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Observatoires et collections, à quoi ça sert ?

Etienne Prévost

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Etienne Prévost. Observatoires et collections, à quoi ça sert ?. Journée du pôle R&D pour la gestion des migrateurs amphihalins dans leur environnement, Jun 2021, Paris, France. hal-03790609

HAL Id: hal-03790609

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Submitted on 28 Sep 2022

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Observatoires et collections, à quoi ça sert ?

Etienne PREVOST



ORE DiaPFC

Observatoire de recherche
en environnement
sur les poissons diadromes
dans les fleuves côtiers

Infrastructure de recherche



Saumon atlantique



Truite commune



Anguille européenne



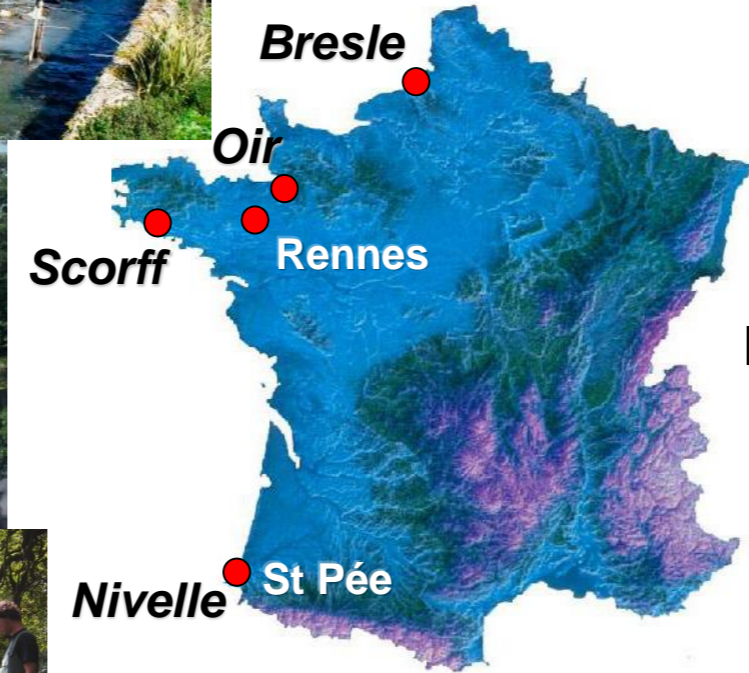
Aloses



Lamproie marine

<https://www6.inrae.fr/diapfc>

ORE DiaPFC un réseau multi-site



Installations expérimentales



Suivis à
long terme
in natura

ORE DiaPFC un réseau multi-site



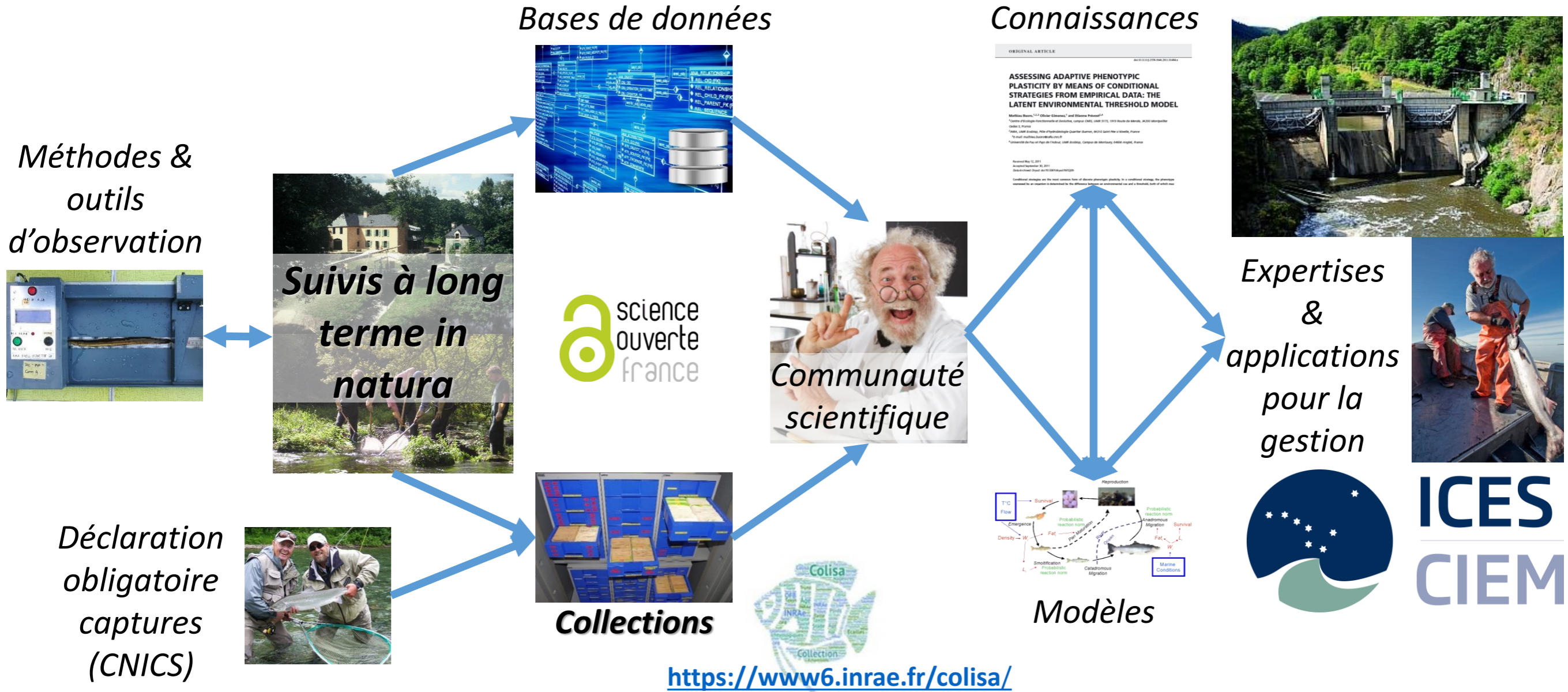
Suivis à long terme *in natura*



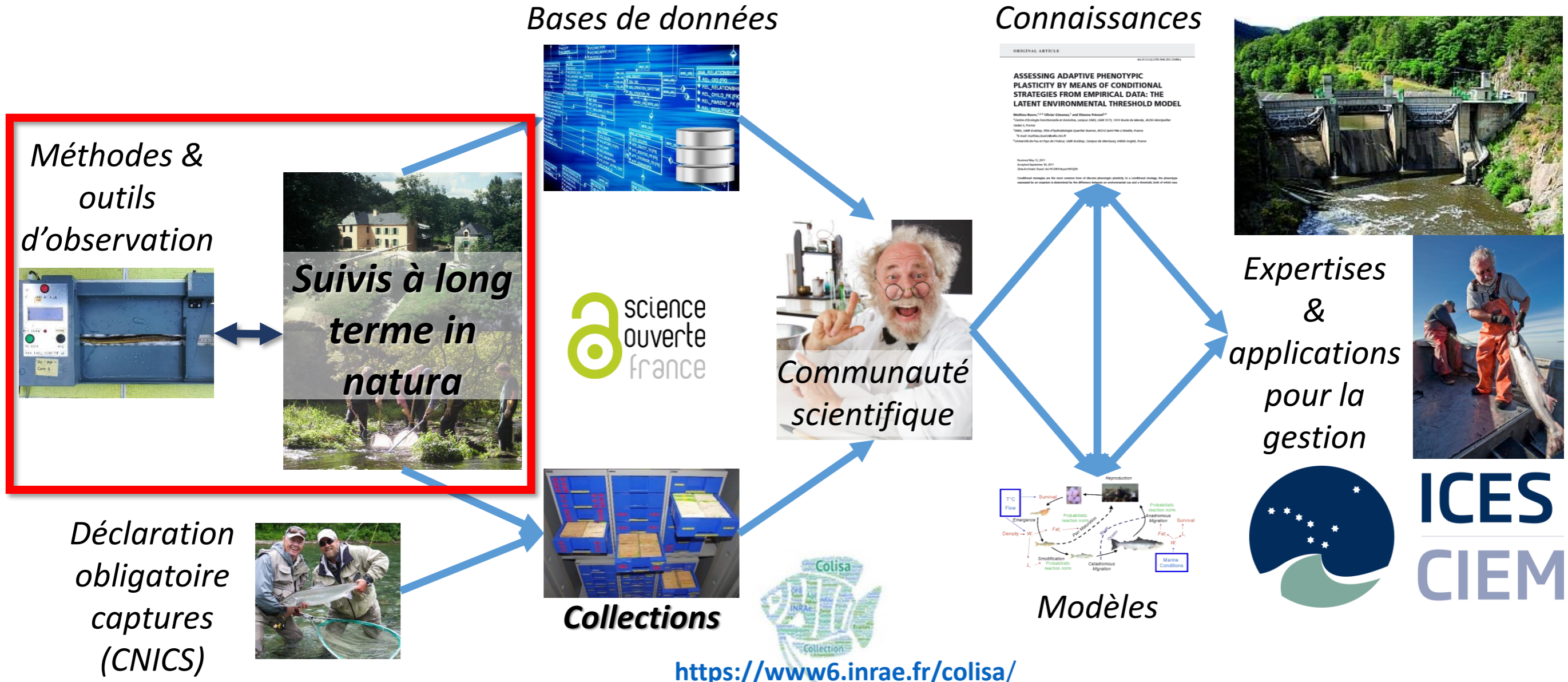
Installations expérimentales



Observatoire & collection : quels utilisations ?



