMES OF DERIVATIVES

Type : String  
Dimension : 2  
Mnemo NAME\_ADVAR  
DEFAULT VALUE : 'MANDATORY'

French keyword : AD NOMS DES DERIVEES

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

**1.5 AD NUMBER OF DERIVATIVES**

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

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

**1.6 AD NUMBER OF DIRECTIONS**

Type : Integer  
 Dimension : 0  
 Mnemo AD\_NUMOFDIR  
 DEFAULT VALUE : 1  
 French keyword : AD NOMBRE DE DIRECTIONS

Defines the number of directions for the differentiators

**1.7 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.

**1.8 B VALUE FOR THE BIJKER FORMULA**

Type : Real  
 Dimension : 1  
 Mnemo BIJK  
 DEFAULT VALUE : 2.E0  
 French keyword : COEFFICIENT B DE LA FORMULE DE BIJKER

b value for the Bijker formula

**1.9 BED LOAD**

Type : Logical  
 Dimension : 1  
 Mnemo  
 DEFAULT VALUE : YES  
 French keyword : CHARRIAGE

TODD: WRITE HELP FOR THAT KEYWORD

**1.10 BED ROUGHNESS PREDICTION**

Type : Logical  
 Dimension : 0  
 Mnemo KSPRED  
 DEFAULT VALUE : NO  
 French keyword : PREDICTION DE LA RUGOSITE

The bed roughness is predicted according to the selected BED ROUGHNESS PREDICTOR

OPTION. In case of coupling with Telemac2d, the calculated bed roughness is sent to Telemac. The FRICTION COEFFICIENT and FRICTION LAW are no longer used (KFROT is set to 5)

### 1.11 BED ROUGHNESS PREDICTOR OPTION

Type : Integer  
 Dimension : 1  
 Mnemo IKS  
 DEFAULT VALUE : 1  
 French keyword : OPTION DU PREDICTEUR DE RUGOSITE  
 1: Flat bed, 2: Rippled bed, 3: Dunes and mega ripples (Method of Van Rijn)

### 1.12 BED-LOAD TRANSPORT FORMULA

Type : Integer  
 Dimension : 1  
 Mnemo ICF  
 DEFAULT VALUE : 1  
 French keyword : FORMULE DE TRANSPORT SOLIDE  
 10 bed-load or total load transport formulas are implemented in SISYPHE. The formula Ne3, Ne30 and Ne9 should not be used in the case of coupling with the suspension. The formula Ne4, Ne5, Ne8 and Ne9 model the transport under the combined action of currents and waves : 1 : MEYER-PETER (bed load) 2 : EINSTEIN-BROWN (bed load) 3 : ENGELUND-HANSEN + CHOLLET AND CUNGE (VERSION 5.3) 30: ENGELUND-HANSEN (total) 4 : BIJKER (bed load + suspension) 5 : SOULSBY - VAN RIJN (bed load + suspension) 6 : HUNZIKER (only for sand grading) IN THIS CASE HIDING FACTOR KEYWORD DISCARDED And Hunziker formula used 7 : VAN RIJN (bed load) 8 : BAILARD (bed load + suspension) 9 : DIBAJNIA ET WATANABE (total) Users can also program other formulas (subroutine QS-FORM.f) setting this key word to zero : 0 : FORMULA PROGRAMMED BY USER Warning : it is not then possible to choose the option VARIABLE TIME-STEP

### 1.13 BETA

Type : Real  
 Dimension : 1  
 Mnemo  
 DEFAULT VALUE : 1.3  
 French keyword : BETA  
 Specifies the value of the beta coefficient used in the Koch and Flokstra slope effect formulation.

### 1.14 BINARY OF THE PREVIOUS SEDIMENTOLOGICAL COMPUTATION FILE

Type : String  
 Dimension : 1  
 Mnemo  
 DEFAULT VALUE : 'STD'  
 French keyword : STANDARD DU FICHIER PRECEDENT SEDIMENTOLOGIQUE  
 Binary file type used for writing the previous sedimentological computation results file. This type depends on the machine on which the file was generated. The possible values are the same as for the geometry file.

**1.15 BOTTOM TOPOGRAPHY FILE**

Type : String  
 Dimension : 1  
 Mnemo SIS\_FILES(SISFON)  
 DEFAULT VALUE : "  
 French keyword : FICHIER DES FONDS  
 Name of the possible file containing the bathymetric data.

**1.16 BOUNDARY CONDITIONS FILE**

Type : String  
 Dimension : 1  
 Mnemo SIS\_FILES(SISLIM)  
 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 colours that are assigned to the computation domain boundary nodes.

**1.17 C-VSM DYNAMIC ALT MODEL**

Type : Integer  
 Dimension : 0  
 Mnemo ALT\_MODEL  
 DEFAULT VALUE : 5  
 French keyword : C-VSM DYNAMIC ALT MODEL  
 MODEL FOR ACTIVE LAYER THICKNESS 0 = ELAY0 (Keyword: ACTIVE LAYER THICKNESS) 1 = Hunziker & Günther 2 = Fredsoe & Deigaard (1992) 3 = van RIJN (1993) 4 = Wong (2006) 5 = Malcherek (2003) 6 = 3\*d50 within last time steps ALT

**1.18 C-VSM FULL PRINTOUT PERIOD**

Type : Integer  
 Dimension : 0  
 Mnemo CVSMPPERIOD  
 DEFAULT VALUE : 0  
 French keyword : C-VSM FULL PRINTOUT PERIOD  
 Number of Timesteps to next printout of the full C-VSM. These printouts are highly time and disc consuming. 0 = Coupled to GRAPHIC PRINTOUT PERIOD >0 = Own printout period for the C-VSM

**1.19 C-VSM MAXIMUM SECTIONS**

Type : Integer  
 Dimension : 0  
 Mnemo PRO\_MAX\_MAX  
 DEFAULT VALUE : 200  
 French keyword : C-VSM MAXIMUM SECTIONS  
 Defines the maximum discretisation of the Continous Vertical Sorting Model: Should be bigger than 8xNumber of Fractions. The bigger the higher the RAM requirements, but the faster and accurater the bookkeeping of the sediments.

**1.20 C-VSM PRINTOUT SELECTION**

Type : String  
 Dimension : 13  
 Mnemo CVSMOUTPUT  
 DEFAULT VALUE : '0;0;0;0;0;0;0;0;0;0;0;0;0'  
 French keyword : C-VSM PRINTOUT SELECTION

Printout the C-VSM for the whole model as SELAFIN or / and for some nodes as .VSP.CSV file.  
 Give Up to 100 INTEGER numbers separated by ";" 0 = Full model .-> .RES N = 1,2...NPOINT;  
 2D-ID of a SELFIN MESH POINT ->.CSV

**1.21 CHECKING THE MESH**

Type : Logical  
 Dimension : 0  
 Mnemo CHECK\_MESH  
 DEFAULT VALUE : NO  
 French keyword : VERIFICATION DU MAILLAGE

if this key word is equal to yes, a call to subroutine checkmesh will look for errors in the mesh, superimposed points, etc.

**1.22 COHESIVE SEDIMENTS**

Type : Logical  
 Dimension : 10  
 Mnemo SEDCO  
 DEFAULT VALUE : 0;0;0;0;0;0;0;0;0;0  
 French keyword : SEDIMENTS COHESIFS  
 TODO: WRITE HELP FOR THAT KEYWORD

**1.23 COMPUTATION CONTINUED**

Type : Logical  
 Dimension : 0  
 Mnemo DEBU  
 DEFAULT VALUE : NO  
 French keyword : SUITE DE CALCUL

Determines whether the computation under way is an 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 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. It is also possible to define new boundary conditions.

**1.24 CONCENTRATION PER CLASS AT BOUNDARIES**

Type : Real  
 Dimension : 2  
 Mnemo CBOR\_CLASSE  
 DEFAULT VALUE : MANDATORY  
 French keyword : CONCENTRATIONS PAR CLASSE AUX FRONTIERES

In case of suspension, will be used to initialize the value of volume concentration for each class and each boundary order: boundary 1 (class 1, class2, etc., then boundary 2, etc.

### 1.25 CONSOLIDATION MODEL

Type : Integer  
 Dimension : 1  
 Mnemo ITASS  
 DEFAULT VALUE : 1  
 French keyword : OPTION DU MODELE DE TASSEMENT  
 1: Multilayer model of Walther, 2: Thiebot , 3: Lenormant

### 1.26 CONSTANT ACTIVE LAYER THICKNESS

Type : Logical  
 Dimension : 1  
 Mnemo CONST\_ALAYER  
 DEFAULT VALUE : YES  
 French keyword : EPAISSEUR DE COUCHE ACTIVE CONSTANTE  
 constant active layer thickness or not

### 1.27 CONSTANT FLOW DISCHARGE

Type : Logical  
 Dimension : 1  
 Mnemo LCONDIS  
 DEFAULT VALUE : NO  
 French keyword : CONSTANT FLOW DISCHARGE  
 constant flow discharge or not

### 1.28 CONTROL SECTIONS

Type : Integer  
 Dimension : 3  
 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

### 1.29 CORRECTION ON CONVECTION VELOCITY

Type : Logical  
 Dimension : 0  
 Mnemo CORR\_CONV  
 DEFAULT VALUE : NO  
 French keyword : CORRECTION DU CHAMP CONVECTEUR  
 Modification of 2D convection velocities to account for velocity and concentration profiles

**1.30 CPU TIME**

Type : String  
 Dimension : 1  
 Mnemo  
 DEFAULT VALUE : '10'  
 French keyword : TEMPS MACHINE CRAY

C.P.U. time (in seconds) allowed for making the computation. Please note that this keyword is a string of characters.

**1.31 CRITERION TO UPDATE THE FLOW**

Type : Real  
 Dimension : 1  
 Mnemo CRIT\_CFD  
 DEFAULT VALUE : 0.1  
 French keyword : CRITERE POUR METTRE A JOUR L'HYDRODYNAMIQUE

Criterion (Bottom height > CRIT\_CFD \* Water depth) in order to update the flow. To use with the option constant flow discharge

**1.32 CRITICAL EROSION SHEAR STRESS OF THE MUD**

Type : Real  
 Dimension : 10  
 Mnemo TOCE\_VASE  
 DEFAULT VALUE : 0.01;0.02;0.03;0.04;0.05;0.06;0.07;0.08;0.09;1.  
 French keyword : CONTRAINTE CRITIQUE D'EROSION DE LA VASE

Critical erosion shear stress of the mud per layer (N per m<sup>2</sup>)

**1.33 CRITICAL EVOLUTION RATIO**

Type : Real  
 Dimension : 1  
 Mnemo  
 DEFAULT VALUE : 1.  
 French keyword : RAPPORT D'EVOLUTION CRITIQUE

Specifies the moment when the SISYPHE extrapolation current field is no more valid. This value set the maximum ratio between evolutions and the water depth. Generally, it is considered that an evolution lower than 0,1 time the water depth does not perceptibly modify the current field distribution.

**1.34 CRITICAL SHEAR VELOCITY FOR MUD DEPOSITION**

Type : Real  
 Dimension : 1  
 Mnemo VITCD  
 DEFAULT VALUE : 1000.  
 French keyword : VITESSE CRITIQUE DE DEPOT DE LA VASE

Critical shear velocity for deposition (m/s)

**1.35 D90**

Type : Real  
 Dimension : 10  
 Mnemo FD90  
 DEFAULT VALUE : .01;.01;.01;.01;.01;.01;.01;.01;.01;.01  
 French keyword : D90

Sets value of diameter d90 for particular size class. If the keyword is not in the sterring file, the default value is the value of the mean diameter of the sediment.

**1.36 DEBUGGER**

Type : Integer  
 Dimension : 0  
 Mnemo DEBUG  
 DEFAULT VALUE : 0  
 French keyword : DEBUGGER

If 1, calls of subroutines will be printed in the listing

**1.37 DEFAULT EXECUTABLE**

Type : String  
 Dimension : 1  
 Mnemo EXEDEF  
 DEFAULT VALUE : 'builds\PPP\bin\sisypheMMMVVV.exe'  
 French keyword : EXECUTABLE PAR DEFAULT

Default executable for SISYPHE

**1.38 DEFAULT PARALLEL EXECUTABLE**

Type : String  
 Dimension : 1  
 Mnemo EXEDEFPARA  
 DEFAULT VALUE : 'builds\PPP\bin\sisypheMMMVVV.exe'  
 French keyword : EXECUTABLE PARALLELE PAR DEFAULT

Default executable for SISYPHE

**1.39 DESCRIPTION OF LIBRARIES**

Type : String  
 Dimension : 7  
 Mnemo LINKLIBS  
 DEFAULT VALUE : 'builds\PPP\lib\sisypheMMMVVV.LLL;  
 builds\PPP\lib\nestorMMMVVV.LLL;  
 builds\PPP\lib\biefMMMVVV.LLL;  
 builds\PPP\lib\hermesMMMVVV.LLL;  
 builds\PPP\lib\damoMMMVVV.LLL;  
 builds\PPP\lib\parallelMMMVVV.LLL;  
 builds\PPP\lib\specialMMMVVV.LLL'

French keyword : DESCRIPTION DES LIBRAIRIES  
 SISYPHE LIBRARIES description



**1.40 DICTIONARY**

Type : String  
 Dimension : 1  
 Mnemo  
 DEFAULT VALUE : 'sisyphev6p2.dico'  
 French keyword : DICTIONNAIRE  
 Key word dictionary.

