

**Présentation :**NOM : **CASTELNAUD** .....Prénom : **Gérard** .....

Date de naissance : 20/12/1951 à Limoux, 11, France .....

Adresse administrative : Cemagref, 50 av. de Verdun 33612 Cestas

Tél : 0557890803

Mèl : gerard.castelnaud@cemagref.fr

Corps : Titulaire Recherche .....

Grade : Ingénieur de Recherche classe 1 .....

**Diplômes :**

-Baccalauréat D, mention Bien, Lycée Lapérouse Albi, 1971.

-Ingénieur des Techniques Agricoles, spécialité Agronomie, ENITA de Bordeaux, 1975.

-DEA Analyse et aménagement de l'espace Université Bordeaux III, mention Très Bien, 1976.

-Doctorat 3<sup>ème</sup> cycle Géographie Université Bordeaux III, mention Très Bien 1978.

**Carrière avant l'entrée au Cemagref :**

01/02/1977 au 31/01/1978: Ingénieur de l'équipe Gironde de la division Aménagements Littoraux et Aquaculture du CTGREF, salarié de la société Aquascop, Montpellier.

**Carrière au Cemagref :**

31/02/1978 au 31/09/1978: Ingénieur de l'équipe Gironde de la division Aménagements Littoraux et Aquaculture du CTGREF, Contractuel catégorie V du ministère de l'Agriculture.

31/09/1978 au 31/12/1979: Coopérant militaire en Algérie.

01/01/1980 au 31/12/1991: Ingénieur Contractuel du Cemagref, Division Aquaculture et Pêche, Equipe Poissons Migrateurs et Pêche Continentale.

01/01/1992 au 31/12/1993: Titulaire Recherche, ingénieur d'Etude, Cemagref, Division Aquaculture et Pêche, Equipe Poissons Migrateurs et Pêche Continentale.

Since 01/01/1994 : Research engineer in biology, Civil servant, Cemagref, Ministry of Education and Research and ministry of Agriculture and fisheries; Research Unit Estuarine ecosystems and migratory amphihalines fish species

**Fonction : Fisheries biologist and socio-économist.**

**Description of my work****1976-1992: Inland fisheries assessment and conservation of migratory fishes****-1976-1978: PhD thesis, Cemagref**

During my thesis, I began my investigations on the lower part of the Garonne basin (Gironde) in a "pristine situation". After a geographical approach of the Gironde and a preliminary socio-economic study, I launched a commercial fishery monitoring based on a network of voluntary fishermen who had to be convinced to furnish reliable data according to personal contacts on the field.

A nuclear power plant was settled and we have been in charge of monitoring its effect on estuarine ecosystem and fishes and on the commercial fishery. Annual reports are produced, of which I have been co-author for the most part.

**1978-1979: Teacher in agronomy, Algérie**

International french army cooperation, Alger University.

**1980-1992: Commercial fisheries assessment and sturgeon**

A monitoring and conservation program of which I was responsible, was developed on the European sturgeon *Acipenser sturio*, an endangered species, with mark-recapture experiments involving teams of fishermen. I was responsible of a PhD thesis on abundance monitoring of sturgeon and others migratory species (defended in 1992) and I was supervising a technician from a Conservation Association of which I was the Secretary. The results have been presented in 1989 in the International Symposium in Bordeaux of which I was member of the scientific committee, and latter in 2011 in a book by Springer.

The fisheries, targeting fishes of high commercial and gastronomic value, had to be evaluated and I piloted a socio-economic study in inter-disciplinarity (biological, historical, sociological, legal approaches); I was responsible of a PhD thesis on fisheries laws (defended in 1988) and participated in the surveys with interviews and made management propositions. This kind of study and expertise was extended at the national level supported by a PhD thesis on geography of which I was responsible (defended in 1993) and we interviewed 300 professional fishermen among 500 in France. A presentation was made in an EIFAC symposium in 1988 and a book on the results was edited by Cemagref n for the Ministry of Environment.