Observatoire & collection : quels utilisations ?



<https://www6.inrae.fr/colisa/>

Développement de méthodes de suivis à long terme ?

Bull. Fr. Pêche Piscic. (1999) 352 : 19-29

— 19 —

RELATION ENTRE INDICATEUR D'ABONDANCE DE TYPE CPUE ET ESTIMATION DE DENSITÉ PAR ENLÈVEMENTS SUCCESSIFS POUR LES JUVÉNILES DE SAUMON ATLANTIQUE (*SALMO SALAR* L.) DE L'ANNÉE.

E. PRÉVOST (1) et A. NIHOARN (2)

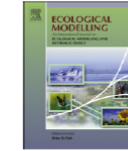


Ecological Modelling 222 (2011) 1069–1079

Contents lists available at ScienceDirect

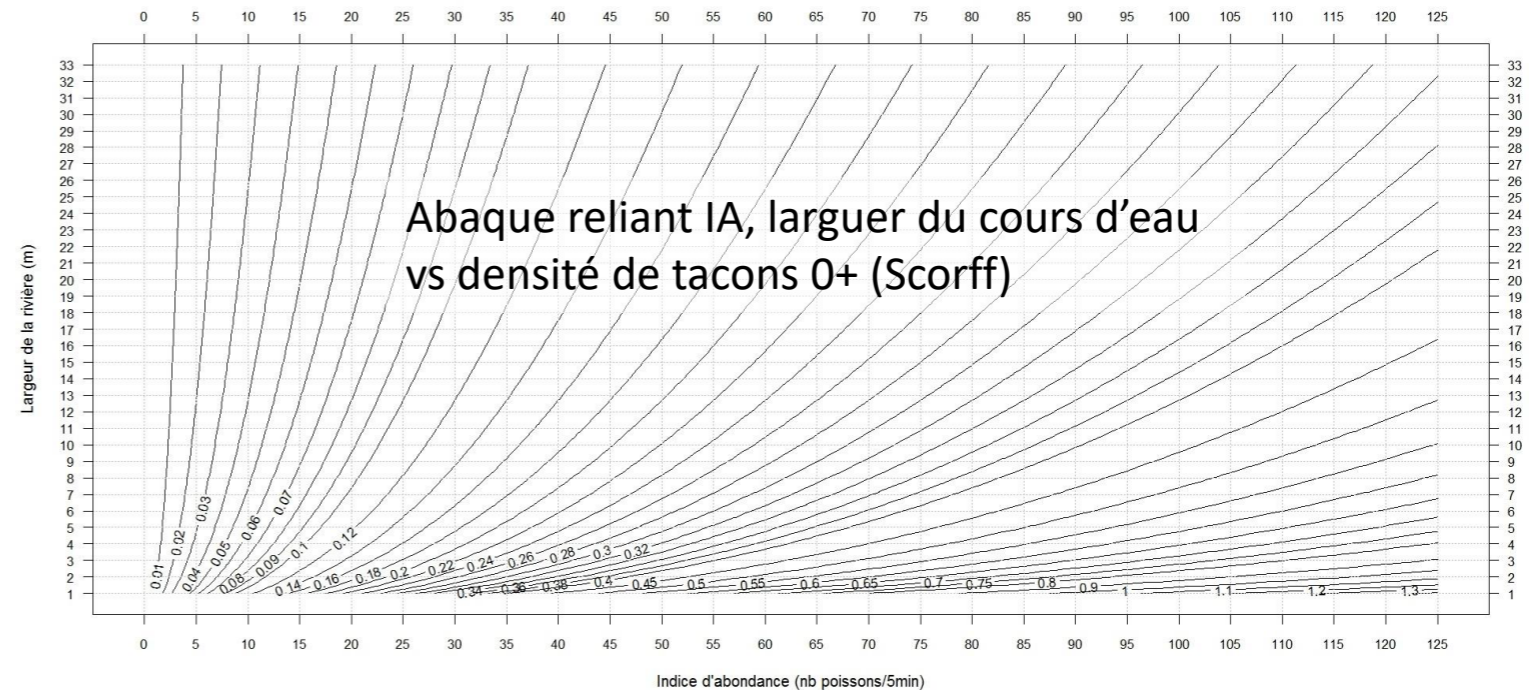
Ecological Modelling

journal homepage: www.elsevier.com/locate/ecolmodel



Estimating an homogeneous series of a population abundance indicator despite changes in data collection procedure: A hierarchical Bayesian modelling approach

Mélanie Brun^{a,b,d,e,*}, Christophe Abraham^{d,e}, Marc Jarry^{a,c}, Jacques Dumas^{a,b}, Frédéric Lange^{a,b}, Etienne Prévost^{a,b}



Observatoire & collection : quels utilisations ?

Méthodes & outils d'observation



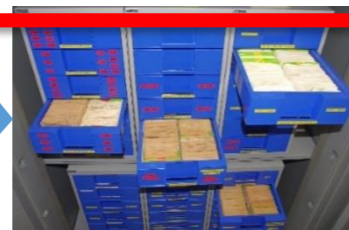
Déclaration obligatoire captures (CNICS)



Bases de données



Communauté scientifique

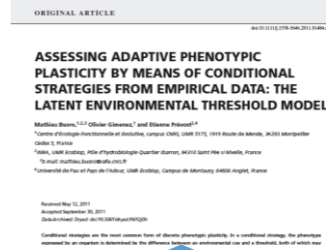


Collections

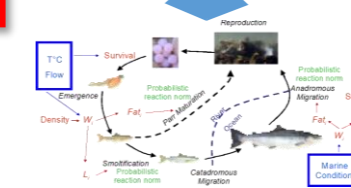
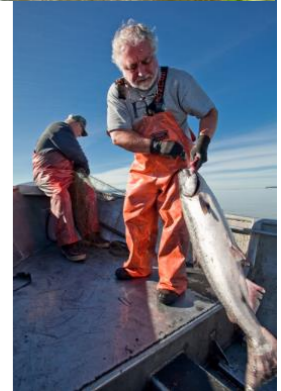


<https://www6.inrae.fr/colisa/>

Connaissances



Expertises & applications pour la gestion

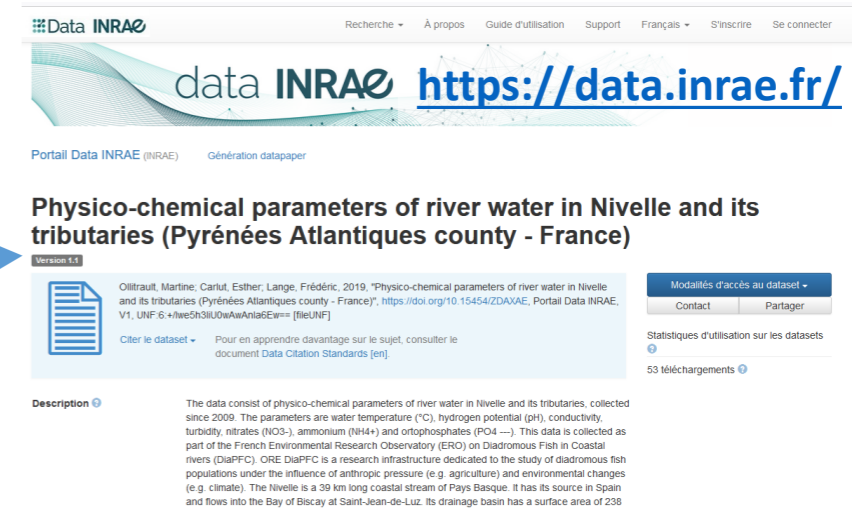


Modèles



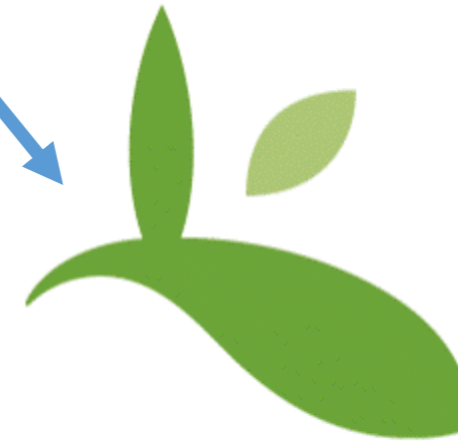
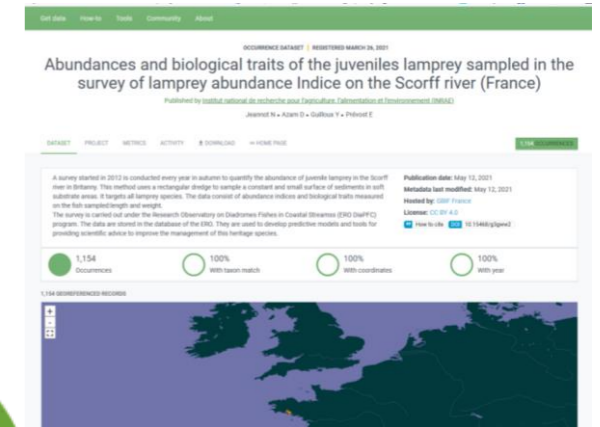
ICES
CIEM

Comment accéder aux données des suivis à long terme ?