**1.41 DIFFUSION**

Type : Logical  
 Dimension : 0  
 Mnemo DIFT  
 DEFAULT VALUE : YES  
 French keyword : DIFFUSION  
 If yes, diffusion of the concentration of suspended sediment is done

**1.42 DISPERSION ACROSS THE FLOW**

Type : Real  
 Dimension : 0  
 Mnemo  
 DEFAULT VALUE : 1.E-2  
 French keyword : DISPERSION TRANSVERSALE  
 TODO: WRITE HELP FOR THAT KEYWORD

**1.43 DISPERSION ALONG THE FLOW**

Type : Real  
 Dimension : 0  
 Mnemo  
 DEFAULT VALUE : 1.E-2  
 French keyword : DISPERSION LONGITUDINALE  
 TODO: WRITE HELP FOR THAT KEYWORD

**1.44 EFFECT OF WAVES**

Type : Logical  
 Dimension : 1  
 Mnemo HOULE  
 DEFAULT VALUE : NO  
 French keyword : PRISE EN COMPTE DE LA HOULE  
 Takes into account the effect of waves

**1.45 EQUILIBRIUM INFLOW CONCENTRATION**

Type : Logical  
 Dimension : 0  
 Mnemo IMP\_INFLOW\_C  
 DEFAULT VALUE : NO  
 French keyword : CONCENTRATION D'EQUILIBRE EN ENTREE  
 impose the equilibrium concentration for the inflow and at t=0 in the whole domain thanks to

the formula of Fredsoe for non cohesive sediments

#### 1.46 FINITE VOLUMES

Type : Logical  
 Dimension : 0  
 Mnemo VF  
 DEFAULT VALUE : NO  
 French keyword : VOLUMES FINIS  
 Finite volumes method or not

#### 1.47 FLUXLINE

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

#### 1.48 FLUXLINE INPUT FILE

Type : String  
 Dimension : 1  
 Mnemo SIS\_FILES(SISFLX)  
 DEFAULT VALUE : "  
 French keyword : FICHIER DE FLUXLINE  
 Name of the Fluxline file

#### 1.49 FORMULA FOR DEVIATION

Type : Integer  
 Dimension : 1  
 Mnemo DEVIA  
 DEFAULT VALUE : 1  
 French keyword : FORMULE POUR LA DEVIATION  
 1: Koch and Flokstra 2: formula of Talmon et al. 1995, JHR 33(4) formulas (1) and (17) linked  
 keyword : BETA2

#### 1.50 FORMULA FOR SLOPE EFFECT

Type : Integer  
 Dimension : 1  
 Mnemo SLOPEFF  
 DEFAULT VALUE : 1  
 French keyword : FORMULE POUR EFFET DE PENTE  
 1 : formula of Koch et Flokstra, modification of bed load linked keyword : BETA 2 : formula of Soulsby, modification critical shear stress, can only be used with a threshold fomula linked  
 keyword : FRICTION ANGLE OF THE SEDIMENT

**1.51 FORMULATION FOR DEPOSITION AND EROSION**

Type : Integer  
Dimension : 0  
Mnemo  
DEFAULT VALUE : 2  
French keyword : FORMULATION POUR DEPOT ET EROSION  
TODO: WRITE HELP FOR THAT KEYWORD

**1.52 FORTRAN FILE**

Type : String  
Dimension : 1  
Mnemo  
DEFAULT VALUE : 'DEFAULT'  
French keyword : FICHER FORTRAN  
Name of FORTRAN file to be submitted.

**1.53 FREE INTEGER 1**

Type : Integer  
Dimension : 1  
Mnemo  
DEFAULT VALUE : 0  
French keyword : FREE INTEGER 1  
TODO: WRITE HELP FOR THAT KEYWORD

**1.54 FREE INTEGER 2**

Type : Integer  
Dimension : 1  
Mnemo  
DEFAULT VALUE : 1  
French keyword : FREE INTEGER 2  
TODO: WRITE HELP FOR THAT KEYWORD

**1.55 FREE LOGICAL 1**

Type : Logical  
Dimension : 1  
Mnemo  
DEFAULT VALUE : NO  
French keyword : FREE LOGICAL 1  
TODO: WRITE HELP FOR THAT KEYWORD

**1.56 FRICTION ANGLE OF THE SEDIMENT**

Type : Real  
Dimension : 1  
Mnemo PHISED  
DEFAULT VALUE : 40.  
French keyword : ANGLE DE FROTTEMENT DU SEDIMENT  
Angle of repose of the sediment. Used in the Soulsby formula to take into account the influence

of bed slope on critical shear stress. Use if ...=2

### 1.57 FRICTION COEFFICIENT

Type : Real

Dimension : 1

Mnemo

DEFAULT VALUE : 50.

French keyword : COEFFICIENT DE FROTTEMENT

Sets the value of the friction coefficient to calculate the bed shear stress. Depends on the LAW OF BOTTOM FRICTION.

### 1.58 GEL CONCENTRATION

Type : Real

Dimension : 1

Mnemo CONC\_GEL

DEFAULT VALUE : 310.E0

French keyword : CONCENTRATION GEL

Gel Concentration (Kg/m3)

### 1.59 GEOMETRY FILE

Type : String

Dimension : 0

Mnemo SIS\_FILES(SISGEO)

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.

### 1.60 GEOMETRY FILE BINARY

Type : String

Dimension : 1

Mnemo

DEFAULT VALUE : 'STD'

French keyword : STANDARD DU FICHIER DE GEOMETRIE

Binary file type used for writing the geometry file. This type depends on the machine on which the file was generated. The possible values are as follows : IBM, for a file on an IBM (from a CRAY) I3E, for a file on an HP (from a CRAY) STD, binary type of the machine on which the user is working. The normal READ and WRITE commands are then used.

### 1.61 GEOMETRY FILE FORMAT

Type : String

Dimension : 1

Mnemo ????

DEFAULT VALUE : 'SERAFIN?'

French keyword : FORMAT DU FICHIER DE GEOMETRIE

Geometry file format. Possible values are: - SERAFIN : classical single precision format in

Telemac; - SERAFIND: classical double precision format in Telemac; - MED : MED format based on HDF5

### 1.62 GRAIN-FEEDING

Type : Logical  
Dimension : 1  
Mnemo LGRAFED  
DEFAULT VALUE : NO  
French keyword : GRAIN-FEEDING  
Now suppressed

### 1.63 GRAPHIC PRINTOUT PERIOD

Type : Integer  
Dimension : 1  
Mnemo  
DEFAULT VALUE : 1  
French keyword : PERIODE DE SORTIE GRAPHIQUE  
Determines, in number of time steps, the printout period for the "VARIABLES FOR GRAPHIC PRINTOUTS" in the "RESULTS FILE".

### 1.64 GRAPHIC SOFTWARE

Type : Integer  
Dimension : 1  
Mnemo  
DEFAULT VALUE : 3  
French keyword : LOGICIEL DE DESSIN  
Specifies the used graphic software for the graphic printouts : 1: LEONARD 2: RUBENS 3: SELAFIN.

### 1.65 GRAPHIC SOFTWARE OF THE HYDRODYNAMIC COMPUTATION

Type : Integer  
Dimension : 1  
Mnemo  
DEFAULT VALUE : 3  
French keyword : LOGICIEL DE DESSIN DU CALCUL PRECEDENT  
Specifies the used graphic software for the graphic printouts of the previous computation: 1: LEONARD 2: RUBENS 3: SELAFIN.

### 1.66 GRAVITY ACCELERATION

Type : Real  
Dimension : 1  
Mnemo  
DEFAULT VALUE : 9.81  
French keyword : GRAVITE  
Sets the value of the acceleration due to gravity. M/S2

**1.67 HIDING FACTOR FOR PARTICULAR SIZE CLASS**

Type : Real  
 Dimension : 10  
 Mnemo HIDI  
 DEFAULT VALUE : 1.;1.;1.;1.;1.;1.;1.;1.;1.  
 French keyword : HIDING FACTOR PAR CLASSE GRANULO  
 Sets value of hiding factor for particular size class.

**1.68 HIDING FACTOR FORMULA**

Type : Integer  
 Dimension : 0  
 Mnemo HIDFAC  
 DEFAULT VALUE : 0  
 French keyword : HIDING FACTOR FORMULA

4 hiding factor formulas are implemented in SISYPHE 0: const => need to give HIDING FACTOR FOR PARTICULAR SIZE CLASS 1: Egiazaroff 2: Ashida & Michiue : 4: Karim, Holly & Yang

**1.69 HYDRODYNAMIC CODE**

Type : Integer  
 Dimension : 1  
 Mnemo HYDRO  
 DEFAULT VALUE : 1  
 French keyword : CODE DE CALCUL UTILISE POUR L'HYDRODYNAMIQUE  
 specifie le code utilise pour modeliser l'hydrodynamique

**1.70 HYDRODYNAMIC FILE**

Type : String  
 Dimension : 0  
 Mnemo SIS\_FILES(SISHYD)  
 DEFAULT VALUE : "  
 French keyword : FICHIER HYDRODYNAMIQUE

Name of a file containing the results a previous computation made on the same mesh. The hydrodynamic will be given by the last record of the file if the case is steady or, if the case is unsteady, by the time steps describing the tide or flood. Remark :If the bed-load transport under the combined action of currents and wave is modelled (keyword BED-LOAD TRANSPORT FORMULA set equal to 4), this file must contain not only the hydrodynamic data (water height, velocities) but also the wave data (wave height, wave period).However, the user has also the possibility to give the values of the wave data in the subroutine CONDIM.

**1.71 HYDRODYNAMIC FILE BINARY**

Type : String  
 Dimension : 1  
 Mnemo  
 DEFAULT VALUE : 'STD'  
 French keyword : STANDARD DU FICHIER HYDRODYNAMIQUE  
 obsolete

**1.72 HYDRODYNAMIC FILE FORMAT**

Type : String  
 Dimension : 1  
 Mnemo : ????  
 DEFAULT VALUE : 'SERAFIN?'

French keyword : FORMAT DU FICHIER HYDRODYNAMIQUE

Previous computation results file format. Possible values are: - SERAFIN : classical single precision format in Telemac; - SERAFIND: classical double precision format in Telemac; - MED : MED format based on HDF5

**1.73 INITIAL FRACTION FOR PARTICULAR SIZE CLASS**

Type : Real  
 Dimension : 10  
 Mnemo : AVA0  
 DEFAULT VALUE : 1.;0.;0.;0.;0.;0.;0.;0.;0.

French keyword : FRACTION INITIALE PAR CLASSE SEDIMENTOLOGIQUE

Sets value of initial fraction for particular size class.

**1.74 INITIAL SUSPENSION CONCENTRATIONS**

Type : Real  
 Dimension : 2  
 Mnemo : CS0  
 DEFAULT VALUE : MANDATORY

French keyword : CONCENTRATIONS INITIALES EN SUSPENSION

In case of suspension, will be used to initialize the value of volume concentration for each class.

Will not be used if EQUILIBRIUM INFLOW CONCENTRATION=YES

**1.75 LAW OF BOTTOM FRICTION**

Type : Integer  
 Dimension : 0  
 Mnemo : KFROT  
 DEFAULT VALUE : 3

French keyword : LOI DE FROTTEMENT SUR LE FOND

Selects the type of formulation used for the bottom friction. To know the possible laws see CHOIX1 above. See FRICTION COEFFICIENT. Beware: in the case of internal coupling with Telemac, the friction coefficient is selected in the Telemac steering file, except when BED ROUGHNESS PREDICTION is set to YES

**1.76 LIBRARIES**

Type : String  
 Dimension : 0  
 Mnemo :  
 DEFAULT VALUE : 'SISYPHE,TELEMAC,UTIL,DAMO,BIEF,HP'

French keyword : BIBLIOTHEQUES

Used by the start-up procedure at the workstation.

### 1.77 LIQUID BOUNDARIES FILE

Type : String  
 Dimension : 1  
 Mnemo SIS\_FILES(SISLIQ)  
 DEFAULT VALUE : ”

French keyword : FICHIER DES FRONTIERES LIQUIDES

Variations in time of boundary conditions. Data of this file are read on channel SIS\_FILES(SISLIQ)

### 1.78 LIST OF FILES

Type : String  
 Dimension : 20  
 Mnemo  
 DEFAULT VALUE : 'GEOMETRY FILE;  
 BOUNDARY CONDITIONS FILE;  
 RESULTS FILE;  
 BOTTOM TOPOGRAPHY FILE;  
 REFERENCE FILE;  
 PREVIOUS SEDIMENTOLOGICAL COMPUTATION FILE;  
 PREVIOUS COMPUTATION FILE;  
 HYDRODYNAMIC FILE;  
 WAVE FILE;  
 FORTRAN FILE;  
 STEERING FILE;  
 NESTOR ACTION FILE;  
 NESTOR POLYGON FILE;  
 NESTOR SURFACE REFERENCE FILE;  
 NESTOR RESTART FILE;  
 DICTIONARY;  
 SECTIONS INPUT FILE;  
 SECTIONS OUTPUT FILE;  
 LIQUID BOUNDARIES FILE;  
 FLUXLINE INPUT FILE'

French keyword : LISTE DES FICHIERS

TODO: WRITE HELP FOR THAT KEYWORD

### 1.79 LISTING PRINTOUT PERIOD

Type : Integer  
 Dimension : 1  
 Mnemo  
 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 printed out on the listing file (file cas\_numerodeprocessus.sortie on a workstation).