**1993-2011 Fisheries management science, sustainability and conservation of migratory fishes**

**1993-2002: Fisheries monitoring, fisheries data base, European programs on inland fisheries**

A data-base on the Gironde commercial fishery has been developed and progressively improved, with the software PostgreSQL and the data-series for eel *Anguilla anguilla* and shad *Alosa alosa* have been exploited for publications. The collection and analysis of biological and socio-economics indicators have been used to write the French chapter in the FAO-EIFAC Technical paper on Inland fisheries in Europe (Dill, 1993), to advise local and national fishery management services and to implement European project between 2000 and 2002, like Glass Eel Monitoring, Pecosude, Eel Adour Basin. The expertise has been applied in inland fisheries in Marocco in 1995-1996 (lakes and reservoirs) and Tunisia in 2001 (lagoons).

**2003-2008: Fisheries data base (continued), fish abundance monitoring methods, eel management and FAO-CECPI.**

The exploitation of the fisheries data-base has been developed in the frame of a PhD thesis on methodology of fish abundance monitoring with particular application on glass eel and lamprey *Petromyzon marinus* and later on shad *Alosa alosa* and shrimp *Palaemon longirostris*.

The expertise has been used in Romania in 2006 in the frame of a national strategic plan for inland fisheries (EFF, EC).

Eel has been particularly monitored, because of the settlement of the EU eel management plan regulation in 2007 and of the Data Collection regulation from 2000 to 2008. I have participated in the workshops put in place by the French Ministry of Agriculture and Fisheries with contribution to the reports and to different meetings at the European level on the DCR program (2005), on the eel management plan (CSTEP, 2006), on the SLIME project (2006). I have attended the annual meetings of the EIFAC/ICES working group on eel with contribution to the national report. I have also

participate in the Intereg INDICANG project (2004-2007), as chair of the group "glass eel" and I have made a contribution on fishery biology and socio-economy in the Methodological guide Indicang (2008).

My strong and progressive involvement in EIFAC has begun in 2002 as national correspondent, and then as chair of the sub-commission "protection of the aquatic environment".

### **2009-2012**

I am working in two teams: (i) Migratory fishes and (ii) Estuarines ecosystems as a fishery and socio-economist biologist on the research theme "Quality and restoration of aquatic systems" in the research Department "Water" restructured in 2009.

My research program concerns the monitoring and assessment of inland fisheries comprising estuaries, the population dynamics of migratory fishes, their and management in their socio-ecological environment, at the basin scale. It is based on (i) the design and implementation of inland fisheries biology and socio-economics monitoring methods and tools, (ii) production of results and management advices for helping the public decision and the sustainable development of these fisheries.

My objectives are:

- to assess the fisheries pressures and the status (abundance) of migratory fishes populations in estuarine ecosystems;
- to furnish reliable fisheries data to bio-economic and population dynamic models and report cards for fishes;
- to give scientific advices on management and restoration of fishes and to contribute to the management and expertises of fisheries and socio-economics studies, of fishes monitoring at the national and international level ;
- to participate in a multidisciplinary approach of governance of fish management in the socio-ecological systems of river basins and to connect analysis and propositions with human sciences, in particular socio-anthropology and history;
- to develop in Europe, in connection with EIFAAC, an application of the evaluation of inland fisheries sustainability as an indicator of global quality of water bodies in the sense of WFD.

My current references and supports of work are (i) a regular presence on the field with interviews of fishermen (statistical monitoring) and fisheries experiments (with research vessel and fishermen teams); (ii) a capacity to speak and understand the language of fishermen, stakeholders and sociology scientists; (iii) a fishery database with more than 30 years data series registered; (iiii) my involvement in restructuring EIFAC *and monitoring its works*, in improving European inland fisheries statistics in connection with FIES, (iiiiii)the supervision of technicians and students; (iiiiiii) training courses, expertises and selected publications.

### **List of some publications and significant reports**

CASTELNAUD G, BABIN D., 1990. Analysis of the professional fishery in the Loire-Allier and Vilaine bassins. France, Proceeding Symposium EIFAC on Management of Freshwater fisheries, Goteborg, Sweden 31 may-3 june 1988, pp. 151-167.