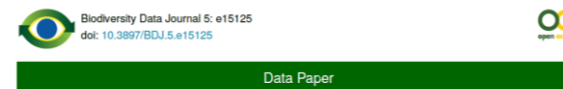
Demandes particulières

Data paper



GLOBAL BIODIVERSITY INFORMATION FACILITY

www.gbif.org



Abundance indices and biological traits of juvenile salmon (*Salmo salar*) sampled in three rivers on the Atlantic and Channel coasts (France)

Frédéric Marchand^{‡§}, Laurent Beaulaton[‡], Etienne Prévost^{‡§}, Richard Delanoë^{‡†}, Jean-Pierre Destouches^{‡§}, François Gueraud^{‡§}, Yoann Guilloux[‡], Nicolas Jeannot^{‡§}, Emmanuel Huchet^{‡§}, Frédéric Lange^{‡§}, Jacques Rives^{‡§}, Julien Tremblay^{‡§}, Nadine Herrard^{‡§}, Didier Azam^{‡§}

[‡] USE, Ecologie et Ecotoxicologie aquatique, INRA, pôle GestAqua, 35042 Rennes, France
[§] AFB, pôle GestAqua, 35042 Rennes, France
[|] ECOBIOP, INRA, University Pau & Pays Adour, Aquaspole, Quartier Ibarrou, 64310 Saint-Pée-sur-Nivelle, France
[†] Fédération du Morbihan pour la Pêche et la Protection du Milieu Aquatique, 56890 Saint-Avé, France

Observatoire & collection : quels utilisations ?

Méthodes & outils d'observation



Suivis à long terme in natura

Déclaration obligatoire captures (CNICS)



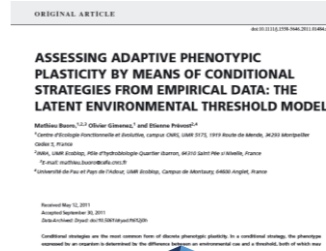
Bases de données



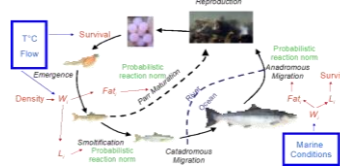
Collections



Connaissances



Communauté scientifique



Modèles



Expertises & applications pour la gestion



ICES
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<https://www6.inrae.fr/colisa/>



Saumon atlantique

Productions de connaissances



ORIGINAL ARTICLE
doi:10.1111/j.1558-5646.2010.01929.x

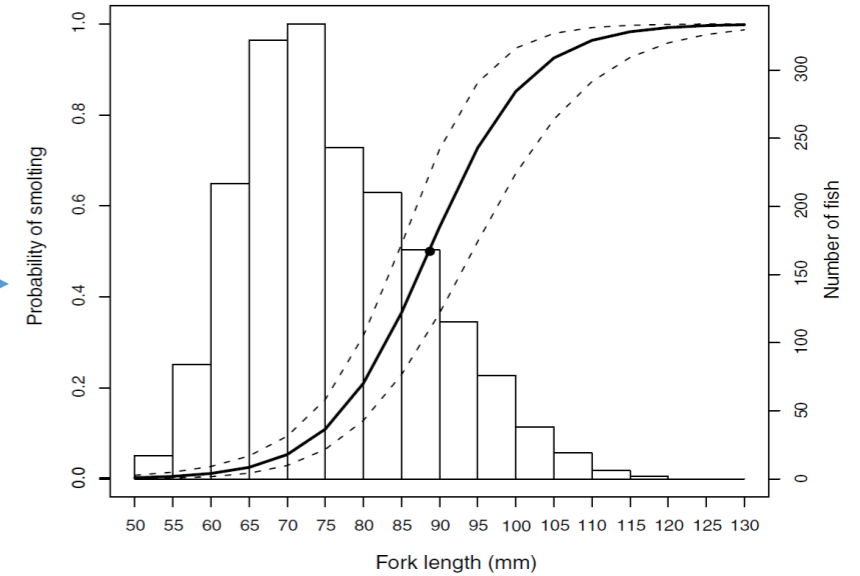
INVESTIGATING EVOLUTIONARY TRADE-OFFS IN WILD POPULATIONS OF ATLANTIC SALMON (*SALMO SALAR*): INCORPORATING DETECTION PROBABILITIES AND INDIVIDUAL HETEROGENEITY

Mathieu Buoro,^{1,2,3} Etienne Prévost^{2,4,5} and Olivier Gimenez^{1,6}

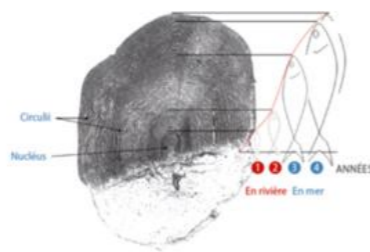
¹Centre d'Ecologie Fonctionnelle et Evolutive, campus CNRS, UMR 5175, 1919 Route de Mende, 34293 Montpellier Cedex 5, France
²INRA, UMR Ecobiop, Quartier Ibarron 64310 Saint Pie Stivelle, France
³E-mail: mathieu.buoro@cefe.cnrs.fr
⁴Université de Pau et Pays de l'Adour, UMR Ecobiop, Campus de Montaur, 64600 Anglet, France
⁵E-mail: eprevost@st-pee.inra.fr
⁶E-mail: olivier.gimenez@cefe.cnrs.fr

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Evolution 64: 9–2029–2042
2629

Buoro et al. 2010



Ages de rivière et de mer dépendent de la croissance



ARTICLE

Growth during the first summer at sea modulates sex-specific maturation schedule in Atlantic salmon

Cécile Trehin, Etienne Rivot, Ludvine Lamureau, Lisa Mestier, Anne-Laure Bernard, Stephen D. Gregory, and Marie Nevoux

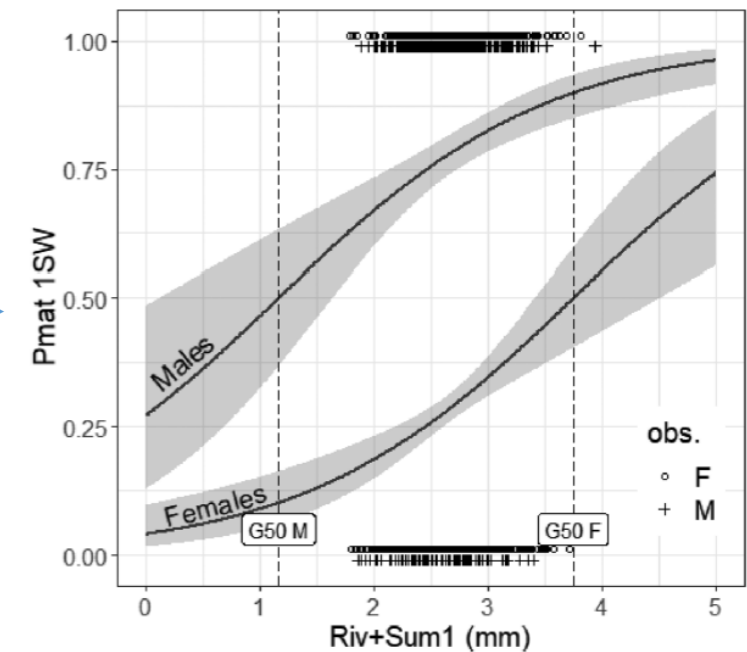
Received 20 June 2020; Accepted 12 December 2020

C. Trehin, L. Mestier and A.-L. Bernard: INRAE, UR1202 Ecology and Ecosystem Health, Institut Agro, INRAE, 35042 Rennes, France; E. Rivot and M. Nevoux: INRAE, UR1202 Ecology and Ecosystem Health, Institut Agro, INRAE, 35042 Rennes, France; M. MAME: Management of Diadromous Fishes in their Environment, INRAE, Institut Agro, 43000 Clermont; L. Lamureau: INRAE, pole PNB-INRAE-Institut Agro-UR1202 MIAGE – Management of Diadromous Fish in their Environment, UR1202, Rennes, France; S.D. Gregory: Salmon and Trout Research Centre, Game and Wildlife Conservation Trust, FFA River Laboratory, Waulkerburn, Dorset, BH20 4AR, UK; Corresponding author: Cécile Trehin (trehin.c@inrae.fr)