**1.80 MASS CONCENTRATION**

Type : Logical  
 Dimension : 0  
 Mnemo UNIT  
 DEFAULT VALUE : NO  
 French keyword : CONCENTRATION MASSIQUE

Determines if concentrations (input and output) are mass concentrations in g/l or adimensionnal volume concentrations (default option).

**1.81 MASS TRANSFER PER LAYER**

Type : Real  
 Dimension : 2  
 Mnemo TRANS\_MASS  
 DEFAULT VALUE : MANDATORY  
 French keyword : TRANSFERT DE MASSE PAR COUCHE

Mass transfert coefficients of the multilayer consolidation model in s-1

**1.82 MASS-BALANCE**

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

Determines whether a check of the mass-balance over the domain is made or not

**1.83 MASS-LUMPING**

Type : Logical  
 Dimension : 1  
 Mnemo  
 DEFAULT VALUE : YES  
 French keyword : MASS-LUMPING

If this key word is equal to yes, the mass matrix is then condensed on its diagonal. This technique is used to accelerate the computation and also to make it more stable. However, the solutions obtained are smoothed.

**1.84 MATRIX STORAGE**

Type : Integer  
 Dimension : 0  
 Mnemo OPTASS  
 DEFAULT VALUE : 1  
 French keyword : STOCKAGE DES MATRICES

TODO: WRITE HELP FOR THAT KEYWORD

**1.85 MATRIX-VECTOR PRODUCT**

Type : Integer  
 Dimension : 0  
 Mnemo  
 DEFAULT VALUE : 1  
 French keyword : PRODUIT MATRICE-VECTEUR  
 TODO: WRITE HELP FOR THAT KEYWORD

**1.86 MAXIMUM CONCENTRATION**

Type : Real  
 Dimension : 1  
 Mnemo CONC\_MAX  
 DEFAULT VALUE : 364.E0  
 French keyword : CONCENTRATION MAXIMALE  
 Maximum Concentration for Thiebot consolidation model(Kg/m3)

**1.87 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

**1.88 MAXIMUM NUMBER OF ITERATIONS FOR ADVECTION SCHEMES**

Type : Integer  
 Dimension : 0  
 Mnemo MAXADV  
 DEFAULT VALUE : 10  
 French keyword : MAXIMUM D'ITERATIONS POUR LES SCHEMAS DE CONVECTION  
 Only for schemes 13 and 14

**1.89 MAXIMUM NUMBER OF ITERATIONS FOR SOLVER**

Type : Integer  
 Dimension : 0  
 Mnemo NITMAX  
 DEFAULT VALUE : 60  
 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:Used only if the key-word MASS LUMPING is equal to false .

### 1.90 MAXIMUM NUMBER OF ITERATIONS FOR SOLVER FOR SUSPENSION

Type : Integer  
Dimension : 0  
Mnemo  
DEFAULT VALUE : 50  
French keyword : MAXIMUM D'ITERATIONS POUR LE SOLVEUR POUR LA SUSPENSION  
TODO: WRITE HELP FOR THAT KEYWORD

### 1.91 MEAN DIAMETER OF THE SEDIMENT

Type : Real  
Dimension : 10  
Mnemo FDM  
DEFAULT VALUE : .01;.01;.01;.01;.01;.01;.01;.01;.01  
French keyword : DIAMETRE MOYEN DES GRAINS  
Sets value of diameter dm for particular size class.

### 1.92 MEMORY SPACE CRAY

Type : String  
Dimension : 1  
Mnemo  
DEFAULT VALUE : '1500000W'  
French keyword : PLACE MEMOIRE CRAY  
Storage capacity (in words of 8 bytes) reserved in machine for making the computation.

### 1.93 MESHING

Type : Integer  
Dimension : 1  
Mnemo  
DEFAULT VALUE : 3  
French keyword : MAILLEUR  
MESHING 1: LEONARD STANDARD FINITE DIFFERENTS MESH-GENERATOR 2: PABLO  
2D STANDARD FINITE ELEMENTS MESH-GENERATOR 3: SELAFIN STANDARD FI-  
NITE ELEMENTS MESH-GENERATOR.

### 1.94 MINIMAL VALUE OF THE WATER HEIGHT

Type : Real  
Dimension : 1  
Mnemo HMIN  
DEFAULT VALUE : 1.E-3  
French keyword : VALEUR MINIMUM DE H  
Sets the minimum value of the water depth. Is used when the keyword TIDAL FLATS is equal to yes.

**1.95 MINIMUM DEPTH FOR BEDLOAD**

Type : Real  
 Dimension : 1  
 Mnemo HMIN\_BEDLOAD  
 DEFAULT VALUE : 1.E-2  
 French keyword : PROFONDEUR MINIMUM POUR LE CHARRIAGE  
 To cancel sediment fluxes to and from dry points

**1.96 MIXED SEDIMENT**

Type : Logical  
 Dimension : 0  
 Mnemo MIXTE  
 DEFAULT VALUE : NO  
 French keyword : SEDIMENT MIXTE  
 Mixture of cohesive and non cohesive sediment : 2 class only

**1.97 MORPHOLOGICAL FACTOR**

Type : Real  
 Dimension : 1  
 Mnemo MOFAC  
 DEFAULT VALUE : 1.  
 French keyword : FACTEUR MORPHOLOGIQUE  
 Amplification for the morphological time scale

**1.98 MPM COEFFICIENT**

Type : Real  
 Dimension : 1  
 Mnemo MPM  
 DEFAULT VALUE : 8.0E-00  
 French keyword : MPM COEFFICIENT  
 Meyer-Peter Mueller Coefficient(-)

**1.99 MUD CONCENTRATION PER LAYER**

Type : Real  
 Dimension : 2  
 Mnemo CONC\_VASE  
 DEFAULT VALUE : MANDATORY  
 French keyword : CONCENTRATIONS DU LIT DE VASE  
 Concentrations of the mud-bed in g per l (per layer)

**1.100 MUD CONSOLIDATION**

Type : Logical  
 Dimension : 0  
 Mnemo TASS  
 DEFAULT VALUE : NO  
 French keyword : TASSEMENT DU LIT COHESIF  
 consolidation of the mud or sand mud-mixture sediment bed accounted for

**1.101 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

**1.102 NESTOR**

Type : Logical  
 Dimension : 0  
 Mnemo NESTOR  
 DEFAULT VALUE : NO  
 French keyword : NESTOR  
 For coupling with NESTOR

**1.103 NESTOR ACTION FILE**

Type : String  
 Dimension : 1  
 Mnemo SIS\_FILES(SISMAF)  
 DEFAULT VALUE : "  
 French keyword : FICHER DE NESTOR ACTION  
 Name of the Nestor steering file

**1.104 NESTOR POLYGON FILE**

Type : String  
 Dimension : 1  
 Mnemo SIS\_FILES(DSIPDS)  
 DEFAULT VALUE : "  
 French keyword : FICHER DE NESTOR POLYGON  
 Name of the Nestor polygon file

**1.105 NESTOR RESTART FILE**

Type : String  
 Dimension : 1  
 Mnemo SIS\_FILES(DSCFG1)  
 DEFAULT VALUE : "  
 French keyword : FICHER DE NESTOR RESTART  
 Name of the Nestor file phydef-cf.cfg.ds

**1.106 NESTOR SURFACE REFERENCE FILE**

Type : String  
 Dimension : 1  
 Mnemo SIS\_FILES(DSRWSP)  
 DEFAULT VALUE : "  
 French keyword : FICHER DE NESTOR DE SURFACE REFERENCE

Name of the Nestor file which contains the reference water surface

### 1.107 NON COHESIVE BED POROSITY

Type : Real  
 Dimension : 1  
 Mnemo XKV  
 DEFAULT VALUE : 0.4  
 French keyword : POROSITE DU LIT NON COHESIF

The bed volume concentration  $CSF=(1-\text{porosity})$  is used to calculate the bed evolution of non-cohesive sand transport.

### 1.108 NUMBER OF BED LOAD MODEL LAYERS

Type : Integer  
 Dimension : 1  
 Mnemo NOMBLAY  
 DEFAULT VALUE : 2  
 French keyword : NOMBRE DE COUCHES POUR GRANULO ETENDUE

This is the given allocation limit, secure default NOMLAY=2

### 1.109 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

### 1.110 NUMBER OF ITERATIONS FOR TELEMAT

Type : Integer  
 Dimension : 1  
 Mnemo NCONDIS  
 DEFAULT VALUE : 500  
 French keyword : NOMBRE D'ITERATIONS POUR TELEMAT

Number of iteration to do with telemat in order to obtain a new quasi-stationary flow. To use with the option constant flow discharge

### 1.111 NUMBER OF LAYERS OF THE CONSOLIDATION MODEL

Type : Integer  
 Dimension : 0  
 Mnemo NCOUCH\_TASS  
 DEFAULT VALUE : 1  
 French keyword : NOMBRE DE COUCHES POUR LE TASSEMENT

Vertical bed structure - The number of layers should be less than 10

**1.112 NUMBER OF PRIVATE ARRAYS**

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

**1.113 NUMBER OF SIZE-CLASSES OF BED MATERIAL**

Type : Integer  
 Dimension : 0  
 Mnemo NSICLA  
 DEFAULT VALUE : 1  
 French keyword : NOMBRE DE CLASSES GRANULOMETRIQUES  
 Sets value of number of size classes of bed materials.

**1.114 NUMBER OF SUB-ITERATIONS**

Type : Integer  
 Dimension : 0  
 Mnemo NSOUS  
 DEFAULT VALUE : 1  
 French keyword : NOMBRE DE SOUS-ITERATIONS  
 enable to realize sub-iteration inside a time step (this key word is not used if the key word VARIABLE TIME-STEP is set equal to yes). It could be useful for a non steady case be useful for a non steady case when the time step which is fixed by the graphic printout period of the HYDRODYNAMIC FILE is too large.

**1.115 NUMBER OF SUB-STEPS OF DISTRIBUTIVE SCHEMES**

Type : Integer  
 Dimension : 0  
 Mnemo NSP\_DIST  
 DEFAULT VALUE : 1  
 French keyword : NOMBRE DE SOUS-PAS DES SCHEMAS DISTRIBUTIFS  
 Only for implicit scheme with predictor-corrector

**1.116 NUMBER OF TIDES OR FLOODS**

Type : Integer  
 Dimension : 1  
 Mnemo NMAREE  
 DEFAULT VALUE : 1  
 French keyword : NOMBRE DE MAREES OU CRUES  
 For an unsteady case, specifies the number of tides or floods performed when running the code.  
 For a steady case, this keyword is not used.

**1.117 NUMBER OF TIME STEPS**

Type : Integer  
 Dimension : 1  
 Mnemo  
 DEFAULT VALUE : 1

French keyword : NOMBRE DE PAS DE TEMPS

Specifies, for a steady case, the number of time steps performed when running the code. For an unsteady case, this keyword is not used.

**1.118 OPTION FOR THE DIFFUSION OF TRACER**

Type : Integer  
 Dimension : 0  
 Mnemo OPDTRA  
 DEFAULT VALUE : 1

French keyword : OPTION POUR LA DIFFUSION DU TRACEUR

1: Diffusion in the form  $\text{div}(\nu \text{grad}(T))$  2: Diffusion in the form  $1/h \text{div}(\nu \text{grad}(T))$

**1.119 OPTION FOR THE DISPERSION**

Type : Integer  
 Dimension : 0  
 Mnemo OPTDIF  
 DEFAULT VALUE : 1

French keyword : OPTION POUR LA DISPERSION

1 les mots cles dispersion longitudinale et dispersion transversale permettent d affecter une valeur constante, 2  $K1=\alpha u \cdot h$  et  $K2=\alpha \phi u \cdot h$  affectent les valeurs  $\alpha$  et  $\alpha \phi$  (par default  $\alpha=6$  et  $\alpha \phi=0.6$ , 3 dispersion fournie par telemac2d

**1.120 OPTION FOR THE TREATMENT OF NON ERODABLE BEDS**

Type : Integer  
 Dimension : 0  
 Mnemo CHOIX  
 DEFAULT VALUE : 0

French keyword : OPTION DE TRAITEMENT DES FONDS NON ERODABLES

This parameters determines the method used to treat the non erodable bottoms : 0 = ERODABLE BOTTOMS EVERYWHERE 1 = MINIMISATION OF THE SOLID DISCHARGE 2 = NUL SOLID DISCHARGE 3 = MINIMISATION OF THE SOLID DISCHARGE IN FE / MASS-LUMPING 4 = MINIMISATION OF THE SOLID DISCHARGE IN FINITE VOLUMES When the rigid bed can be reached during the computation, it is advised to use the method 3 or the method 4

**1.121 OPTION FOR THE TREATMENT OF TIDAL FLATS**

Type : Integer  
 Dimension : 1  
 Mnemo  
 DEFAULT VALUE : 1

French keyword : OPTION DE TRAITEMENT DES BANCS DECOUVRANTS

Used if "TIDAL FLATS" is true 1 : EQUATIONS SOLVED EVERYWHERE WITH COR-



RECTION ON TIDAL FLATS 2 : DRY ELEMENTS FROZEN It is recommended to choose 1 since it ensures mass conservation.

