



**HAL**  
open science

## Individual vs collective in public policy design, a cooperation example in the Marais Poitevin region

Pierre-Yves Hardy, Véronique Souchère, Anne Dray, Maia M. David,  
Rodolphe Sabatier

### ► To cite this version:

Pierre-Yves Hardy, Véronique Souchère, Anne Dray, Maia M. David, Rodolphe Sabatier. Individual vs collective in public policy design, a cooperation example in the Marais Poitevin region. 8. Congress International Environmental Modelling and Software Society, International Environmental Modelling and Software Society (iEMSs). FRA., Jul 2016, Toulouse, France. hal-02743721

**HAL Id: hal-02743721**

**<https://hal.inrae.fr/hal-02743721>**

Submitted on 3 Jun 2020

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



Jul 12th, 9:10 AM - 9:30 AM

# Individual vs collective in public policy design, a cooperation example in the Marais Poitevin region

Pierre-Yves Hardy

UMR SADAPT, INRA, AgroParisTech, Université Paris-Saclay, pierre-yves.hardy@grignon.inra.fr

Véronique Souchère

UMR SADAPT, INRA, AgroParisTech, Université Paris-Saclay, souchere@versailles.inra.fr

Anne Dray

ETH Zurich, ForDev Group, Universitätstrasse, anne.dray@usys.ethz.ch

Maia David

UMR Economie Publlique, AgroParisTech, Université Paris-Saclay, maia.david@agroparistech.fr

Rodolphe Sabatier

UMR SADAPT, INRA, AgroParisTech, Université Paris-Saclay, rodolphe.sabatier@agroparistech.fr

*See next page for additional authors*

Follow this and additional works at: <https://scholarsarchive.byu.edu/iemssconference>

 Part of the [Civil Engineering Commons](#), [Data Storage Systems Commons](#), [Environmental Engineering Commons](#), [Hydraulic Engineering Commons](#), and the [Other Civil and Environmental Engineering Commons](#)

Hardy, Pierre-Yves; Souchère, Véronique; Dray, Anne; David, Maia; Sabatier, Rodolphe; and Kernéis, Eric, "Individual vs collective in public policy design, a cooperation example in the Marais Poitevin region" (2016). *International Congress on Environmental Modelling and Software*. 92.

<https://scholarsarchive.byu.edu/iemssconference/2016/Stream-D/92>

This Event is brought to you for free and open access by the Civil and Environmental Engineering at BYU ScholarsArchive. It has been accepted for inclusion in International Congress on Environmental Modelling and Software by an authorized administrator of BYU ScholarsArchive. For more information, please contact [scholarsarchive@byu.edu](mailto:scholarsarchive@byu.edu), [ellen\\_amatangelo@byu.edu](mailto:ellen_amatangelo@byu.edu).

---

**Presenter/Author Information**

Pierre-Yves Hardy, Véronique Souchère, Anne Dray, Maia David, Rodolphe Sabatier, and Eric Kernéis

# Individual vs collective in public policy design, a cooperation example in the Marais Poitevin region

**Pierre-Yves Hardy<sup>1</sup>, Véronique Souchère<sup>1</sup>, Anne Dray<sup>2</sup>, Maia David<sup>3</sup>, Rodolphe Sabatier<sup>1</sup> and Eric Kernéis<sup>4</sup>**

<sup>1</sup> UMR SADAPT, INRA, AgroParisTech, Université Paris-Saclay, 78850, Thiverval Grignon, France ([pierre-yves.hardy@grignon.inra.fr](mailto:pierre-yves.hardy@grignon.inra.fr), [souchere@versailles.inra.fr](mailto:souchere@versailles.inra.fr), [rodolphe.sabatier@agroparistech.fr](mailto:rodolphe.sabatier@agroparistech.fr))

<sup>2</sup> ETH Zurich, ForDev Group, Universitätstrasse 16, 8092 Zurich, Switzerland ([anne.dray@usys.ethz.ch](mailto:anne.dray@usys.ethz.ch))

<sup>3</sup> UMR Economie Publique, AgroParisTech, Université Paris-Saclay, 78850, Thiverval Grignon, France ([maia.david@agroparistech.fr](mailto:maia.david@agroparistech.fr))

<sup>4</sup> INRA, UE 0057 DSLP Domaine expérimental de Saint-Laurent-de-la-Prée. Centre de recherche de Poitou Charentes, Saint-Laurent-De-La-Prée, France ([eric.kerneis@stlaurent.lusignan.inra.fr](mailto:eric.kerneis@stlaurent.lusignan.inra.fr))

**Abstract:** The conciliation between different issues such as production activities, biodiversity conservation and water management remains unsolved in many places in the world. As a striking example, the wet grasslands of the Marais Poitevin region (France) present many obstacles against the integration of previous issues, especially in terms of public policy design. The socio-cultural situation in this region shows a high degree of political resistance and questions the relevancy of the current Agri-Environmental Schemes (AES) as an incentive for livestock farmers to adopt biodiversity friendly practices favoring the birds' richness of the area. Yet, the current AES based on financial support has been interpreted as a production support and has still not fulfilled its goal of agro-ecology development. The reasons of the poor effect of public policy are studied using a two-fold approach based on ethnographic field and a computer-assisted role-playing game. The game combines an agent-based model and a tabletop artifact. The game is based on two sessions involving different AES to be tested. The model simulates the grass regeneration and flows of water through a canal system and a surrounding network of plots with culture (wheat, corn, sunflower, alfalfa), pasture and mowing. The game is played by 9 players who embody their role in real life, i.e. water managers, biodiversity managers and 7 farmers. The behaviors of the players during the sessions have been observed and analyzed through a microeconomic conceptualization. A comparison is proposed between the first session where the current AES were tested and the second session where collective public policy instruments were tested. Such comparison identifies individual and collective level on an economic perspective and brings new concerns for public policy design. It also highlights the topic of integrated environmental management and questions the relevancy of participatory approaches and contradiction/dilemmas resolutions in environmental development.

**Keywords:** public policy, biodiversity, wetland, collective arrangements, companion modelling