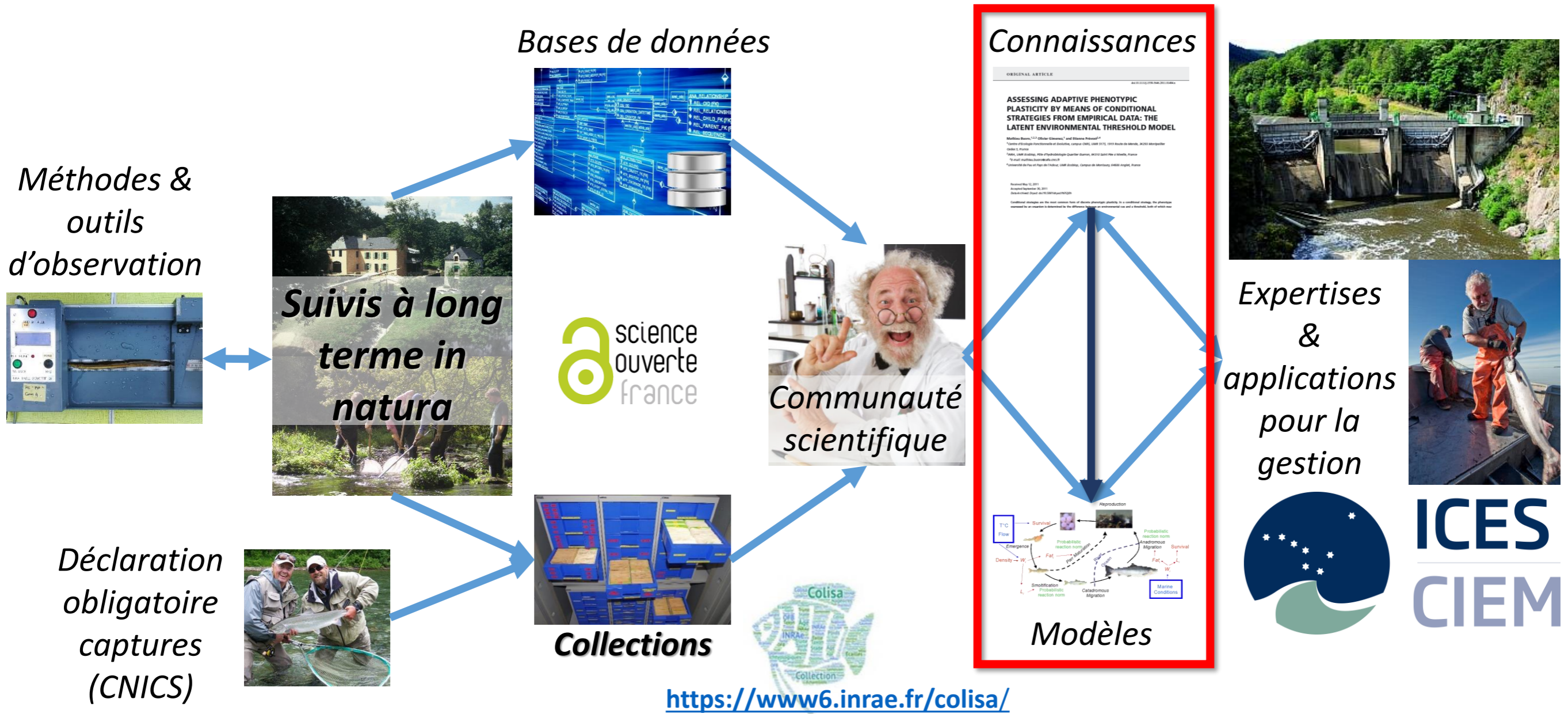
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Can. J. Fish. Aquat. Sci. 78: 459–469 (2021). doi:10.1139/cjfas-2020-0236. Published at www.nrcresearchpress.com/cjfas on 19 December 2020.

Trehin et al. 2020



Observatoire & collection : quels utilisations ?





Agrégation des connaissances par des modèles

Saumon atlantique

Ecological Modelling 231 (2012) 37–52

Contents lists available at SciVerse ScienceDirect

Ecological Modelling

journal homepage: www.elsevier.com/locate/ecolmodel



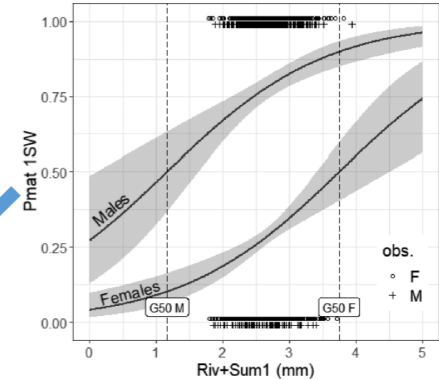
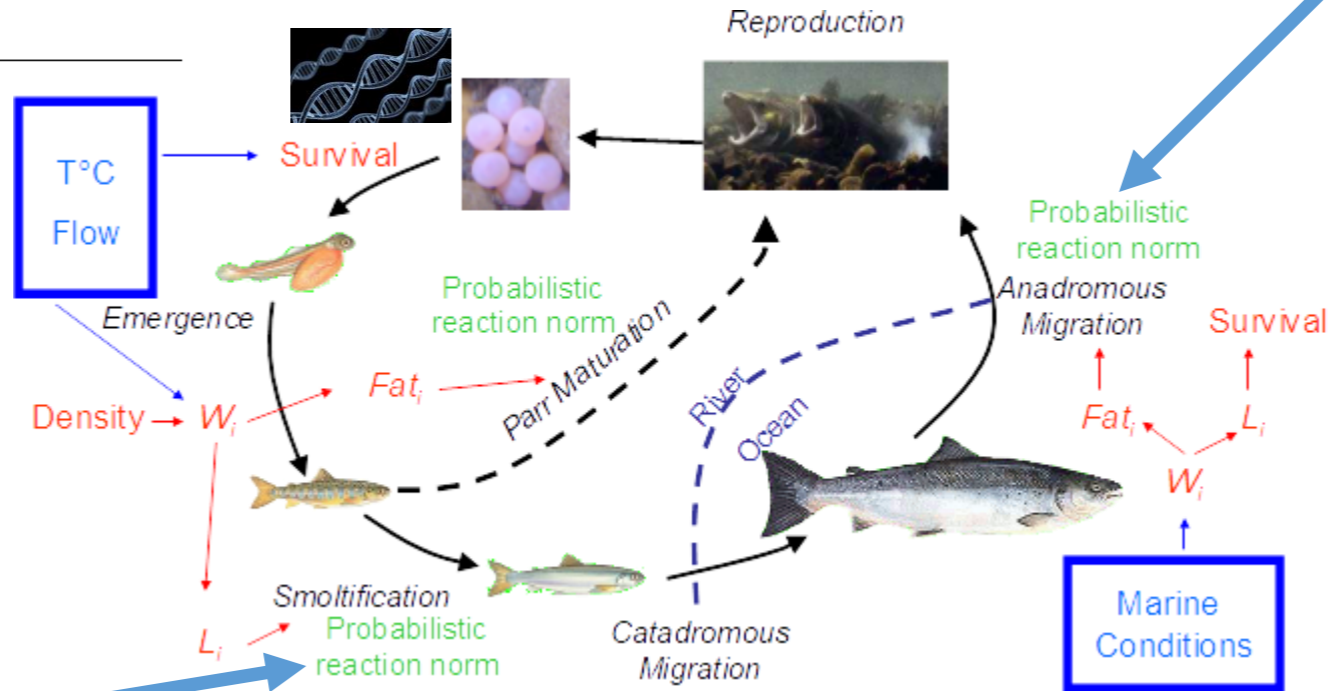
A demo-genetic individual-based model for Atlantic salmon populations: Model structure, parameterization and sensitivity

Cyril Piou^{a,b,*}, Etienne Prévost^{a,b}

^a INRA, UMR ECOBIOP, Station Hydrobiologique INRA, Quartier Itharon, 64310 St-Pée sur Nivelle, France
^b UPPA, UMR ECOBIOP, UFR Sciences et Techniques Côte Basque, Campus Montoury, 64600 Anglet, France

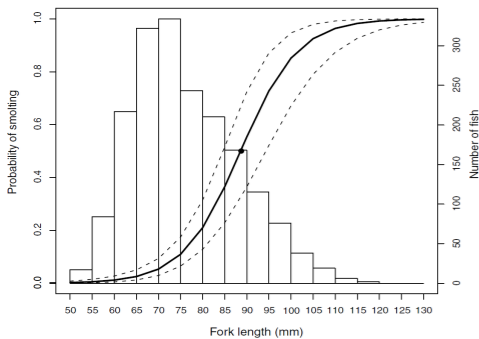
IBASAM

Simulateur démogénétique



Synthétise et articule les connaissances disponibles sur les processus démogénétiques chez le saumon atlantique : plasticité, génétique explicite, forçage environnementaux

Chaque individu explicitement représenté de sa naissance jusqu'à sa reproduction et/ou sa mort



Observatoire & collection : quels utilisations ?

Méthodes & outils d'observation



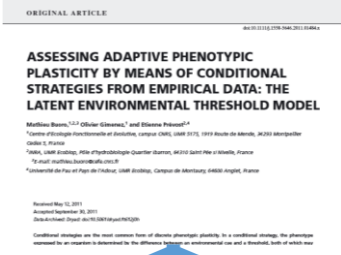
Déclaration obligatoire captures (CNICS)



Bases de données



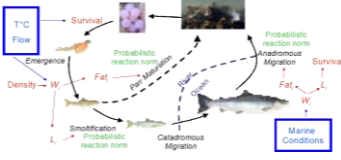
Connaissances



Communauté scientifique



Collections



Modèles



Expertises & applications pour la gestion



ICES
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<https://www6.inrae.fr/colisa/>