### 1.122 ORIGIN COORDINATES

Type : Integer  
 Dimension : 2  
 Mnemo I\_ORIG,J\_ORIG  
 DEFAULT VALUE : 0;0

French keyword : COORDONNEES DE L'ORIGINE

Value in metres, used to avoid large real numbers, added in Selafrin format, but so far no other treatment

### 1.123 ORIGINAL DATE OF TIME

Type : Integer  
 Dimension : 3  
 Mnemo  
 DEFAULT VALUE : 0;0;0

French keyword : DATE DE L'ORIGINE DES TEMPS

Give the date of the time origin of the model when taking into account the tide generating force.

### 1.124 ORIGINAL HOUR OF TIME

Type : Integer  
 Dimension : 3  
 Mnemo  
 DEFAULT VALUE : 0;0;0

French keyword : HEURE DE L'ORIGINE DES TEMPS

Give the time of the time origin of the model when taking into account of the tide generator force.

### 1.125 PARALLEL PROCESSORS

Type : Integer  
 Dimension : 0  
 Mnemo NCSIZE  
 DEFAULT VALUE : 0

French keyword : PROCESSEURS PARALLELES

NUMBER OF PROCESSORS FOR PARALLEL PROCESSING 0 : 1 machine, compiling without parallel library 1 : 1 machine, compiling with a parallel library 2 : 2 processors or machines in parallel etc....

### 1.126 PARAMETER FOR DEVIATION

Type : Real  
 Dimension : 1  
 Mnemo BETA2  
 DEFAULT VALUE : 0.85

French keyword : PARAMETRE POUR LA DEVIATION

Parameter pour la deviation pour la formule de Talmon et al.

**1.127 PARTHENIADES CONSTANT**

Type : Real  
 Dimension : 1  
 Mnemo PARTHENIADES  
 DEFAULT VALUE : 1.E-03  
 French keyword : CONSTANTE DE PARTHENIADES  
 constant of the Krone and Partheniades erosion law (Kg/m2/s)

**1.128 PARTITIONING TOOL**

Type : String  
 Dimension : 1  
 Mnemo  
 DEFAULT VALUE : 'METIS'  
 French keyword : PARTITIONNEUR  
 PARTITIONING TOOL SELECTION 1 : METIS 2 : SCOTCH 3 : PARMETIS 4 : PTSCOTCH  
 etc...

**1.129 PASSWORD CRAY**

Type : String  
 Dimension : 1  
 Mnemo  
 DEFAULT VALUE : "  
 French keyword : MOT DE PASSE CRAY  
 Password related to USER CRAY.

**1.130 PERMEABILITY COEFFICIENT**

Type : Real  
 Dimension : 1  
 Mnemo COEF\_N  
 DEFAULT VALUE : 8.E0  
 French keyword : COEFFICIENT DE PERMEABILITE  
 Coefficient of permeability for consolidation model

**1.131 PRECONDITIONING**

Type : Integer  
 Dimension : 0  
 Mnemo PRECON  
 DEFAULT VALUE : 2  
 French keyword : PRECONDITIONNEMENT

Choice of the preconditioning in the resolution of the linear system that the convergence is speeded up when it is being solved (Used only if the key-word MASS LUMPING is equal to false). 0: no preconditioning 2: diagonal preconditioning 3: diagonal preconditioning with the condensed matrix 7: Crout's preconditioning per element (not implemented). 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.

**1.132 PRECONDITIONING FOR SUSPENSION**

Type : Integer  
 Dimension : 0  
 Mnemo  
 DEFAULT VALUE : 2  
 French keyword : PRECONDITIONNEMENT POUR LA SUSPENSION  
 TODO: WRITE HELP FOR THAT KEYWORD

**1.133 PRESCRIBED SOLID DISCHARGES**

Type : Real  
 Dimension : 2  
 Mnemo SOLDIS  
 DEFAULT VALUE : MANDATORY  
 French keyword : DEBITS SOLIDES IMPOSES  
 Values of prescribed solid discharges at the inflow boundaries (m3/s without voids). One value per liquid boundary

**1.134 PREVIOUS SEDIMENTOLOGICAL COMPUTATION FILE**

Type : String  
 Dimension : 0  
 Mnemo SIS\_FILES(SISPRE)  
 DEFAULT VALUE : "  
 French keyword : FICHIER PRECEDENT SEDIMENTOLOGIQUE  
 Name of a file containing the results of an earlier sedimentological computation which was made on the same mesh. The last recorded time step will provide the initial conditions for the new computation.

**1.135 PREVIOUS SEDIMENTOLOGICAL COMPUTATION FILE FORMAT**

Type : String  
 Dimension : 1  
 Mnemo ?????  
 DEFAULT VALUE : 'SERAFIN?'  
 French keyword : FORMAT DU FICHIER PRECEDENT SEDIMENTOLOGIQUE  
 Previous computation results file format. Possible values are: - SERAFIN : classical single precision format in Telemac; - SERAFIND: classical double precision format in Telemac; - MED : MED format based on HDF5

**1.136 PVM1 LIBRARY**

Type : String  
 Dimension : 0  
 Mnemo  
 DEFAULT VALUE : "  
 French keyword : BIBLIOTHEQUE PVM1  
 Utilise par la procedure de lancement sur station de travail

**1.137 PVM2 LIBRARY**

Type : String

Dimension : 0

Mnemo

DEFAULT VALUE : "

French keyword : BIBLIOTHEQUE PVM2

Utilise par la procedure de lancement sur station de travail

**1.138 RATIO BETWEEN SKIN FRICTION AND MEAN DIAMETER**

Type : Real

Dimension : 1

Mnemo KSPRATIO

DEFAULT VALUE : 3.0

French keyword : RATIO ENTRE LA RUGOSITE DE PEAU ET LE DIAMETRE MOYEN

Ratio for the computation of skin friction. skin roughness = ratio \* mean diameter (for the mixture of sand, the mean diameter used is a value per node which is computed thanks to the fraction and the mean diameter of each sediment for each node of the mesh) if KSPRATIO =0 : use skin friction prediction from Van Rijn (2007) for currents and the Wiberg and Harris method for waves

**1.139 REFERENCE CONCENTRATION FORMULA**

Type : Integer

Dimension : 1

Mnemo ICQ

DEFAULT VALUE : 1

French keyword : FORMULE POUR LA CONCENTRATION DE REFERENCE

1 : Zysderman and Fredsoe, equilibrium formula 2: Bijker method. The near bed concentration is related to the bedload . This option cannot be used without bedload transport 3: Van Rijn formula 4: Soulsby\_van Rijn formula

**1.140 REFERENCE FILE**

Type : String

Dimension : 0

Mnemo SIS\_FILES(SISREF)

DEFAULT VALUE : "

French keyword : FICHIER DE REFERENCE

Name of the file used to validate the computation. If VALIDATION = YES, the results of the computation will be compared with the values of this file. The comparison is made by the subroutine VALIDA.

**1.141 REFERENCE FILE BINARY**

Type : String

Dimension : 1

Mnemo

DEFAULT VALUE : 'STD'

French keyword : STANDARD DU FICHIER DE REFERENCE

Binary file type used for writing the reference file. This type depends on the machine on which the file was generated. The possible values are the same as for the geometry file.

**1.142 REFERENCE FILE FORMAT**

Type : String  
 Dimension : 1  
 Mnemo : ????  
 DEFAULT VALUE : 'SERAFIN?'

French keyword : FORMAT DU FICHIER DE REFERENCE

Previous computation results file format. Possible values are: - SERAFIN : classical single precision format in Telemac; - SERAFIND: classical double precision format in Telemac; - MED : MED format based on HDF5

**1.143 RELEASE**

Type : String  
 Dimension : 1  
 Mnemo :  
 DEFAULT VALUE : 'TRUNK'

French keyword : NUMERO DE VERSION

Release of the libraries used by SISYPHE.

**1.144 RESULTS FILE**

Type : String  
 Dimension : 0  
 Mnemo : SIS\_FILES(SISRES)  
 DEFAULT VALUE : 'MANDATORY'

French keyword : FICHIER DES RESULTATS

Name of the file into which the computation results shall be written, the periodicity being given by the keyword GRAPHIC PRINTOUT PERIOD.

**1.145 RESULTS FILE BINARY**

Type : String  
 Dimension : 1  
 Mnemo :  
 DEFAULT VALUE : 'STD'

French keyword : STANDARD DU FICHIER RESULTAT

Binary file type used for writing the results file. This type depends on the machine on which the file was generated. The possible values are the same as for the geometry file.

**1.146 RESULTS FILE FORMAT**

Type : String  
 Dimension : 1  
 Mnemo : ????  
 DEFAULT VALUE : 'SERAFIN?'

French keyword : FORMAT DU FICHIER DES RESULTATS

Results file format. Possible values are: - SERAFIN : classical single precision format in Telemac; - SERAFIND: classical double precision format in Telemac; - MED : MED format based on HDF5

**1.147 SCHEME OPTION FOR ADVECTION**

Type : Integer  
 Dimension : 1  
 Mnemo OPTADV  
 DEFAULT VALUE : 1

French keyword : OPTION DU SCHEMA POUR LA CONVECTION

If present replaces and has priority over: OPTION FOR CHARACTERISTICS (not yet implemented) SUPG OPTION IF PSI SCHEME: 1=explicit 2=predictor-corrector for tracers

**1.148 SECONDARY CURRENTS**

Type : Logical  
 Dimension : 0  
 Mnemo SECCURRENT  
 DEFAULT VALUE : NO

French keyword : COURANTS SECONDAIRES

using the parametrisation for secondary currents

**1.149 SECONDARY CURRENTS ALPHA COEFFICIENT**

Type : Real  
 Dimension : 1  
 Mnemo ALPHA  
 DEFAULT VALUE : 1.0E-00

French keyword : SECONDARY CURRENTS ALPHA COEFFICIENT

Alpha coefficient of secondary current(-), Should be chosen between 0.75 (rough bottom) and 1 (smooth bottom)

**1.150 SECONDARY CURRENTS FILE**

Type : Logical  
 Dimension : 0  
 Mnemo HAVESECFILE  
 DEFAULT VALUE : NO

French keyword : FICHIER DE COURANTS SECONDAIRES

The radii needed for the parametrisation of secondary currents are read from SELFAIN file

**1.151 SECTIONS INPUT FILE**

Type : String  
 Dimension : 1  
 Mnemo SIS\_FILES(SISSEC)  
 DEFAULT VALUE : "

French keyword : FICHIER DES SECTIONS DE CONTROLE

sections input file, partitioned

**1.152 SECTIONS OUTPUT FILE**

Type : String  
 Dimension : 1  
 Mnemo SIS\_FILES(SISSEO)  
 DEFAULT VALUE : "  
 French keyword : SECTIONS OUTPUT FILE  
 sections output file, written by the master

**1.153 SEDIMENT DENSITY**

Type : Real  
 Dimension : 1  
 Mnemo  
 DEFAULT VALUE : 2650.  
 French keyword : MASSE VOLUMIQUE DU SEDIMENT  
 sets the value of the sediment density en Kg/m3

**1.154 SEDIMENT DIAMETERS**

Type : Real  
 Dimension : 10  
 Mnemo FDM  
 DEFAULT VALUE : .01;.01;.01;.01;.01;.01;.01;.01;.01;.01  
 French keyword : DIAMETRES DES GRAINS  
 Sets value of diameter dm for particular size class.

**1.155 SEDIMENT SLIDE**

Type : Logical  
 Dimension : 0  
 Mnemo SLIDE  
 DEFAULT VALUE : NO  
 French keyword : GLISSEMENT DU SEDIMENT  
 If yes, the key-word FRICTION ANGLE OF THE SEDIMENT is taken into account for slope stability

**1.156 SETTLING LAG**

Type : Logical  
 Dimension : 1  
 Mnemo SET\_LAG  
 DEFAULT VALUE : NO  
 French keyword : SETTLING LAG  
 (-)

**1.157 SETTLING VELOCITIES**

Type : Real  
 Dimension : 10  
 Mnemo XWC  
 DEFAULT VALUE : MANDATORY  
 French keyword : VITESSES DE CHUTE

The default value is not given. If the user does not give a value, the subroutine vitchu-sisyphe is used: Stockes, Zanke or Van Rijn formulae depending on the grain size

### 1.158 SHIELDS PARAMETERS

Type : Real  
 Dimension : 10  
 Mnemo AC  
 DEFAULT VALUE : MANDATORY  
 French keyword : PARAMETRES DE SHIELDS

Used to determine the critical bed shear stress value (non-cohesive sediments). For multi grain size, the shields parameter needs to be specified for each class. If only one value is specified, the shields parameter will be considered constant. The default option (no shields given in parameter file) is to calculate the shields parameter as a function of sand grain diameter (see logical CALAC).