Rochard E., Castelnaud G., Lepage M., 1990. sturgeons threats and prospects. Journal of Fish Biology (1990) 37 pp. 123-132;

CASTELNAUD G., ROCHARD E., JATTEAU Ph., LEPAGE M., 1991. Données actuelles sur la biologie d'*Acipenser sturio*. Actes Coll. Acipenser Bordeaux, 3-6 oct. 1989, P. Williot (coord.), CEMAGREF Bordeaux, pp 251-275.

Castelnaud G., Babin D., 1992. La pêche professionnelle fluviale et lacustre en France. Coll. Etudes, Cemagref/Min. Environnement, 291 p.;

CASTELNAUD G., GUERAULT D., DESAUNAY Y., ELIE P., 1994. Production et abondance de la civelle en France au début des années 90. Bull. Fr. Pêche Piscic. (1994) 335 : 263-287.

CASTELNAUD G., BABIN D., 1990. Analysis of the professional fishery in the Loire-Allier and Vilaine bassins. France, Proceeding Symposium EIFAC on Management of Freshwater fisheries, Goteborg, Sweden 31 may-3 june 1988, pp. 151-167.

ROCHARD E., CASTELNAUD G., LEPAGE M., 1990. Sturgeons (Pisces : Acipenseridae) ; Threats and prospects. Journal of Fish Biology (1990) 37 (supplement A) pp. 123-132.

CASTELNAUD G., ROCHARD E., JATTEAU Ph., LEPAGE M., 1991. Données actuelles sur la biologie d'*Acipenser sturio*. Actes Coll. Acipenser Bordeaux, 3-6 oct. 1989, P. Williot (coord.), CEMAGREF Bordeaux, pp 251-275.

CASTELNAUD G., GUERAULT D., DESAUNAY Y., ELIE P., 1994. Production et abondance de la civelle en France au début des années 90. Bull. Fr. Pêche Piscic. (1994) 335 : 263-287.

WILLIOT P., ROCHARD E., CASTELNAUD G., ROUAULT T., BRUN R., LEPAGE M., ELIE P., 1997. Biological characteristics of european atlantic sturgeon, *Acipenser sturio* as a basis for a restoration program in France. Environmental Biology of Fishes, 48, 359-370.

Castelnaud G., 2000. effort de pêche et production des espèces amphihalines dans les fleuves français. Bull. Fr. Pêche Piscic. (2000) 357/358, 439-460.;

Castelnaud G, Rochard E., Le Gat Y., 2001. Analyse de la tendance de l'abondance de l'alose *Alosa alosa* en Gironde à partir de l'estimation d'indicateurs halieutiques sur la période 1977-1998. *Bull Fr. Pêche et Piscic(2001)* 362/363 : 989-1015  
 .et al., 2001. tendance de l'abondance d' *Alosa alosa* en Gironde 1977-1998. Bull Fr. Pêche et Piscic(2001) 362/363 : 989-1015.

CASTELNAUD G., CAUVIN G., 2002. Site atelier de la Gironde. Caractéristiques des petites pêches côtières et estuariennes de la côte Atlantique du sud de l'Europe. Rapport final, contrat européen PECOSUDE n°99/024 ED/DG FISH (DGXIV). Cemagref, Groupement de Bordeaux, 58 p.

FEUNTEUN F., CASTELNAUD G., BRIAND C., PROUZET P., MENELLA J.-Y. and DE ROTON G., 2002. Monitoring of glass eel recruitment in France in: Monitoring of glass eel recruitment VOLUME 2B: COUNTRY REPORTS; SOUTHERN PART. European Union, Study contract n°98/076. Edited by Willem Dekker.250p.