Saumon atlantique

Calibration des modèles par des séries de données à long terme

Ecological Modelling 231 (2012) 37–52

Contents lists available at SciVerse ScienceDirect

Ecological Modelling

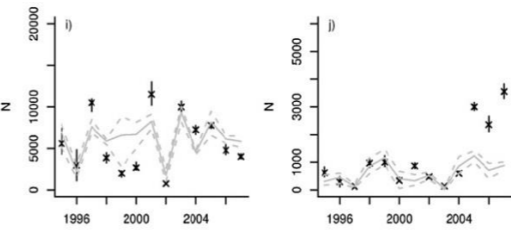
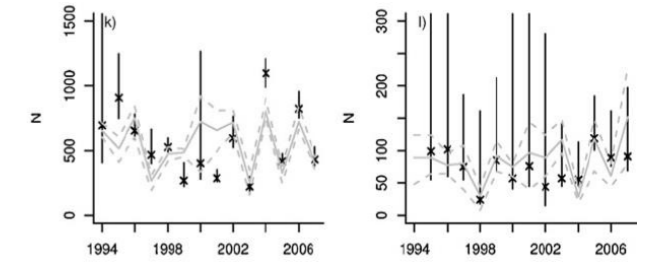
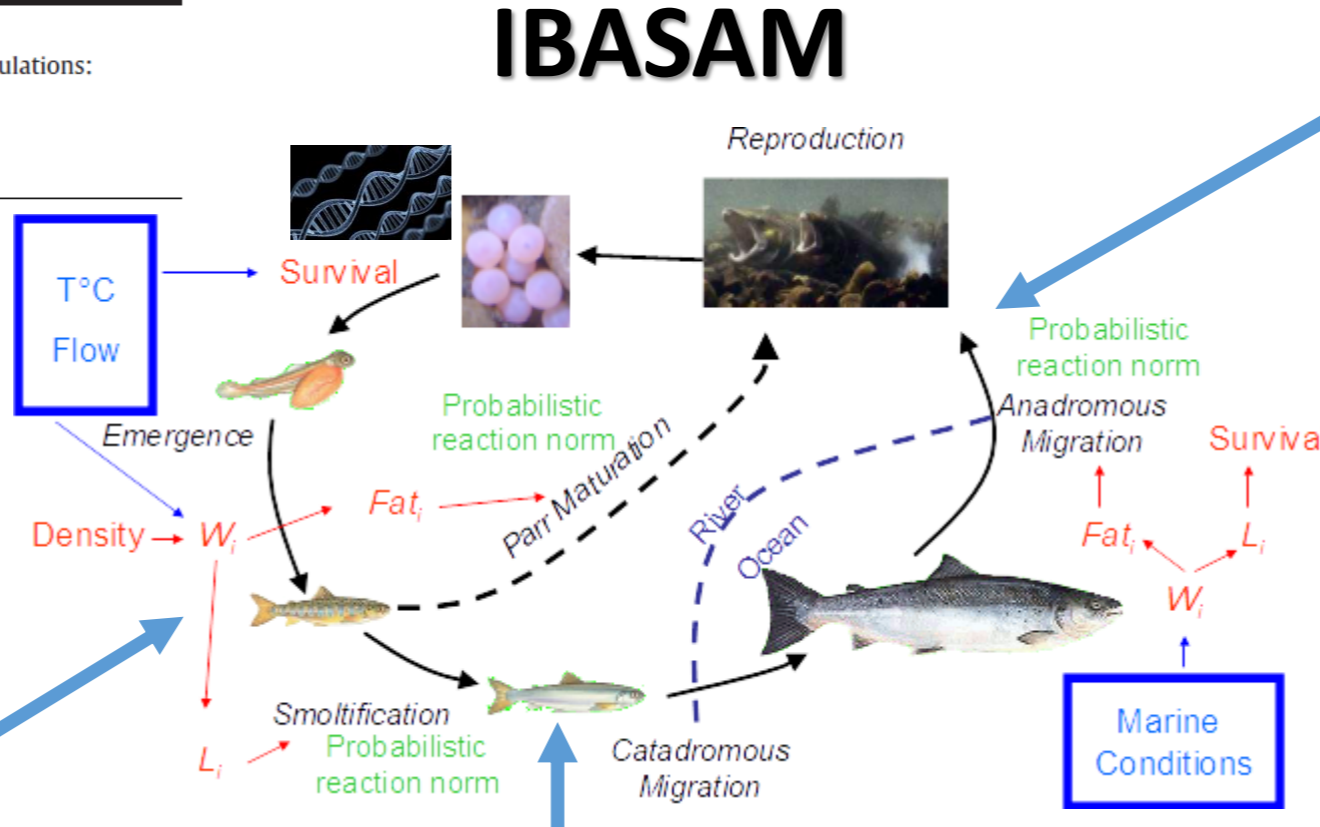
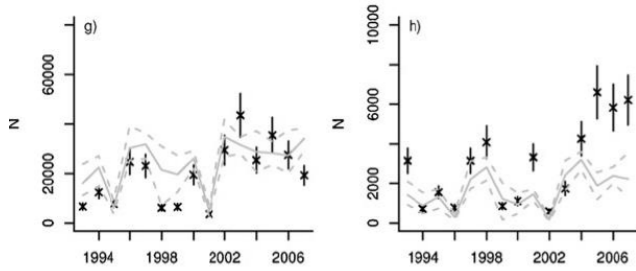
journal homepage: www.elsevier.com/locate/ecolmodel



A demo-genetic individual-based model for Atlantic salmon populations: Model structure, parameterization and sensitivity

Cyril Piou^{a,b,*}, Etienne Prévost^{a,b}

^a INRA, UMR ECOBIOP, Station Hydrobiologique INRA, Quartier Itharron, 64310 St-Pée sur Nivelle, France
^b UPPA, UMR ECOBIOP, UFR Sciences et Techniques Côte Basque, Campus Montoury, 64600 Anglet, France

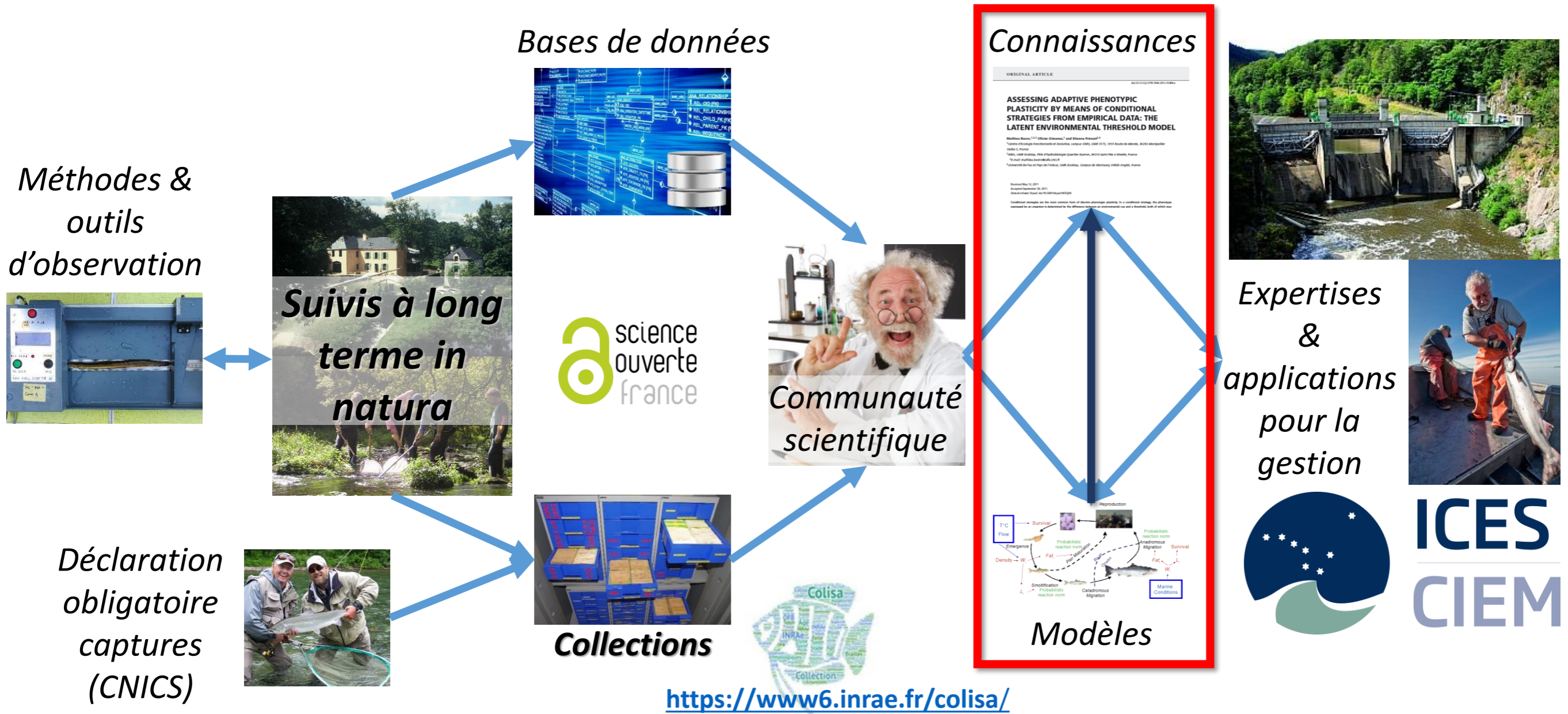


Observatoire et collections, à quoi ça sert ?

OFB-INRAE-Agrocampus Ouest-UPPA

Pôle MIAME

Observatoire & collection : quels utilisations ?