### 1.159 SKIN FRICTION CORRECTION

Type : Integer  
 Dimension : 1  
 Mnemo ICR  
 DEFAULT VALUE : 1  
 French keyword : CORRECTION FROTTEMENT DE PEAU

formula to predict the skin bed roughness (see also KSPRATIO) 0 : NO correction (TAUP=TOB) 1 : Flat bed (KSP= KSPRATIO \* D50) 2 : Ripple correction factor

### 1.160 SLOPE EFFECT

Type : Logical  
 Dimension : 0  
 Mnemo EFFPEN  
 DEFAULT VALUE : YES  
 French keyword : EFFET DE PENTE

If yes, slope effect taken into account: deviation + modification of critical shear stress. NO will cancel the key-words FORMULA FOR SLOPE EFFECT and FORMULA FOR DEVIATION

### 1.161 SOLVER

Type : Integer  
 Dimension : 0  
 Mnemo METHOD  
 DEFAULT VALUE : 3  
 French keyword : SOLVEUR

Makes it possible to select the solver used for solving the bottom evolution equation (Used only if the key-word MASS LUMPING is equal to false). All the currently available methods are variations of the Conjugate Gradient method. They are as follows: 1: conjugate gradient 2: conjugate residual 3: conjugate gradient on a normal equation 4: minimum error 5: conjugate gradient squared (not implemented) 6: conjugate gradient squared stabilised (cgstab) 7: gmres (see option for solver)



### 1.162 SOLVER ACCURACY

Type : Real

Dimension : 0

Mnemo EPSI

DEFAULT VALUE : 1.E-7

French keyword : PRECISION DU SOLVEUR

Required accuracy for solving the linear system (used only if the key word MASS LUMPING is equal to false).

### 1.163 SOLVER ACCURACY FOR SUSPENSION

Type : Real

Dimension : 0

Mnemo

DEFAULT VALUE : 1.E-8

French keyword : PRECISION DU SOLVEUR POUR LA SUSPENSION

TOD0: WRITE HELP FOR THAT KEYWORD

### 1.164 SOLVER FOR SUSPENSION

Type : Integer

Dimension : 0

Mnemo

DEFAULT VALUE : 3

French keyword : SOLVEUR POUR LA SUSPENSION

TOD0: WRITE HELP FOR THAT KEYWORD

### 1.165 SOLVER OPTION

Type : Integer

Dimension : 0

Mnemo METHOD

DEFAULT VALUE : 2

French keyword : OPTION DU SOLVEUR

WHEN GMRES (7) IS CHOSEN, DIMENSION OF THE KRYLOV SPACE TRY VALUES BETWEEN 2 AND 15. Used only if the key-word MASS LUMPING is equal to false

### 1.166 SOLVER OPTION FOR SUSPENSION

Type : Integer

Dimension : 0

Mnemo

DEFAULT VALUE : 2

French keyword : OPTION DU SOLVEUR POUR LA SUSPENSION

TOD0: WRITE HELP FOR THAT KEYWORD

**1.167 STARTING TIME OF THE HYDROGRAM**

Type : Real  
 Dimension : 1  
 Mnemo TPREC  
 DEFAULT VALUE : -1000.

French keyword : TEMPS D'ORIGINE DE L'HYDROGRAMME

this key word specifies the time when SISYPHE computation begins except when a computation is continued (the initial time is then read on the "previous sedimentological file". For an unsteady case, it moreover specifies the time which corresponds to the 1st record to be read in the "previous computation file"(the file which contains the hydrodynamic data).

**1.168 STATIONARY MODE**

Type : Logical  
 Dimension : 1  
 Mnemo STAT\_MODE  
 DEFAULT VALUE : NO  
 French keyword : STATIONARY MODE  
 (-)

**1.169 STEADY CASE**

Type : Logical  
 Dimension : 1  
 Mnemo  
 DEFAULT VALUE : NO  
 French keyword : CAS PERMANENT

Specifies steady or unsteady case.If this keyword is equal to YES, the last record of the previous computation file will give the values of h,u,v and eventually wave height and period to be considered.

**1.170 STEERING FILE**

Type : String  
 Dimension : 1  
 Mnemo  
 DEFAULT VALUE : ""  
 French keyword : FICHER DES PARAMETRES

Name of the file containing the parameters of the computation. Could be written by the user with EDAMOX.

**1.171 SUPG OPTION**

Type : Integer  
 Dimension : 0  
 Mnemo  
 DEFAULT VALUE : 2

French keyword : OPTION DE SUPG

TODO: WRITE HELP FOR THAT KEYWORD

**1.172 SUSPENSION**

Type : Logical  
Dimension : 1  
Mnemo  
DEFAULT VALUE : NO  
French keyword : SUSPENSION  
TODO: WRITE HELP FOR THAT KEYWORD

**1.173 TETA**

Type : Real  
Dimension : 1  
Mnemo  
DEFAULT VALUE : 0.  
French keyword : TETA  
Specifies the implicitation coefficient of the numerical scheme.

**1.174 TETA SUSPENSION**

Type : Real  
Dimension : 0  
Mnemo TETA\_SUSP  
DEFAULT VALUE : 1.  
French keyword : TETA SUSPENSION  
implication factor for the deposition flux and the diffusion. for  $teta = 0$ , the deposition flux is only explicit.

**1.175 TIDAL FLATS**

Type : Logical  
Dimension : 1  
Mnemo  
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

**1.176 TIDE PERIOD**

Type : Real  
Dimension : 1  
Mnemo  
DEFAULT VALUE : 44640.  
French keyword : PERIODE DE LA MAREE  
Sets the period of the event (tide or flood) for an unsteady case.

**1.177 TIME STEP**

Type : Real

Dimension : 1

Mnemo

DEFAULT VALUE : 1.

French keyword : PAS DE TEMPS

Specifies the time step in seconds in steady case. For an unsteady case, this time step is fixed by the graphic printout period of the previous computation file, except if no name is given for the "HYDRODYNAMIC FILE" in the steering file. Remark : If the keyword "VARIABLE TIME STEP" is set equal to yes, the time step required for a correct resolution is computed in the code and sub-iterations are performed

**1.178 TITLE**

Type : String

Dimension : 1

Mnemo

DEFAULT VALUE : "

French keyword : TITRE

Title of the case being considered. This title shall be marked on the printouts.

**1.179 TREATMENT OF FLUXES AT THE BOUNDARIES**

Type : Integer

Dimension : 0

Mnemo DIRFLU

DEFAULT VALUE : 2

French keyword : TRAITEMENT DES FLUX AUX FRONTIERES

Used so far only with the PSI and N schemes. With option 2, Dirichlet prescribed values are not obeyed, but the fluxes are correct

**1.180 TYPE OF ADVECTION**

Type : Integer

Dimension : 0

Mnemo RESOL

DEFAULT VALUE : 1

French keyword : FORME DE LA CONVECTION

Scheme used for advection of suspended sediment : 1: characteristics 2: semi-implicit SUPG 3 et 4: N scheme 5: psi scheme 6: non conservative psi scheme 7: non conservative N scheme 13 et 14: Edge-based N scheme (recommended for tidal flats)

**1.181 USER CRAY**

Type : String

Dimension : 1

Mnemo

DEFAULT VALUE : "

French keyword : USER CRAY

User's identity on CRAY.

**1.182 VALIDATION**

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

This option is primarily used for the validation documents. If this keyword is equal to YES, the REFERENCE FILE is then considered as a reference which the computation is going to be compared with. The comparison is made by the subroutine VALIDA, which can be modified so as to include, for example, a comparison with an exact solution.

**1.183 VARIABLES FOR GRAPHIC PRINTOUTS**

Type : String  
 Dimension : 7  
 Mnemo  
 DEFAULT VALUE : 'U;V;H;S;B;R;E'  
 French keyword : VARIABLES POUR LES SORTIES GRAPHIQUES

Names of variables the user wants to write into the graphic results file. Each variable is represented by a letter. See CHOIX1 above. One can use \*, \*A\* means all fractions

**1.184 VARIABLES TO BE PRINTED**

Type : String  
 Dimension : 1  
 Mnemo  
 DEFAULT VALUE : "  
 French keyword : VARIABLES A IMPRIMER

Names of variables the user wants to write on the listing. Each variable is represented by a letter in the same manner as it is done in the graphic results file.

**1.185 VECTOR LENGTH**

Type : Integer  
 Dimension : 1  
 Mnemo  
 DEFAULT VALUE : 1  
 French keyword : LONGUEUR DU VECTEUR  
 vector length on vector machines.

**1.186 VERTICAL GRAIN SORTING MODEL**

Type : Integer  
 Dimension : 0  
 Mnemo VSMTYPE  
 DEFAULT VALUE : 0  
 French keyword : VERTICAL GRAIN SORTING MODEL

Defines the model of the vertical grain sorting: 0 = HR-VSM = Layer Model (Classic Hirano / Ribberink approach) 1 = C-VSM (Continuous Vertical Grain Sorting Model)

**1.187 WATER DENSITY**

Type : Real  
 Dimension : 1  
 Mnemo  
 DEFAULT VALUE : 1000.  
 French keyword : MASSE VOLUMIQUE DE L'EAU  
 sets the value of water density.

**1.188 WATER VISCOSITY**

Type : Real  
 Dimension : 1  
 Mnemo VCE  
 DEFAULT VALUE : 1.E-6  
 French keyword : VISCOSITE CINEMATIQUE EAU  
 Specifies the water kinematic viscosity. M/S2

**1.189 WAVE FILE**

Type : String  
 Dimension : 0  
 Mnemo SIS\_FILES(SISCOU)  
 DEFAULT VALUE : "  
 French keyword : FICHER DE HOULE

Name of a file containing the results a previous TOMAWAC computation made on the same mesh. The wave data (wave height, wave period, wave angle ) will be given by the last record of the file. The user has to verify that both informations (wave and current data) are consistent. Remark :The wave data can also be specified in the hydrodynamic file. the user has also the possibility to give the values of the wave data in the subroutine CONDIM. This is recommended for non-steady flow simulation.

**1.190 WAVE FILE FORMAT**

Type : String  
 Dimension : 1  
 Mnemo ?????  
 DEFAULT VALUE : 'SERAFIN?'  
 French keyword : FORMAT DU FICHER DE HOULE

Wave file format. Possible values are: - SERAFIN : classical single precision format in Telemac;  
 - SERAFIND: classical double precision format in Telemac; - MED : MED format based on HDF5

**1.191 ZERO**

Type : Real  
 Dimension : 1  
 Mnemo  
 DEFAULT VALUE : 1.E-10  
 French keyword : ZERO  
 Sets the zero of the code.

## 2. List of keywords classified according to type

### 2.1 BED MATERIAL

ACTIVE LAYER THICKNESS  
COHESIVE SEDIMENTS  
CONSTANT ACTIVE LAYER THICKNESS  
D90  
HIDING FACTOR FOR PARTICULAR SIZE CLASS  
HIDING FACTOR FORMULA  
INITIAL FRACTION FOR PARTICULAR SIZE CLASS  
NUMBER OF SIZE-CLASSES OF BED MATERIAL  
SEDIMENT DIAMETERS

#### 2.1.1 C-VSM

C-VSM DYNAMIC ALT MODEL  
C-VSM FULL PRINTOUT PERIOD  
C-VSM MAXIMUM SECTIONS  
C-VSM PRINTOUT SELECTION  
VERTICAL GRAIN SORTING MODEL

### 2.2 BED-LOAD

B VALUE FOR THE BIJKER FORMULA  
BED LOAD  
BED-LOAD TRANSPORT FORMULA

### 2.3 COHESIVE SEDIMENT

CRITICAL EROSION SHEAR STRESS OF THE MUD  
MUD CONCENTRATION PER LAYER

## **2.4 COMPUTATIONAL INFORMATION**

### **2.4.1 GENERAL**

MINIMUM DEPTH FOR BEDLOAD  
MORPHOLOGICAL FACTOR

## **2.5 CONSOLIDATION**

CONSOLIDATION MODEL  
GEL CONCENTRATION  
MASS TRANSFER PER LAYER  
MAXIMUM CONCENTRATION  
MUD CONSOLIDATION  
NUMBER OF LAYERS OF THE CONSOLIDATION MODEL  
PERMEABILITY COEFFICIENT

## **2.6 DATA FILES**

BOTTOM TOPOGRAPHY FILE  
BOUNDARY CONDITIONS FILE  
FORTRAN FILE  
HYDRODYNAMIC FILE FORMAT  
REFERENCE FILE  
REFERENCE FILE FORMAT  
SECTIONS INPUT FILE  
WAVE FILE  
WAVE FILE FORMAT

