

# Aspects des mécanismes de répartition de l'eau relevant de la justice sociale

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## Enjeu

L'eau est rare dans le sud de l'Alberta, et pourrait le devenir encore plus selon les prévisions relatives aux changements climatiques. Il existe une pression croissante pour laisser plus d'eau dans les cours d'eau à des fins environnementales, ce qui aura pour effet d'accroître la rareté de l'eau pour les utilisateurs de l'industrie extractive. Il est également urgent de trouver des mécanismes d'attribution et de réattribution de l'eau entre utilisations concurrentes, à savoir l'environnement et l'industrie extractive. L'atteinte de ces objectifs au sein des collectivités actuelles tributaires de l'eau ne se fera pas sans diverses répercussions socioéconomiques. L'ampleur des répercussions dépendra des choix politiques, de l'acceptabilité de ces politiques pour les intervenants, des réactions à ces politiques des utilisateurs de l'eau et de la capacité des utilisateurs actuels à se satisfaire d'une moins grande quantité d'eau. Le projet étudie ces questions.

## Projet

Les objectifs de cette recherche consistent à :

- i) élaborer d'éventuelles politiques pouvant servir à répartir l'eau disponible et à la réaffecter entre les utilisations actuelles et nouvelles, afin de mieux refléter les valeurs changeantes de la société à l'égard de l'eau;
- ii) estimer les répercussions des stratégies de remplacement en matière d'attribution sur la fiabilité de l'approvisionnement en eau des utilisateurs actuels;
- iii) évaluer l'acceptabilité de telles politiques auprès de la population générale et des intervenants clés;
- iv) évaluer les éventuelles réactions à ces politiques des organisations d'utilisateurs de l'eau actuels;
- v) évaluer les éventuelles répercussions socioéconomiques de ces réactions.

Cette recherche fournira d'importants renseignements sur les interactions existant entre eau, société et économie canadienne.

## Produits

À ce jour, cette recherche a donné lieu aux publications savantes et rapports de l'utilisateur suivants (publications choisies) :

Livres et volumes édités

- Bjornlund, Zuo, Wheeler and Xu (2014) Exploring the Reluctance to Embrace Water Markets in Alberta, Canada In Easter and Qiuqiong (eds) Water Markets for the 21st Century: What we have learned, Springer, 215-237.
- Bjornlund, H. and Wheeler, S. (2014): Exploring some of the socio-economic realities of sustainable water management in irrigation. Special Issue of Agricultural Water management, Vol. 145
- Brebbia, C. and Bjornlund, H. Eds. (2014): Sustainable Irrigation and Drainage V. WITPress, Southampton, UK

#### Chapitres de livres

- Bjornlund, H. and Bjornlund, V. (2014) Changing societal values: Implications for water management and social opportunities. In Linton, J. and Davidson, S. Eds. Water as a social opportunity. Queen's Policy Studies Series by McGill-Queen's University Press.
- Bjornlund, H. and Klein, K.K. (2014): Water Conservation and trading – policy challenges in Alberta Canada. Paper submitted for inclusion Burnett, K.; Howitt, R. and Roumasset, J. Eds. Handbook of Water Economics and Institutions. Routledge, 379-94
- Bjornlund, H.; Zuo, A., Wheeler, S. and Xu, W. (2014): Exploring the Reluctance to Embrace Water Markets in Alberta, Canada. In Easter, B and Huang, Q. Eds. Water Markets for the 21st Century: What we have learned. Springer, 215-237.
- Bjornlund, H. (2014): Water Governance for Sustainable Irrigation: The role of Civil Society. In Brebbia, C and Bjornlund, H. Eds. Sustainable Irrigation, WITPress, Southampton, UK
- Bjornlund, H. (2014): Water Governance for Sustainable Irrigation: The role of Civil Society. In Brebbia, C and Bjornlund, H. Eds. Sustainable Irrigation, WITPress, Southampton, UK. This chapter builds on the water governance work done in Alberta and Australia
- Bjornlund, H.; Zhao, X.; and Xu, W. (2013): Generational differences in policy preferences for water sharing – implications for the future. In Brebbia, C. Water and Society II, WITPress, Southampton, UK, 307-320. This chapter builds on extensive surveys carried out both under this and a previous project and look at how policy preferences for water sharing are likely to change in the future.

#### Articles de revues

- Bjornlund, H.; Zhao, X.; and Xu, W. (2014): Variation in the perspective on sharing water - irrigators, their communities and the wider society. International Journal of Water Governance 2(1) DOI: 10.7564/13-IJWG29
- Bjornlund, H.; Xu, W. and Wheeler, S (2014): An overview of water sharing and participation issues for irrigators and their communities in Alberta: Implications for water policy. In Bjornlund, H. and Wheeler, W. Eds. Exploring some of the socio-economic realities of sustainable water management in irrigation, Special issue of Agricultural Water Management 145(November), 171-80(ERA A)
- Bjornlund, V. and Bjornlund, H. (2013): Economic Incentives: Successful in expansion, will it also be successful in contraction. International Journal of Sustainable Development and Planning 8(3), 422-439.