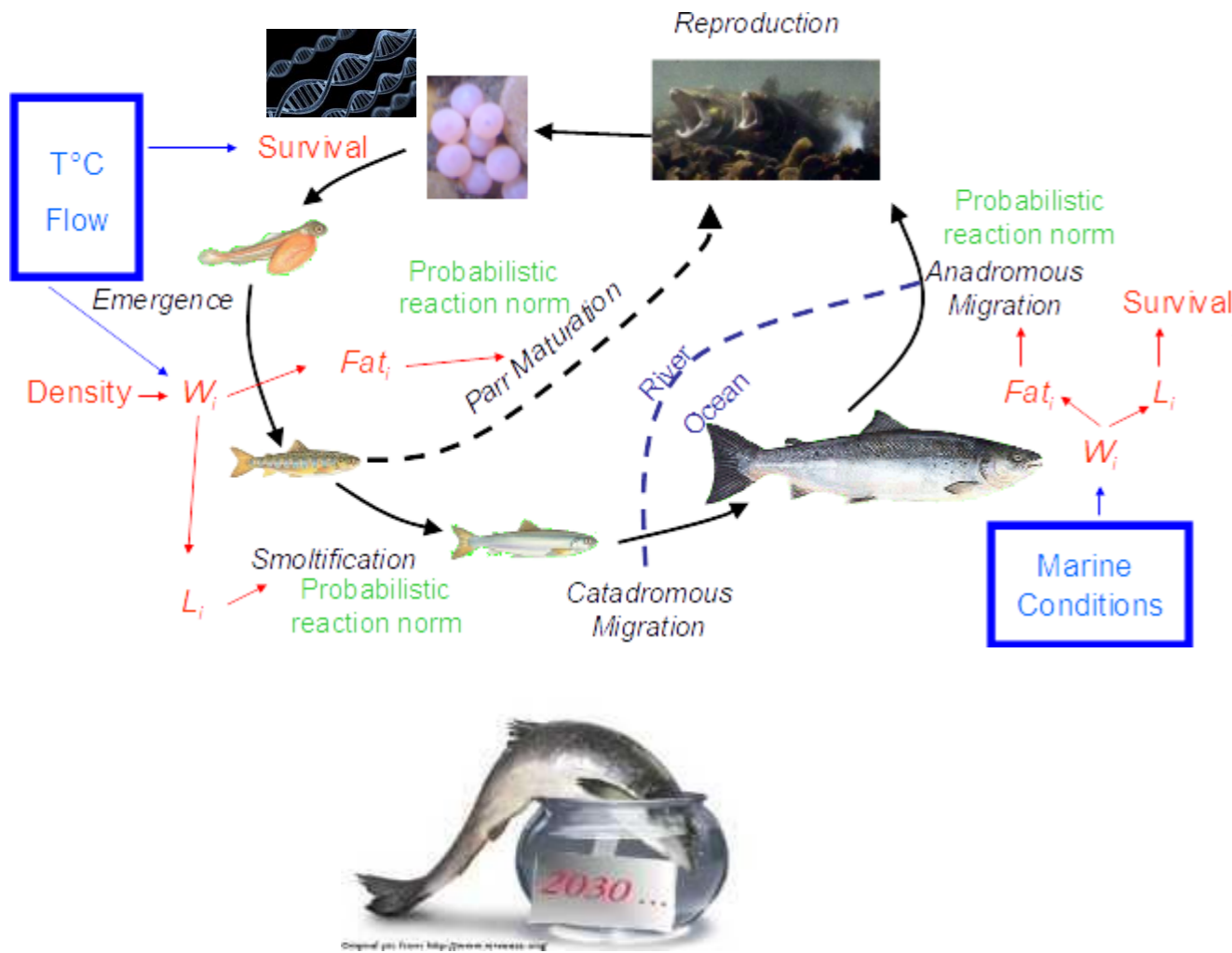




Saumon atlantique

Production de connaissances à partir des modèles

IBASAM



Global Change Biology

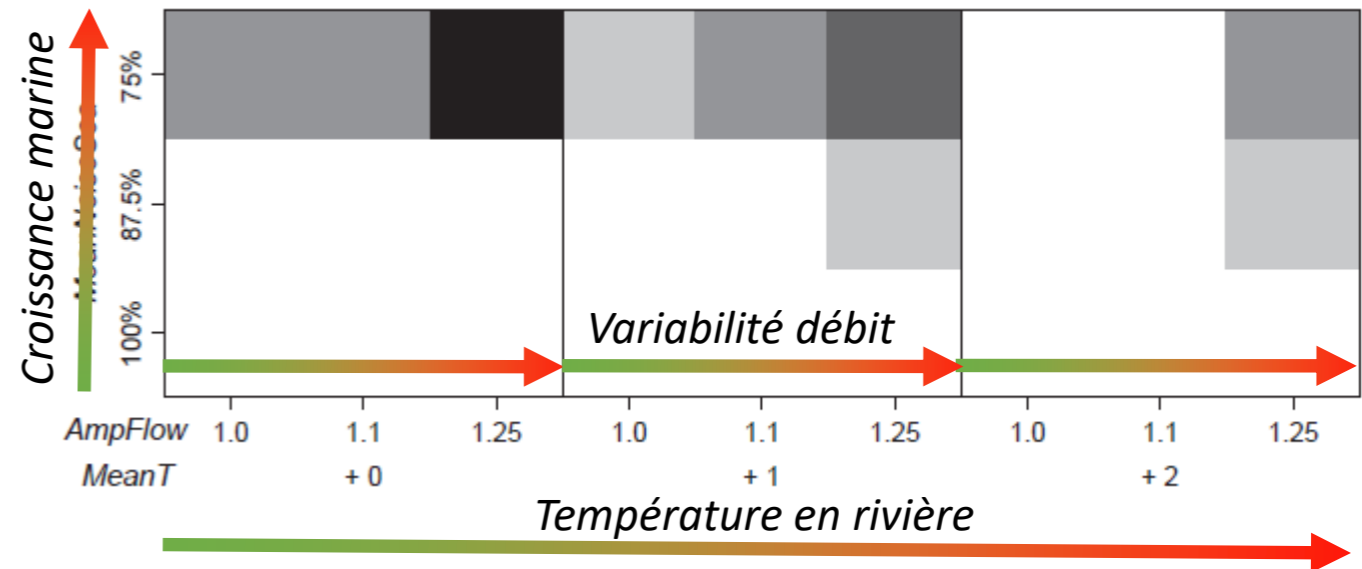
Global Change Biology (2013) 19, 711–723, doi: 10.1111/gcb.12085

Contrasting effects of climate change in continental vs. oceanic environments on population persistence and microevolution of Atlantic salmon

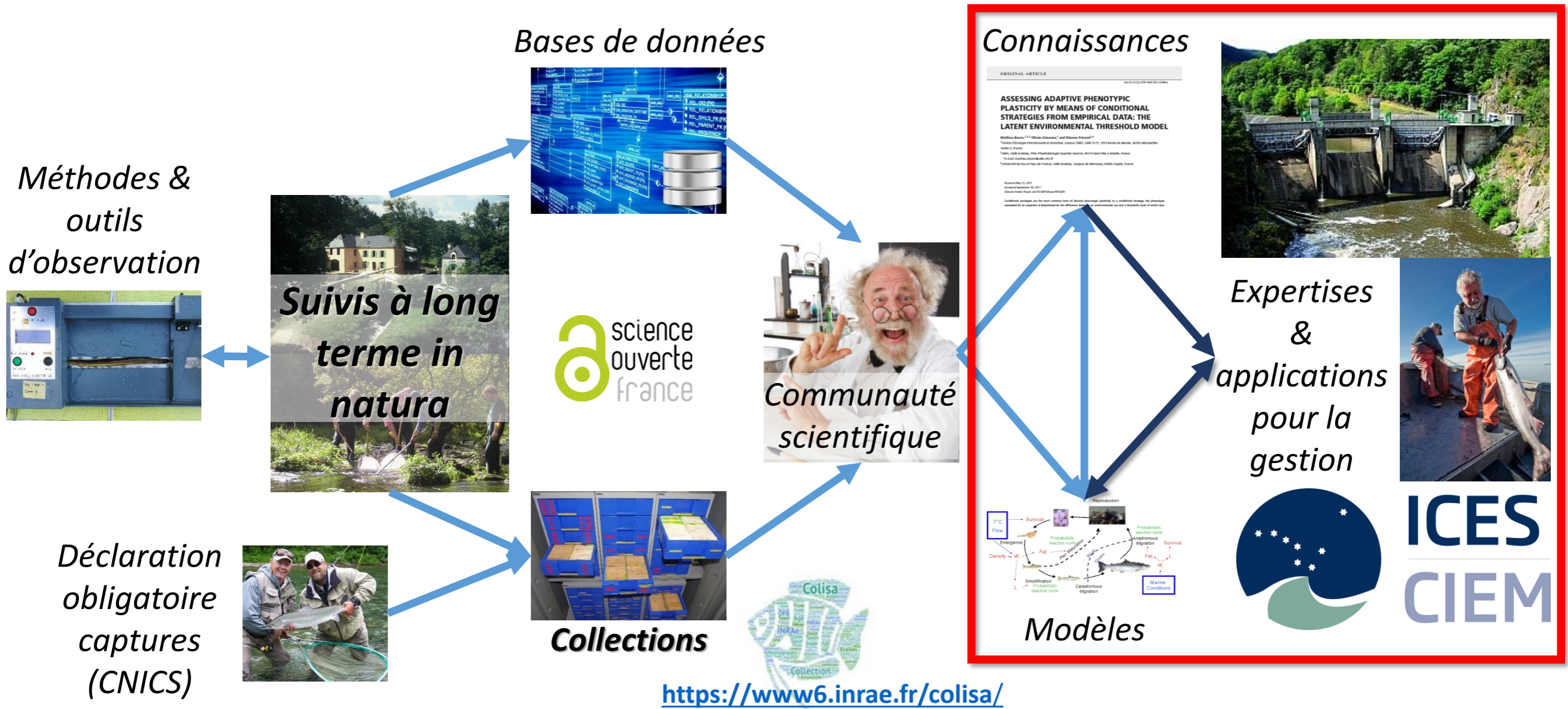
CYRIL PIOU*†‡ and ETIENNE PRÉVOST*†

*INRA, UMR 1224 ECOBIOP, Aquapôle, Quartier Ibaron, Saint-Pée sur Nivelle 64310, France, †Pau and Pays Adour University, UFR Sciences et Techniques Côte Basque, Campus Montaury, Anglet 64600, France, ‡CIRAD, UPR Bioagresseurs analyse et maîtrise du risque, Montpellier F-34398, France