## **2.7 EQUATIONS, ADVECTION**

### **2.7.1 GENERAL**

SCHEME OPTION FOR ADVECTION

## **2.8 EQUATIONS, BOUNDARY CONDITIONS**

PRESCRIBED SOLID DISCHARGES

## **2.9 FRICTION**

FRICTION COEFFICIENT  
LAW OF BOTTOM FRICTION  
RATIO BETWEEN SKIN FRICTION AND MEAN DIAMETER  
SKIN FRICTION CORRECTION



## 2.10 GENERAL

CHECKING THE MESH  
CONSTANT FLOW DISCHARGE  
CONTROL SECTIONS  
CRITERION TO UPDATE THE FLOW  
CRITICAL EVOLUTION RATIO  
EFFECT OF WAVES  
FLUXLINE  
FLUXLINE INPUT FILE  
GRAIN-FEEDING  
MASS CONCENTRATION  
MAXIMUM NUMBER OF BOUNDARIES  
MINIMAL VALUE OF THE WATER HEIGHT  
MIXED SEDIMENT  
NUMBER OF BED LOAD MODEL LAYERS  
NUMBER OF ITERATIONS FOR TELEMACH  
OPTION FOR THE TREATMENT OF NON ERODABLE BEDS  
SECONDARY CURRENTS  
SECONDARY CURRENTS FILE  
SHIELDS PARAMETERS  
STATIONARY MODE  
STEADY CASE  
TIDAL FLATS

## 2.11 INITIAL CONDITIONS

COMPUTATION CONTINUED  
PREVIOUS SEDIMENTOLOGICAL COMPUTATION FILE  
PREVIOUS SEDIMENTOLOGICAL COMPUTATION FILE FORMAT

## 2.12 INPUT-OUTPUT, FILES

GEOMETRY FILE FORMAT

### 2.12.1 NAMES

GEOMETRY FILE  
HYDRODYNAMIC FILE  
LIQUID BOUNDARIES FILE  
LIST OF FILES  
NAMES OF PRIVATE VARIABLES

## 2.13 INPUT-OUTPUT, GRAPHICS AND LISTING

VARIABLES FOR GRAPHIC PRINTOUTS

## **2.14 INPUT-OUTPUT, INFORMATION**

### **2.14.1 COMPUTATION ENVIRONMENT**

DICTIONARY

### **2.14.2 COMPUTATIONAL INFORMATION**

DEFAULT EXECUTABLE

DEFAULT PARALLEL EXECUTABLE

DESCRIPTION OF LIBRARIES

RELEASE

TITLE

### **2.14.3 MESH GENERATOR**

MESHING

## **2.15 MISCELLANEOUS**

DEBUGGER

NESTOR

NESTOR ACTION FILE

NESTOR POLYGON FILE

NESTOR RESTART FILE

NESTOR SURFACE REFERENCE FILE

NUMBER OF PRIVATE ARRAYS

OPTION FOR THE TREATMENT OF TIDAL FLATS

ORIGIN COORDINATES

PARALLEL PROCESSORS

VALIDATION

## **2.16 NUMERICAL**

FINITE VOLUMES

MASS-LUMPING

MATRIX STORAGE

MATRIX-VECTOR PRODUCT

OPTION FOR THE DIFFUSION OF TRACER

SUPG OPTION

TETA

TYPE OF ADVECTION

ZERO

## **2.17 NUMERICAL PARAMETERS**

MAXIMUM NUMBER OF ITERATIONS FOR ADVECTION SCHEMES

**2.17.1 AUTOMATIC DIFFERENTIATION**

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

**2.17.2 GENERAL**

BED ROUGHNESS PREDICTOR OPTION  
NUMBER OF CORRECTIONS OF DISTRIBUTIVE SCHEMES  
NUMBER OF SUB-STEPS OF DISTRIBUTIVE SCHEMES  
PARTITIONING TOOL  
TREATMENT OF FLUXES AT THE BOUNDARIES

**2.17.3 SOLVER  
SUSPENSION**

SOLVER FOR SUSPENSION

**2.18 PHYSICS**

GRAVITY ACCELERATION  
NON COHESIVE BED POROSITY  
SEDIMENT DENSITY  
SETTLING LAG  
WATER DENSITY  
WATER VISCOSITY

**2.19 RESULTS**

GRAPHIC PRINTOUT PERIOD  
LISTING PRINTOUT PERIOD  
MASS-BALANCE  
RESULTS FILE  
RESULTS FILE FORMAT  
SECTIONS OUTPUT FILE  
VARIABLES TO BE PRINTED

**2.20 SEDIMENT TRANSPORT****2.20.1 NONEQUILIBRIUM BED LOAD**

BED ROUGHNESS PREDICTION

## **2.21 SEDIMENTOLOGY**

### **2.21.1 GENERAL**

SECONDARY CURRENTS ALPHA COEFFICIENT

## **2.22 SLOPE EFFECT**

BETA  
FORMULA FOR DEVIATION  
FORMULA FOR SLOPE EFFECT  
FRICTION ANGLE OF THE SEDIMENT  
PARAMETER FOR DEVIATION  
SEDIMENT SLIDE  
SLOPE EFFECT

## **2.23 SOLVER**

MAXIMUM NUMBER OF ITERATIONS FOR SOLVER  
MAXIMUM NUMBER OF ITERATIONS FOR SOLVER FOR SUSPENSION  
PRECONDITIONING  
PRECONDITIONING FOR SUSPENSION  
SOLVER  
SOLVER ACCURACY  
SOLVER ACCURACY FOR SUSPENSION  
SOLVER OPTION  
SOLVER OPTION FOR SUSPENSION

## **2.24 SUSPENSION**

CONCENTRATION PER CLASS AT BOUNDARIES  
CORRECTION ON CONVECTION VELOCITY  
CRITICAL SHEAR VELOCITY FOR MUD DEPOSITION  
DIFFUSION  
DISPERSION ACROSS THE FLOW  
DISPERSION ALONG THE FLOW  
EQUILIBRIUM INFLOW CONCENTRATION  
FORMULATION FOR DEPOSITION AND EROSION  
INITIAL SUSPENSION CONCENTRATIONS  
OPTION FOR THE DISPERSION  
PARTHENIADES CONSTANT  
REFERENCE CONCENTRATION FORMULA  
SETTLING VELOCITIES  
SUSPENSION  
TETA SUSPENSION

**2.25 TIME**

NUMBER OF SUB-ITERATIONS  
NUMBER OF TIDES OR FLOODS  
NUMBER OF TIME STEPS  
ORIGINAL DATE OF TIME  
ORIGINAL HOUR OF TIME  
STARTING TIME OF THE HYDROGRAM  
TIDE PERIOD  
TIME STEP

**2.26 USELESS**

BINARY OF THE PREVIOUS SEDIMENTOLOGICAL COMPUTATION FILE  
CPU TIME  
FREE INTEGER 1  
FREE INTEGER 2  
FREE LOGICAL 1  
GEOMETRY FILE BINARY  
GRAPHIC SOFTWARE  
GRAPHIC SOFTWARE OF THE HYDRODYNAMIC COMPUTATION  
HYDRODYNAMIC CODE  
HYDRODYNAMIC FILE BINARY  
LIBRARIES  
MEAN DIAMETER OF THE SEDIMENT  
MEMORY SPACE CRAY  
PASSWORD CRAY  
PVM1 LIBRARY  
PVM2 LIBRARY  
REFERENCE FILE BINARY  
RESULTS FILE BINARY  
STEERING FILE  
USER CRAY  
VECTOR LENGTH

## 3. glossary

### 3.1 english/french glossary

ACTIVE LAYER THICKNESS	EPAISSEUR DE COUCHE ACTIVE
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 NUMBER OF DIRECTIONS	AD NOMBRE DE DIRECTIONS
AD SYMBOLIC LINEAR SOLVER	AD SOLVEUR LINEAIRE SYMBOLIQUE
B VALUE FOR THE BIJKER FORMULA	COEFFICIENT B DE LA FORMULE DE BIJKER
BED LOAD	CHARRIAGE
BED ROUGHNESS PREDICTION	PREDICTION DE LA RUGOSITE
BED ROUGHNESS PREDICTOR OPTION	OPTION DU PREDICTEUR DE RUGOSITE
BED-LOAD TRANSPORT FORMULA	FORMULE DE TRANSPORT SOLIDE
BETA	BETA
BINARY OF THE PREVIOUS SEDIMENTOLOGICAL COMPUTATION FILE	STANDARD DU FICHIER PRECEDENT SEDIMENTOLOGIQUE
BOTTOM TOPOGRAPHY FILE	FICHIER DES FONDS
BOUNDARY CONDITIONS FILE	FICHIER DES CONDITIONS AUX LIMITES
C-VSM DYNAMIC ALT MODEL	C-VSM DYNAMIC ALT MODEL
C-VSM FULL PRINTOUT PERIOD	C-VSM FULL PRINTOUT PERIOD
C-VSM MAXIMUM SECTIONS	C-VSM MAXIMUM SECTIONS
C-VSM PRINTOUT SELECTION	C-VSM PRINTOUT SELECTION
CHECKING THE MESH	VERIFICATION DU MAILLAGE
COHESIVE SEDIMENTS	SEDIMENTS COHESIFS
COMPUTATION CONTINUED	SUITE DE CALCUL

CONCENTRATION PER CLASS AT BOUNDARIES	CONCENTRATIONS PAR CLASSE AUX FRONTIERES
CONSOLIDATION MODEL	OPTION DU MODELE DE TASSEMENT
CONSTANT ACTIVE LAYER THICKNESS	EPAISSEUR DE COUCHE ACTIVE CONSTANTE
CONSTANT FLOW DISCHARGE	CONSTANT FLOW DISCHARGE
CONTROL SECTIONS	SECTIONS DE CONTROLE
CORRECTION ON CONVECTION VELOCITY	CORRECTION DU CHAMP CONVECTEUR
CPU TIME	TEMPS MACHINE CRAY
CRITERION TO UPDATE THE FLOW	CRITERE POUR METTRE A JOUR L'HYDRODYNAMIQUE
CRITICAL EROSION SHEAR STRESS OF THE MUD	CONTRAINTES CRITIQUE D'EROSION DE LA VASE
CRITICAL EVOLUTION RATIO	RAPPORT D'EVOLUTION CRITIQUE
CRITICAL SHEAR VELOCITY FOR MUD DEPOSITION	VITESSE CRITIQUE DE DEPOT DE LA VASE
D90	D90
DEBUGGER	DEBUGGER
DEFAULT EXECUTABLE	EXECUTABLE PAR DEFAUT
DEFAULT PARALLEL EXECUTABLE	EXECUTABLE PARALLELE PAR DEFAUT
DESCRIPTION OF LIBRARIES	DESCRIPTION DES LIBRAIRIES
DICTIONARY	DICTIONNAIRE
DIFFUSION	DIFFUSION
DISPERSION ACROSS THE FLOW	DISPERSION TRANSVERSALE
DISPERSION ALONG THE FLOW	DISPERSION LONGITUDINALE
EFFECT OF WAVES	PRISE EN COMPTE DE LA HOULE
EQUILIBRIUM INFLOW CONCENTRATION	CONCENTRATION D'EQUILIBRE EN ENTREE
FINITE VOLUMES	VOLUMES FINIS
FLUXLINE	FLUXLINE
FLUXLINE INPUT FILE	FICHIER DE FLUXLINE
FORMULA FOR DEVIATION	FORMULE POUR LA DEVIATION
FORMULA FOR SLOPE EFFECT	FORMULE POUR EFFET DE PENTE
FORMULATION FOR DEPOSITION AND EROSION	FORMULATION POUR DEPOT ET EROSION
FORTRAN FILE	FICHIER FORTRAN
FREE INTEGER 1	FREE INTEGER 1
FREE INTEGER 2	FREE INTEGER 2
FREE LOGICAL 1	FREE LOGICAL 1
FRICTION ANGLE OF THE SEDIMENT	ANGLE DE FROTTEMENT DU SEDIMENT
FRICTION COEFFICIENT	COEFFICIENT DE FROTTEMENT
GEL CONCENTRATION	CONCENTRATION GEL
GEOMETRY FILE	FICHIER DE GEOMETRIE
GEOMETRY FILE BINARY	STANDARD DU FICHIER DE GEOMETRIE
GEOMETRY FILE FORMAT	FORMAT DU FICHIER DE GEOMETRIE