CASTELNAUD G., 2002. Caractéristiques de la pêcherie civellière du golfe de Gascogne. Contrat Européen N° 99/023EC/DG FISH (DG XIV). Historique des captures de civelles, intensité actuelle de leur exploitation, variation de leur capturabilité par la pêche professionnelle maritime et indices de colonisation sur la bassin versant de l'Adour. Cemagref, Groupement de Bordeaux, 32 p.

BEAULATON L., CASTELNAUD G., 2005. The efficiency of selective tidal stream transport in glass eels entering the Gironde (France). *Bulletin Français de la Pêche et de la Pisciculture* 378-379: 5-21.

CHANSEAU M., CASTELNAUD G., CARRY L., MARTIN-VANDEMBULCKE D., BELAUD A., 2005. Essai d'évaluation du stock de géniteurs d'alose (*Alosa alosa*) du bassin versant Gironde-Garonne-Dordogne et comparaison de différents indicateurs d'évaluation d'abondance. *Bull. Fr. Pêche Piscic.*, n°374. p.1-19

Castelnaud, G., C. Briand, L. Beaulaton, T. Changeux, P. Prouzet, and M. N. De Casamajor, 2006. Report on the eel stock and fishery in France, 2005, Appendix 3 in FAO European Inland Fisheries Advisory Commission; International Council for the Exploration of the Sea. Report of the 2006 session of the Joint EIFAC/ICES Working Group on Eels. Rome, 23–27 January 2006. EIFAC Occasional Paper. No. 38, ICES CM 2006/ACFM:16. Rome, FAO/Copenhagen, ICES. 2006. p 296-319 (**Annual reports 2002-2011**)

Beaulaton L, Taverny C., Castelnaud G., 2008. Fishing, abundance and life history traits of the anadromous sea lamprey (*Petromyzon marinus*) in Europe. *Fisheries Research* 92 (2008), 90–101.

Castelnaud G., Beaulaton L., 2008. Indicateurs d'abondance et de pression issus des pêcheries. Chapitre 6 in Adam G., Feunteun E., Prouzet P., Rigaud C. (Coord.), L'anguille Européenne, indices d'abondance et de colonisation, Projet Européen Intereg Indicang.. Edition QUAE. pp. 189-220 (Version anglaise : Fisheries abundance and pressure indicators Chapter 6 pp 184-216; version espagnole: Indicadores de abundancia y de presión realizada por las pesquerías pp190-223).

Beaulaton L., Castelnaud G., 2009. Abundance trends of glass eels (*Anguilla anguilla*) between 1978 and 1999 from fisheries data in the Gironde basin, France. in Casselman J. and D. Cairns, editors. *American Fisheries Society Symposium* 58:257–274, 2009.

Girardin M. et Castelnaud G., 2010. Surveillance halieutique de l'estuaire de la Gironde. Suivi des captures 2009 - étude de la faune circulante 2009. Rapport pour EDF CNPE du Blayais, étude n°136, Cemagref groupement de Bordeaux, Cestas, 239 p. (**Annual reports 1980-2011**)

Williot P, Castelnaud G, 2011. Historic overview of the European sturgeon *Acipenser sturio* in France: surveys, regulations, reasons for the decline, conservation, and analysis. In: Williot P, Rochard E, Desse-Berset N, Kirschbaum F, Gessner J (eds) *Biology and conservation of the Atlantic European sturgeon Acipenser sturio* L., 1758. Springer, 285-308.

Castelnaud G., 2011. Sturgeon fishing and landings, caviar production during the XXth century in the Garonne Basin and the coastal sea In: Williot P, Rochard E, Desse-Berset N, Kirschbaum F, Gessner J (eds) *Biology and conservation of the Atlantic European sturgeon Acipenser sturio* L., 1758. Springer, 177-194.

Béguer Castelnaud G., et al. (2011). Estuarine shrimps: witness of changes in their ecosystem. *Ecological Indicators*, (submitted).

Pierrick Haffray, Gérard Castelnaud, et al. 2012 High genetic fragmentation in a highly fecund marine fish, the meagre *Argyrosomus regius* (Sciaenidae, Perciformes): implications for biodiversity preservation, fishery management and aquaculture (submitted).