Risque d'extinction à 50 ans



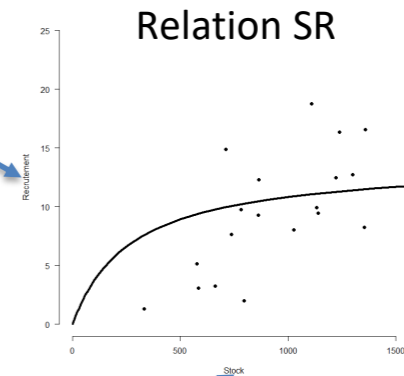
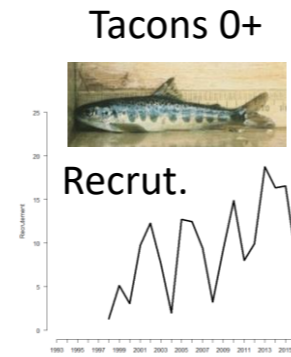
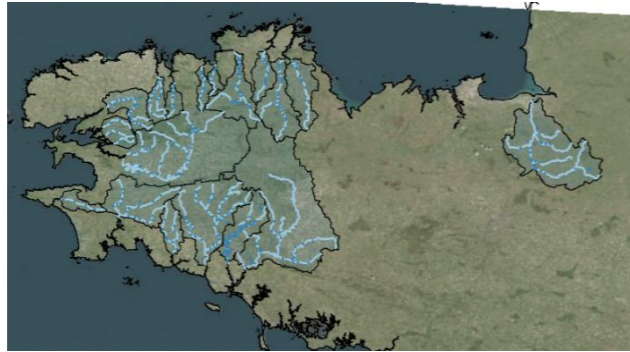
Observatoire & collection : quels utilisations ?





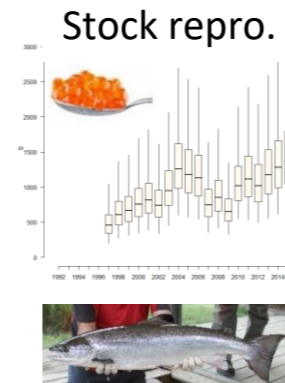
Saumon atlantique

Application pour la gestion : limites de conservation



LC

- LC = référence basse → en dessous : danger
- LC : seuil de stock reproducteur qui évite les faibles recrutements
- Repartir d'une analyse de relation stock-recrutement (SR)





Saumon atlantique

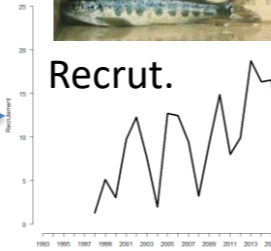
Application pour la gestion : limites de conservation



Tacons 0+

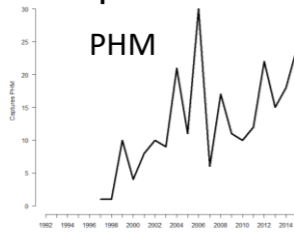


Recrut.

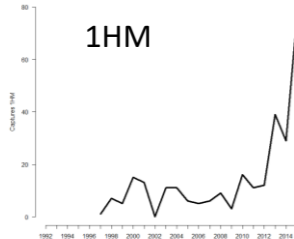


Captures

PHM

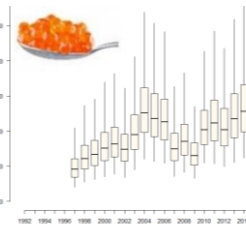


1HM

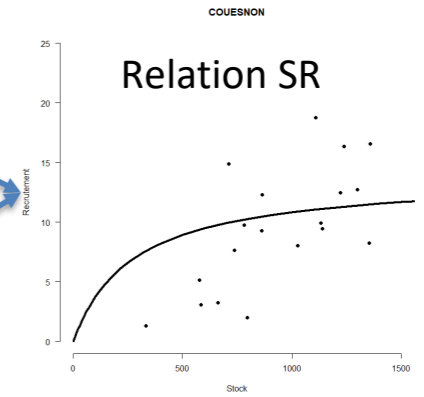


Taux expl.

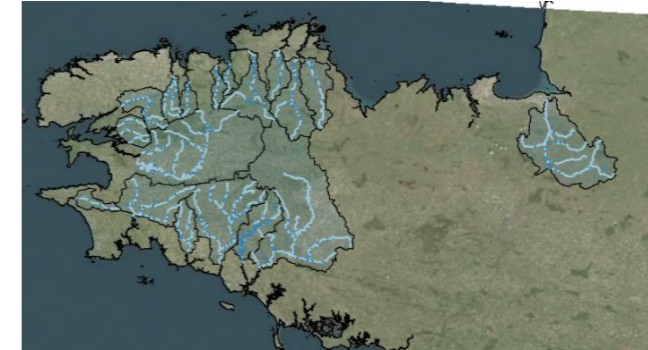
Stock repro.



Relation SR



LC



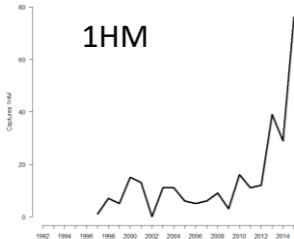
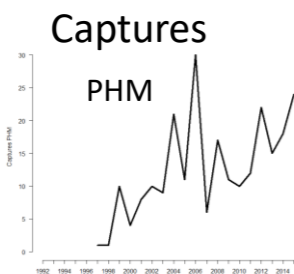


Saumon atlantique

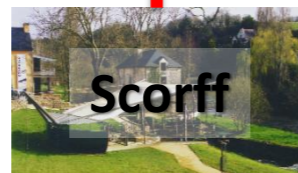
Application pour la gestion : limites de conservation



Tacons 0+



Taux expl.



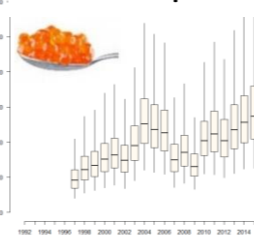
Dénombrements adultes & captures

Relation SR

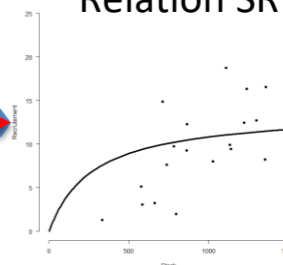


Scorff

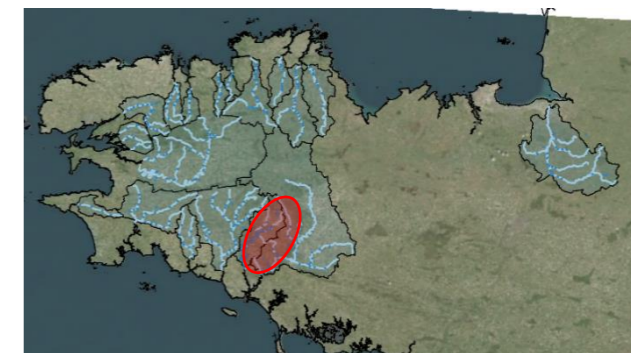
Stock repro.



Relation SR



LC





Saumon atlantique

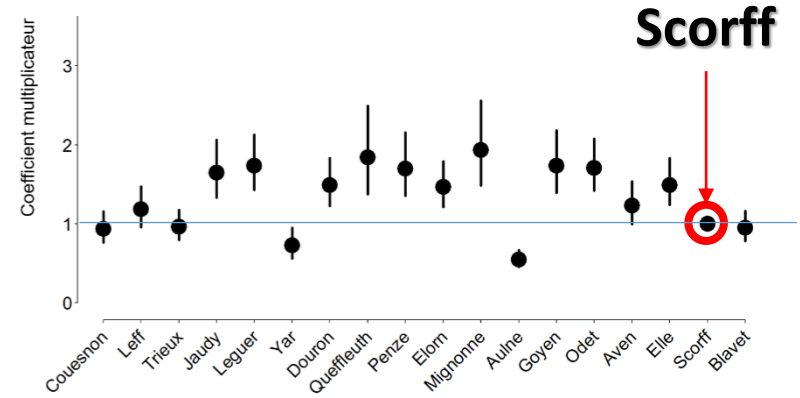
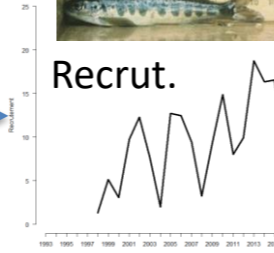
Application pour la gestion : limites de conservation



Tacons 0+

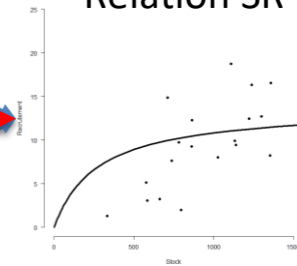


Recrut.