GRAIN-FEEDING	GRAIN-FEEDING
GRAPHIC PRINTOUT PERIOD	PERIODE DE SORTIE GRAPHIQUE
GRAPHIC SOFTWARE	LOGICIEL DE DESSIN
GRAPHIC SOFTWARE OF THE HYDRODYNAMIC COMPUTATION	LOGICIEL DE DESSIN DU CALCUL PRECEDENT
GRAVITY ACCELERATION	GRAVITE
HIDING FACTOR FOR PARTICULAR SIZE CLASS	HIDING FACTOR PAR CLASSE GRANULO
HIDING FACTOR FORMULA	HIDING FACTOR FORMULA
HYDRODYNAMIC CODE	CODE DE CALCUL UTILISE POUR L'HYDRODYNAMIQUE
HYDRODYNAMIC FILE	FICHIER HYDRODYNAMIQUE
HYDRODYNAMIC FILE BINARY	STANDARD DU FICHIER HYDRODYNAMIQUE
HYDRODYNAMIC FILE FORMAT	FORMAT DU FICHIER HYDRODYNAMIQUE
INITIAL FRACTION FOR PARTICULAR SIZE CLASS	FRACTION INITIALE PAR CLASSE SEDIMENTOLOGIQUE
INITIAL SUSPENSION CONCENTRATIONS	CONCENTRATIONS INITIALES EN SUSPENSION
LAW OF BOTTOM FRICTION	LOI DE FROTTEMENT SUR LE FOND
LIBRARIES	BIBLIOTHEQUES
LIQUID BOUNDARIES FILE	FICHIER DES FRONTIERES LIQUIDES
LIST OF FILES	LISTE DES FICHIERS
LISTING PRINTOUT PERIOD	PERIODE DE SORTIE LISTING
MASS CONCENTRATION	CONCENTRATION MASSIQUE
MASS TRANSFER PER LAYER	TRANSFERT DE MASSE PAR COUCHE
MASS-BALANCE	BILAN DE MASSE
MASS-LUMPING	MASS-LUMPING
MATRIX STORAGE	STOCKAGE DES MATRICES
MATRIX-VECTOR PRODUCT	PRODUIT MATRICE-VECTEUR
MAXIMUM CONCENTRATION	CONCENTRATION MAXIMALE
MAXIMUM NUMBER OF BOUNDARIES	NOMBRE MAXIMUM DE FRONTIERES
MAXIMUM NUMBER OF ITERATIONS FOR ADVECTION SCHEMES	MAXIMUM D'ITERATIONS POUR LES SCHEMAS DE CONVECTION
MAXIMUM NUMBER OF ITERATIONS FOR SOLVER	MAXIMUM D'ITERATIONS POUR LE SOLVEUR
MAXIMUM NUMBER OF ITERATIONS FOR SOLVER FOR SUSPENSION	MAXIMUM D'ITERATIONS POUR LE SOLVEUR POUR LA SUSPENSION
MEAN DIAMETER OF THE SEDIMENT	DIAMETRE MOYEN DES GRAINS
MEMORY SPACE CRAY	PLACE MEMOIRE CRAY
MESHING	MAILLEUR
MINIMAL VALUE OF THE WATER HEIGHT	VALEUR MINIMUM DE H
MINIMUM DEPTH FOR BEDLOAD	PROFONDEUR MINIMUM POUR LE CHARRIAGE
MIXED SEDIMENT	SEDIMENT MIXTE



MORPHOLOGICAL FACTOR	FACTEUR MORPHOLOGIQUE
MPM COEFFICIENT	MPM COEFFICIENT
MUD CONCENTRATION PER LAYER	CONCENTRATIONS DU LIT DE VASE
MUD CONSOLIDATION	TASSEMENT DU LIT COHESIF
NAMES OF PRIVATE VARIABLES	NOMS DES VARIABLES PRIVEES
NESTOR	NESTOR
NESTOR ACTION FILE	FICHIER DE NESTOR ACTION
NESTOR POLYGON FILE	FICHIER DE NESTOR POLYGON
NESTOR RESTART FILE	FICHIER DE NESTOR RESTART
NESTOR SURFACE REFERENCE FILE	FICHIER DE NESTOR DE SURFACE REFERENCE
NON COHESIVE BED POROSITY	POROSITE DU LIT NON COHESIF
NUMBER OF BED LOAD MODEL LAYERS	NOMBRE DE COUCHES POUR GRANULO ETENDUE
NUMBER OF CORRECTIONS OF DISTRIBUTIVE SCHEMES	NOMBRE DE CORRECTIONS DES SCHEMAS DISTRIBUTIFS
NUMBER OF ITERATIONS FOR TELEMAC	NOMBRE D'ITERATIONS POUR TELEMAC
NUMBER OF LAYERS OF THE CONSOLIDATION MODEL	NOMBRE DE COUCHES POUR LE TASSEMENT
NUMBER OF PRIVATE ARRAYS	NOMBRE DE TABLEAUX PRIVES
NUMBER OF SIZE-CLASSES OF BED MATERIAL	NOMBRE DE CLASSES GRANULOMETRIQUES
NUMBER OF SUB-ITERATIONS	NOMBRE DE SOUS-ITERATIONS
NUMBER OF SUB-STEPS OF DISTRIBUTIVE SCHEMES	NOMBRE DE SOUS-PAS DES SCHEMAS DISTRIBUTIFS
NUMBER OF TIDES OR FLOODS	NOMBRE DE MAREES OU CRUES
NUMBER OF TIME STEPS	NOMBRE DE PAS DE TEMPS
OPTION FOR THE DIFFUSION OF TRACER	OPTION POUR LA DIFFUSION DU TRACEUR
OPTION FOR THE DISPERSION	OPTION POUR LA DISPERSION
OPTION FOR THE TREATMENT OF NON ERODABLE BEDS	OPTION DE TRAITEMENT DES FONDS NON ERODABLES
OPTION FOR THE TREATMENT OF TIDAL FLATS	OPTION DE TRAITEMENT DES BANCs DECOUVRANTS
ORIGIN COORDINATES	COORDONNEES DE L'ORIGINE
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 FOR DEVIATION	PARAMETRE POUR LA DEVIATION
PARTHENIADES CONSTANT	CONSTANTE DE PARTHENIADES
PARTITIONING TOOL	PARTITIONNEUR
PASSWORD CRAY	MOT DE PASSE CRAY
PERMEABILITY COEFFICIENT	COEFFICIENT DE PERMEABILITE
PRECONDITIONING	PRECONDITIONNEMENT
PRECONDITIONING FOR SUSPENSION	PRECONDITIONNEMENT POUR LA SUSPENSION

PRESCRIBED SOLID DISCHARGES	DEBITS SOLIDES IMPOSES
PREVIOUS SEDIMENTOLOGICAL COMPUTATION FILE	FICHIER PRECEDENT SEDIMENTOLOGIQUE
PREVIOUS SEDIMENTOLOGICAL COMPUTATION FILE FORMAT	FORMAT DU FICHIER PRECEDENT SEDIMENTOLOGIQUE
PVM1 LIBRARY	BIBLIOTHEQUE PVM1
PVM2 LIBRARY	BIBLIOTHEQUE PVM2
RATIO BETWEEN SKIN FRICTION AND MEAN DIAMETER	RATIO ENTRE LA RUGOSITE DE PEAU ET LE DIAMETRE MOYEN
REFERENCE CONCENTRATION FORMULA	FORMULE POUR LA CONCENTRATION DE REFERENCE
REFERENCE FILE	FICHIER DE REFERENCE
REFERENCE FILE BINARY	STANDARD DU FICHIER DE REFERENCE
REFERENCE FILE FORMAT	FORMAT DU FICHIER DE REFERENCE
RELEASE	NUMERO DE VERSION
RESULTS FILE	FICHIER DES RESULTATS
RESULTS FILE BINARY	STANDARD DU FICHIER RESULTAT
RESULTS FILE FORMAT	FORMAT DU FICHIER DES RESULTATS
SCHEME OPTION FOR ADVECTION	OPTION DU SCHEMA POUR LA CONVECTION
SECONDARY CURRENTS	COURANTS SECONDAIRES
SECONDARY CURRENTS ALPHA COEFFICIENT	SECONDARY CURRENTS ALPHA COEFFICIENT
SECONDARY CURRENTS FILE	FICHIER DE COURANTS SECONDAIRES
SECTIONS INPUT FILE	FICHIER DES SECTIONS DE CONTROLE
SECTIONS OUTPUT FILE	SECTIONS OUTPUT FILE
SEDIMENT DENSITY	MASSE VOLUMIQUE DU SEDIMENT
SEDIMENT DIAMETERS	DIAMETRES DES GRAINS
SEDIMENT SLIDE	GLISSEMENT DU SEDIMENT
SETTLING LAG	SETTLING LAG
SETTLING VELOCITIES	VITESSES DE CHUTE
SHIELDS PARAMETERS	PARAMETRES DE SHIELDS
SKIN FRICTION CORRECTION	CORRECTION FROTTEMENT DE PEAU
SLOPE EFFECT	EFFET DE PENTE
SOLVER	SOLVEUR
SOLVER ACCURACY	PRECISION DU SOLVEUR
SOLVER ACCURACY FOR SUSPENSION	PRECISION DU SOLVEUR POUR LA SUSPENSION
SOLVER FOR SUSPENSION	SOLVEUR POUR LA SUSPENSION
SOLVER OPTION	OPTION DU SOLVEUR
SOLVER OPTION FOR SUSPENSION	OPTION DU SOLVEUR POUR LA SUSPENSION
STARTING TIME OF THE HYDROGRAM	TEMPS D'ORIGINE DE L'HYDROGRAMME
STATIONARY MODE	STATIONARY MODE

STEADY CASE	CAS PERMANENT
STEERING FILE	FICHIER DES PARAMETRES
SUPG OPTION	OPTION DE SUPG
SUSPENSION	SUSPENSION
TETA	TETA
TETA SUSPENSION	TETA SUSPENSION
TIDAL FLATS	BANCS DECOUVRANTS
TIDE PERIOD	PERIODE DE LA MAREE
TIME STEP	PAS DE TEMPS
TITLE	TITRE
TREATMENT OF FLUXES AT THE BOUNDARIES	TRAITEMENT DES FLUX AUX FRONTIERES
TYPE OF ADVECTION	FORME DE LA CONVECTION
USER CRAY	USER CRAY
VALIDATION	VALIDATION
VARIABLES FOR GRAPHIC PRINTOUTS	VARIABLES POUR LES SORTIES GRAPHIQUES
VARIABLES TO BE PRINTED	VARIABLES A IMPRIMER
VECTOR LENGTH	LONGUEUR DU VECTEUR
VERTICAL GRAIN SORTING MODEL	VERTICAL GRAIN SORTING MODEL
WATER DENSITY	MASSE VOLUMIQUE DE L'EAU
WATER VISCOSITY	VISCOSITE CINEMATIQUE EAU
WAVE FILE	FICHIER DE HOULE
WAVE FILE FORMAT	FORMAT DU FICHIER DE HOULE
ZERO	ZERO

### 3.2 French/English glossary

AD CONVERGENCE DES DERIVEES POUR LE SOLVEUR LINEAIRE	AD LINEAR SOLVER DERIVATIVE CONVERGENCE
AD NOMBRE DE DERIVEES	AD NUMBER OF DERIVATIVES
AD NOMBRE DE DIRECTIONS	AD NUMBER OF DIRECTIONS
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
ANGLE DE FROTTEMENT DU SEDIMENT	FRICTION ANGLE OF THE SEDIMENT
BANCS DECOUVRANTS	TIDAL FLATS
BETA	BETA
BIBLIOTHEQUE PVM1	PVM1 LIBRARY
BIBLIOTHEQUE PVM2	PVM2 LIBRARY
BIBLIOTHEQUES	LIBRARIES
BILAN DE MASSE	MASS-BALANCE
C-VSM DYNAMIC ALT MODEL	C-VSM DYNAMIC ALT MODEL
C-VSM FULL PRINTOUT PERIOD	C-VSM FULL PRINTOUT PERIOD
C-VSM MAXIMUM SECTIONS	C-VSM MAXIMUM SECTIONS
C-VSM PRINTOUT SELECTION	C-VSM PRINTOUT SELECTION

CAS PERMANENT	STEADY CASE
CHARRIAGE	BED LOAD
CODE DE CALCUL UTILISE POUR L'HYDRODYNAMIQUE	HYDRODYNAMIC CODE
COEFFICIENT B DE LA FORMULE DE BIJKER	B VALUE FOR THE BIJKER FORMULA
COEFFICIENT DE FROTTEMENT	FRICTION COEFFICIENT
COEFFICIENT DE PERMEABILITE	PERMEABILITY COEFFICIENT
CONCENTRATION D'EQUILIBRE EN ENTREE	EQUILIBRIUM INFLOW CONCENTRATION
CONCENTRATION GEL	GEL CONCENTRATION
CONCENTRATION MASSIQUE	MASS CONCENTRATION
CONCENTRATION MAXIMALE	MAXIMUM CONCENTRATION
CONCENTRATIONS DU LIT DE VASE	MUD CONCENTRATION PER LAYER
CONCENTRATIONS INITIALES EN SUSPENSION	INITIAL SUSPENSION CONCENTRATIONS
CONCENTRATIONS PAR CLASSE AUX FRONTIERES	CONCENTRATION PER CLASS AT BOUNDARIES
CONSTANT FLOW DISCHARGE	CONSTANT FLOW DISCHARGE
CONSTANTE DE PARTHENIADES	PARTHENIADES CONSTANT
CONTRAINTES CRITIQUE D'EROSION DE LA VASE	CRITICAL EROSION SHEAR STRESS OF THE MUD
COORDONNEES DE L'ORIGINE	ORIGIN COORDINATES
CORRECTION DU CHAMP CONVECTEUR	CORRECTION ON CONVECTION VELOCITY
CORRECTION FROTTEMENT DE PEAU	SKIN FRICTION CORRECTION
COURANTS SECONDAIRES	SECONDARY CURRENTS
CRITERE POUR METTRE A JOUR L'HYDRODYNAMIQUE	CRITERION TO UPDATE THE FLOW
D90	D90
DATE DE L'ORIGINE DES TEMPS	ORIGINAL DATE OF TIME
DEBITS SOLIDES IMPOSES	PRESCRIBED SOLID DISCHARGES
DEBUGGER	DEBUGGER
DESCRIPTION DES LIBRAIRIES	DESCRIPTION OF LIBRARIES
DIAMETRE MOYEN DES GRAINS	MEAN DIAMETER OF THE SEDIMENT
DIAMETRES DES GRAINS	SEDIMENT DIAMETERS
DICTIONNAIRE	DICTIONARY
DIFFUSION	DIFFUSION
DISPERSION LONGITUDINALE	DISPERSION ALONG THE FLOW
DISPERSION TRANSVERSALE	DISPERSION ACROSS THE FLOW
EFFET DE PENTE	SLOPE EFFECT
EPAISSEUR DE COUCHE ACTIVE	ACTIVE LAYER THICKNESS
EPAISSEUR DE COUCHE ACTIVE CONSTANTE	CONSTANT ACTIVE LAYER THICKNESS
EXECUTABLE PAR DEFAULT	DEFAULT EXECUTABLE
EXECUTABLE PARALLELE PAR DEFAULT	DEFAULT PARALLEL EXECUTABLE
FACTEUR MORPHOLOGIQUE	MORPHOLOGICAL FACTOR

FICHER DE COURANTS SECONDAIRES	SECONDARY CURRENTS FILE
FICHER DE FLUXLINE	FLUXLINE INPUT FILE
FICHER DE GEOMETRIE	GEOMETRY FILE
FICHER DE HOULE	WAVE FILE
FICHER DE NESTOR ACTION	NESTOR ACTION FILE
FICHER DE NESTOR DE SURFACE REFERENCE	NESTOR SURFACE REFERENCE FILE
FICHER DE NESTOR POLYGON	NESTOR POLYGON FILE
FICHER DE NESTOR RESTART	NESTOR RESTART FILE
FICHER DE REFERENCE	REFERENCE FILE
FICHER DES CONDITIONS AUX LIMITES	BOUNDARY CONDITIONS FILE
FICHER DES FONDS	BOTTOM TOPOGRAPHY FILE
FICHER DES FRONTIERES LIQUIDES	LIQUID BOUNDARIES FILE
FICHER DES PARAMETRES	STEERING FILE
FICHER DES RESULTATS	RESULTS FILE
FICHER DES SECTIONS DE CONTROLE	SECTIONS INPUT FILE
FICHER FORTRAN	FORTRAN FILE
FICHER HYDRODYNAMIQUE	HYDRODYNAMIC FILE
FICHER PRECEDENT SEDIMENTOLOGIQUE	PREVIOUS SEDIMENTOLOGICAL COMPUTATION FILE
FLUXLINE	FLUXLINE
FORMAT DU FICHER DE GEOMETRIE	GEOMETRY FILE FORMAT
FORMAT DU FICHER DE HOULE	WAVE FILE FORMAT
FORMAT DU FICHER DE REFERENCE	REFERENCE FILE FORMAT
FORMAT DU FICHER DES RESULTATS	RESULTS FILE FORMAT
FORMAT DU FICHER HYDRODYNAMIQUE	HYDRODYNAMIC FILE FORMAT
FORMAT DU FICHER PRECEDENT SEDIMENTOLOGIQUE	PREVIOUS SEDIMENTOLOGICAL COMPUTATION FILE FORMAT
FORME DE LA CONVECTION	TYPE OF ADVECTION
FORMULATION POUR DEPOT ET EROSION	FORMULATION FOR DEPOSITION AND EROSION
FORMULE DE TRANSPORT SOLIDE	BED-LOAD TRANSPORT FORMULA
FORMULE POUR EFFET DE PENTE	FORMULA FOR SLOPE EFFECT
FORMULE POUR LA CONCENTRATION DE REFERENCE	REFERENCE CONCENTRATION FORMULA
FORMULE POUR LA DEVIATION	FORMULA FOR DEVIATION
FRACTION INITIALE PAR CLASSE SEDIMENTOLOGIQUE	INITIAL FRACTION FOR PARTICULAR SIZE CLASS
FREE INTEGER 1	FREE INTEGER 1
FREE INTEGER 2	FREE INTEGER 2
FREE LOGICAL 1	FREE LOGICAL 1
GLISSEMENT DU SEDIMENT	SEDIMENT SLIDE
GRAIN-FEEDING	GRAIN-FEEDING
GRAVITE	GRAVITY ACCELERATION

HEURE DE L'ORIGINE DES TEMPS	ORIGINAL HOUR OF TIME
HIDING FACTOR FORMULA	HIDING FACTOR FORMULA
HIDING FACTOR PAR CLASSE GRANULO	HIDING FACTOR FOR PARTICULAR SIZE CLASS
LISTE DES FICHIERS	LIST OF FILES
LOGICIEL DE DESSIN	GRAPHIC SOFTWARE
LOGICIEL DE DESSIN DU CALCUL PRECEDENT	GRAPHIC SOFTWARE OF THE HYDRODYNAMIC COMPUTATION
LOI DE FROTTEMENT SUR LE FOND	LAW OF BOTTOM FRICTION
LONGUEUR DU VECTEUR	VECTOR LENGTH
MAILLEUR	MESHING
MASS-LUMPING	MASS-LUMPING
MASSE VOLUMIQUE DE L'EAU	WATER DENSITY
MASSE VOLUMIQUE DU SEDIMENT	SEDIMENT DENSITY
MAXIMUM D'ITERATIONS POUR LE SOLVEUR	MAXIMUM NUMBER OF ITERATIONS FOR SOLVER
MAXIMUM D'ITERATIONS POUR LE SOLVEUR POUR LA SUSPENSION	MAXIMUM NUMBER OF ITERATIONS FOR SOLVER FOR SUSPENSION
MAXIMUM D'ITERATIONS POUR LES SCHEMAS DE CONVECTION	MAXIMUM NUMBER OF ITERATIONS FOR ADVECTION SCHEMES
MOT DE PASSE CRAY	PASSWORD CRAY
MPM COEFFICIENT	MPM COEFFICIENT
NESTOR	NESTOR
NOMBRE D'ITERATIONS POUR TELEMAT	NUMBER OF ITERATIONS FOR TELEMAT
NOMBRE DE CLASSES GRANULOMETRIQUES	NUMBER OF SIZE-CLASSES OF BED MATERIAL
NOMBRE DE CORRECTIONS DES SCHEMAS DISTRIBUTIFS	NUMBER OF CORRECTIONS OF DISTRIBUTIVE SCHEMES
NOMBRE DE COUCHES POUR GRANULO ETENDUE	NUMBER OF BED LOAD MODEL LAYERS
NOMBRE DE COUCHES POUR LE TASSEMENT	NUMBER OF LAYERS OF THE CONSOLIDATION MODEL
NOMBRE DE MAREES OU CRUES	NUMBER OF TIDES OR FLOODS
NOMBRE DE PAS DE TEMPS	NUMBER OF TIME STEPS
NOMBRE DE SOUS-ITERATIONS	NUMBER OF SUB-ITERATIONS
NOMBRE DE SOUS-PAS DES SCHEMAS DISTRIBUTIFS	NUMBER OF SUB-STEPS OF DISTRIBUTIVE SCHEMES
NOMBRE DE TABLEAUX PRIVES	NUMBER OF PRIVATE ARRAYS
NOMBRE MAXIMUM DE FRONTIERES	MAXIMUM NUMBER OF BOUNDARIES
NOMS DES VARIABLES PRIVEES	NAMES OF PRIVATE VARIABLES
NUMERO DE VERSION	RELEASE
OPTION DE SUPG	SUPG OPTION
OPTION DE TRAITEMENT DES BANCS DECOUVRANTS	OPTION FOR THE TREATMENT OF TIDAL FLATS
OPTION DE TRAITEMENT DES FONDS NON ERODABLES	OPTION FOR THE TREATMENT OF NON ERODABLE BEDS

OPTION DU MODELE DE TASSEMENT	CONSOLIDATION MODEL
OPTION DU PREDICTEUR DE RUGOSITE	BED ROUGHNESS PREDICTOR OPTION
OPTION DU SCHEMA POUR LA CONVECTION	SCHEME OPTION FOR ADVECTION
OPTION DU SOLVEUR	SOLVER OPTION
OPTION DU SOLVEUR POUR LA SUSPENSION	SOLVER OPTION FOR SUSPENSION
OPTION POUR LA DIFFUSION DU TRACEUR	OPTION FOR THE DIFFUSION OF TRACER
OPTION POUR LA DISPERSION	OPTION FOR THE DISPERSION
PARAMETRE POUR LA DEVIATION	PARAMETER FOR DEVIATION
PARAMETRES DE SHIELDS	SHIELDS PARAMETERS
PARTITIONNEUR	PARTITIONING TOOL
PAS DE TEMPS	TIME STEP
PERIODE DE LA MAREE	TIDE PERIOD
PERIODE DE SORTIE GRAPHIQUE	GRAPHIC PRINTOUT PERIOD
PERIODE DE SORTIE LISTING	LISTING PRINTOUT PERIOD
PLACE MEMOIRE CRAY	MEMORY SPACE CRAY
POROSITE DU LIT NON COHESIF	NON COHESIVE BED POROSITY
PRECISION DU SOLVEUR	SOLVER ACCURACY
PRECISION DU SOLVEUR POUR LA SUSPENSION	SOLVER ACCURACY FOR SUSPENSION
PRECONDITIONNEMENT	PRECONDITIONING
PRECONDITIONNEMENT POUR LA SUSPENSION	PRECONDITIONING FOR SUSPENSION
PREDICTION DE LA RUGOSITE	BED ROUGHNESS PREDICTION
PRISE EN COMPTE DE LA HOULE	EFFECT OF WAVES
PROCESSEURS PARALLELES	PARALLEL PROCESSORS
PRODUIT MATRICE-VECTEUR	MATRIX-VECTOR PRODUCT
PROFONDEUR MINIMUM POUR LE CHARRIAGE	MINIMUM DEPTH FOR BEDLOAD
RAPPORT D'EVOLUTION CRITIQUE	CRITICAL EVOLUTION RATIO
RATIO ENTRE LA RUGOSITE DE PEAU ET LE DIAMETRE MOYEN	RATIO BETWEEN SKIN FRICTION AND MEAN DIAMETER
SECONDARY CURRENTS ALPHA COEFFICIENT	SECONDARY CURRENTS ALPHA COEFFICIENT
SECTIONS DE CONTROLE	CONTROL SECTIONS
SECTIONS OUTPUT FILE	SECTIONS OUTPUT FILE
SEDIMENT MIXTE	MIXED SEDIMENT
SEDIMENTS COHESIFS	COHESIVE SEDIMENTS
SETTLING LAG	SETTLING LAG
SOLVEUR	SOLVER
SOLVEUR POUR LA SUSPENSION	SOLVER FOR SUSPENSION
STANDARD DU FICHIER DE GEOMETRIE	GEOMETRY FILE BINARY

STANDARD DU FICHIER DE REFERENCE	REFERENCE FILE BINARY
STANDARD DU FICHIER HYDRODYNAMIQUE	HYDRODYNAMIC FILE BINARY
STANDARD DU FICHIER PRECEDENT SEDIMENTOLOGIQUE	BINARY OF THE PREVIOUS SEDIMENTOLOGICAL COMPUTATION FILE
STANDARD DU FICHIER RESULTAT	RESULTS FILE BINARY
STATIONARY MODE	STATIONARY MODE
STOCKAGE DES MATRICES	MATRIX STORAGE
SUITE DE CALCUL	COMPUTATION CONTINUED
SUSPENSION	SUSPENSION
TASSEMENT DU LIT COHESIF	MUD CONSOLIDATION
TEMPS D'ORIGINE DE L'HYDROGRAMME	STARTING TIME OF THE HYDROGRAM
TEMPS MACHINE CRAY	CPU TIME
TETA	TETA
TETA SUSPENSION	TETA SUSPENSION
TITRE	TITLE
TRAITEMENT DES FLUX AUX FRONTIERES	TREATMENT OF FLUXES AT THE BOUNDARIES
TRANSFERT DE MASSE PAR COUCHE	MASS TRANSFER PER LAYER
USER CRAY	USER CRAY
VALEUR MINIMUM DE H	MINIMAL VALUE OF THE WATER HEIGHT
VALIDATION	VALIDATION
VARIABLES A IMPRIMER	VARIABLES TO BE PRINTED
VARIABLES POUR LES SORTIES GRAPHIQUES	VARIABLES FOR GRAPHIC PRINTOUTS
VERIFICATION DU MAILLAGE	CHECKING THE MESH
VERTICAL GRAIN SORTING MODEL	VERTICAL GRAIN SORTING MODEL
VISCOSITE CINEMATIQUE EAU	WATER VISCOSITY
VITESSE CRITIQUE DE DEPOT DE LA VASE	CRITICAL SHEAR VELOCITY FOR MUD DEPOSITION
VITESSES DE CHUTE	SETTLING VELOCITIES
VOLUMES FINIS	FINITE VOLUMES
ZERO	ZERO



- [1] HERVOUET J.-M. *Hydrodynamics of Free Surface Flows. Modelling with the finite element method.* Wiley, 2007.