Scorff

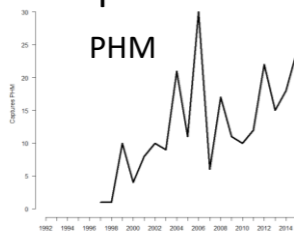
Relation SR



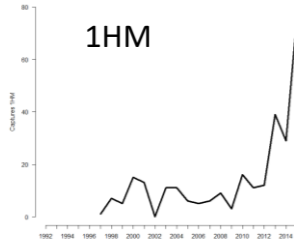
LC



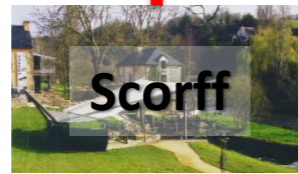
Captures



1HM



Taux expl.



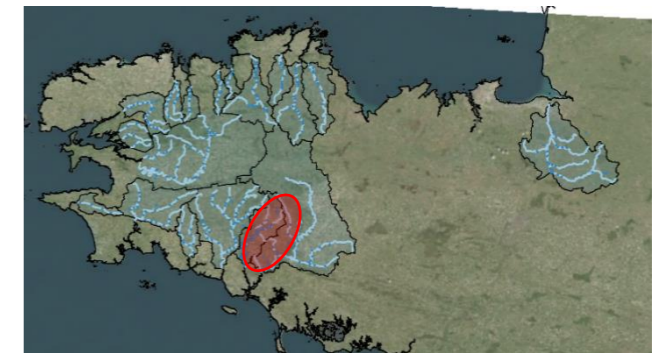
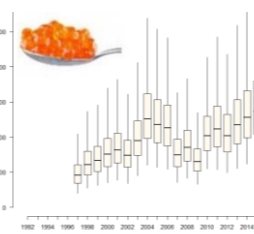
Dénombrements adultes & captures

Relation SR

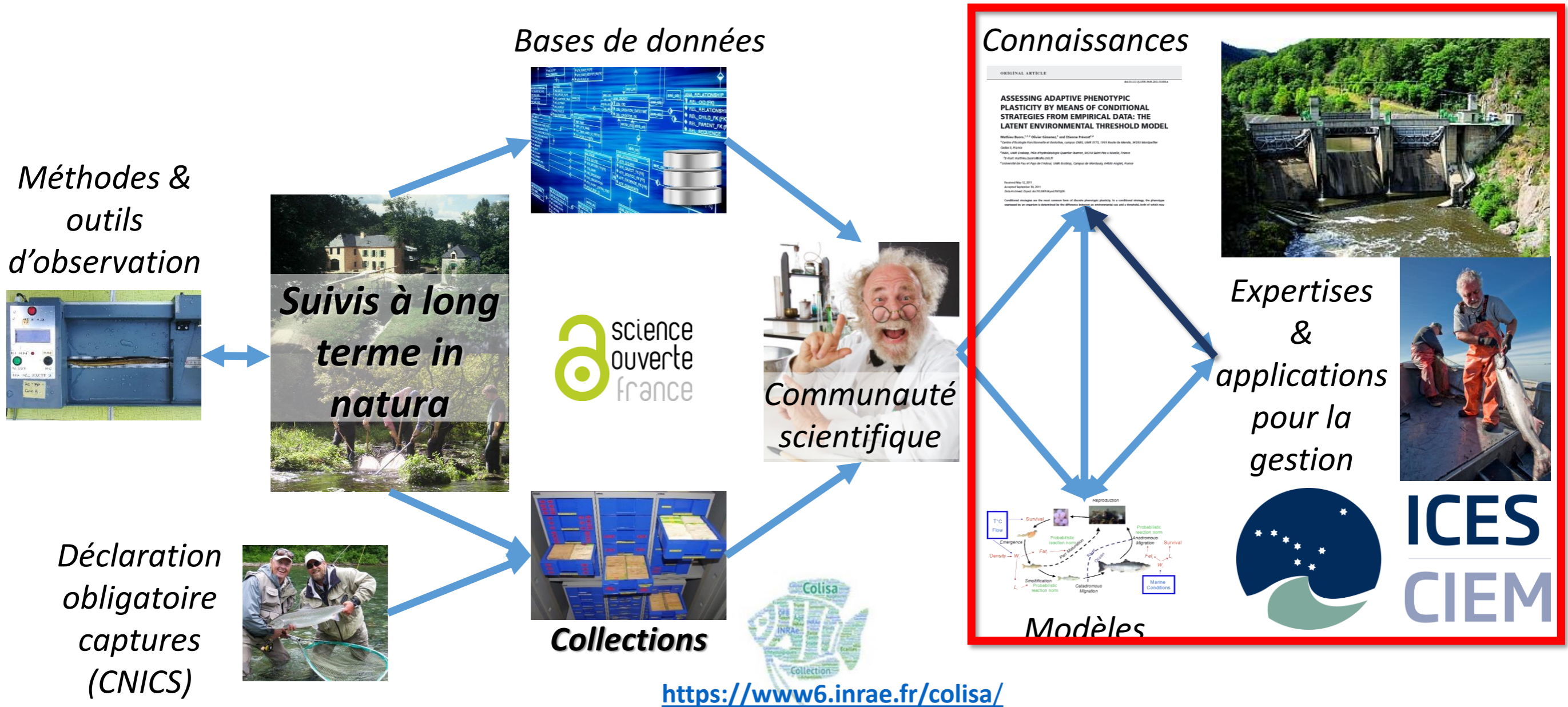


Scorff

Stock repro.

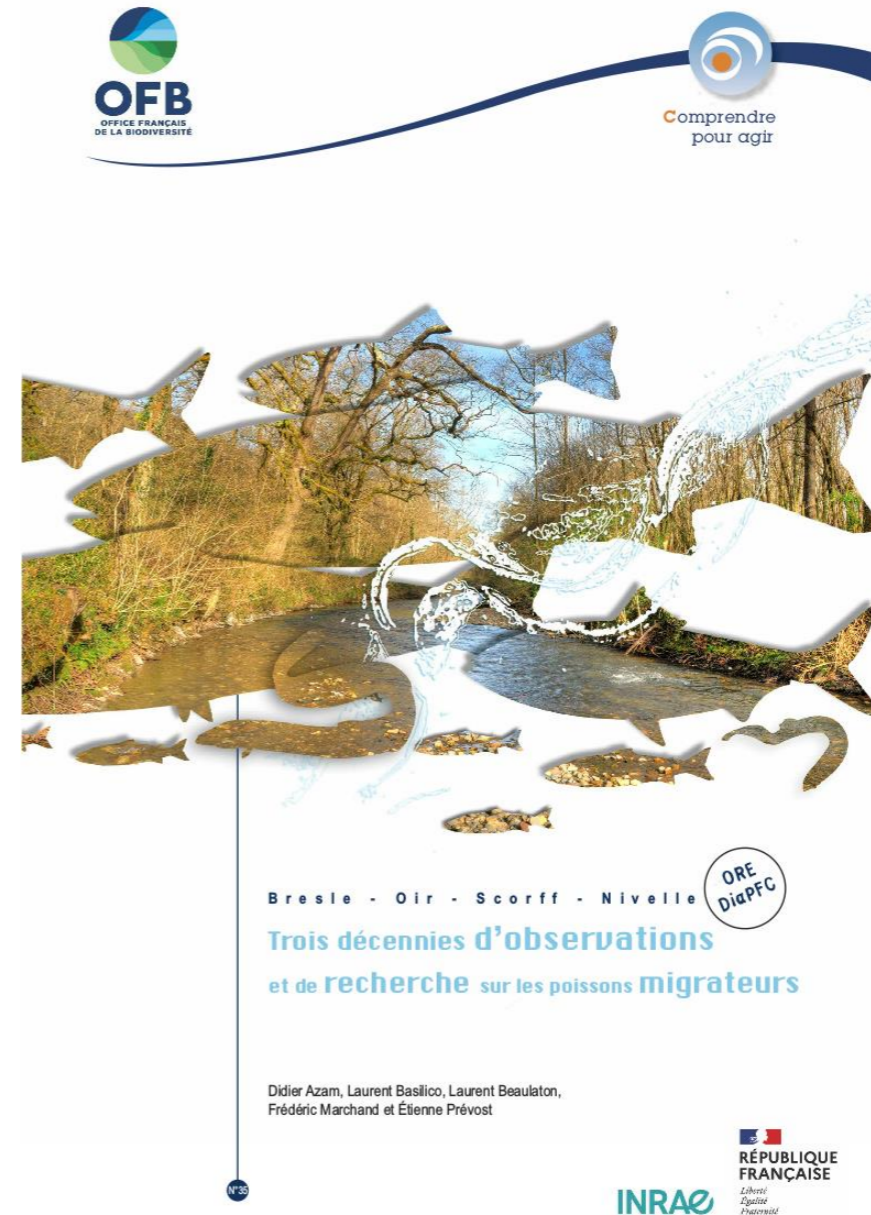


Observatoire & collection : quels utilisations ?



Pour en savoir plus

<https://professionnels.ofb.fr/fr/doc-comprendre-agir/trois-decennies-dobservations-recherche-poissons-migrateurs-bresle-oir-scorff>





Merci de votre attention