- Bjornlund, H., Zuo, A., Wheeler, S., Xu, W. and Edwards, J. (2013): Policy preferences for water sharing in Alberta, Canada. *Water Resources and Economics*, 1(10), 93-110
- Bjornlund, Zhao, and Xu (2014). Variation in the perspective on sharing water - irrigators, their communities and the wider society. *International Journal of Water Governance* 2:19-42. This paper discusses variations in people's perspective on water sharing and indicates the policy implications for Alberta water reallocation
- Bjornlund, Xu and Wheeler (2014). An overview of water sharing and participation issues for irrigators and their communities in Alberta: Implications for water policy. *Agricultural Water Management*, 145 (2014) 171–180. This paper provides important research context within which the project is situated
- Bjornlund, H. Zuo, A. Wheeler, S. Xu, Wei and Edwards, J. (2013) Policy preferences for water sharing in Alberta, Canada. *Water Resources and Economics* 1:93 – 110. This paper focuses on public's view towards water sharing and policy options in Alberta.

#### Autres documents sollicités

- Bjornlund, H. (2014): Policy options and preferences for water sharing. Invited paper presented at the 2014 Sustainable Irrigation Conference, Poznan, Poland

#### Autres documents

- Zhang, Wencui, K. K. Klein and Henning Bjornlund (2014): Importance of including values and attitudes in analyses of water policy reforms. Presented at San Francisco International Business and Education Conference, San Francisco, August
- Xu, W.; Khoshroo, N. and Bjornlund, H. (2014): Evaluating alternative water allocation policies among competing users in the Bow River Basin, Alberta, Canada. Paper presented at the 11th International Conference on Hydroinformatics, New York, September
- Emami, P., Xu, W. and Bjornlund, H. (2014): Evaluating procedural justice in Alberta regional plan: with focus on the Lower Athabasca Regional Plan and the South Saskatchewan Regional Plan. Paper presented at the annual conference of the Canadian Water Resources Association, Ontario, June
- Xu, W., Montgomery, J. and Bjornlund, H. (2014): Alberta's water resource governance: an evaluation. Paper presented at the annual conference of the Canadian Water Resources Association, Ontario, June
- Emami, P., Xu, W., and Bjornlund, H. (2014): Procedural Justice in the Alberta Regional Plan. Paper presented at the annual conference of the Canadian Association of Geography, May
- Xu, W. and Bjornlund, H. (2014): Water resource governance: theory and practice. Paper presented at the annual conference of the American Geographers Association, Florida, April
- Bjornlund, H., Xu, Wei; Zhao, X. (2013): Same Region, different Policy Preferences, CWRA annual conference in Saskatoon, may
- Montgomery, Xu, and Bjornlund (2013) A tale of good governance: using stakeholder perceptions to evaluate water governance in the South Saskatchewan River Basin, Alberta. Presented 2013 CMOS-CGU-CWRA Annual Meeting, Saskatoon, Saskatchewan, May 26-29, 2013

## Mémoires de maîtrise

- Irrigators' Perception and Intention towards Water Re-allocation Policies in Southern Alberta MA Thesis: 'Irrigators' Perception and Intention towards Water Re-allocation Policies in Southern Alberta'. This thesis explores farmers' perceptions and intention toward water re-allocation. It provides important new insight into how irrigators perceive water trading and what determines their actual and intended trading behaviour. One journal article is in preparation.
- This MA thesis explores stakeholders perspective on procedural justice in the regional planning processes in Alberta with the two first regions to engage in the process

Cette recherche a en outre été diffusée dans le cadre de plusieurs présentations, discours et allocutions plénières (présentations choisies) :

- Bjornlund, H. (2014): Water Governance and Civil Society. Paper presented as part of the plenary panel on 'Adaptability of Water Governance at Different Levels and Regional Context' at the third Istanbul Water Forum
- Bjornlund, H. (2014): Water Governance for Sustainable Irrigation: The role of Civil Society. Opening key note address at the 2014 Sustainable Irrigation Conference, Poznan, Poland
- Bjornlund, H. (2013): Policy options and preferences for water sharing – challenges and opportunities. Invited plenary address to the International Symposium of Ecology and Water Security, Wuhan and Yichan, October.
- Wang, J., Bjornlund, H., Klein, K.K., Zhang, L. and Zhang, W. (2014): New Irrigation Technologies – The process of adoption and what influences it in Alberta, Canada. Paper Presented at the joint conference of IWREC and the World Bank, Washington DC, September
- Bjornlund, H., Zuo, A., Wheeler, S. and de Loë, R. (2013): Water Reallocation Policies – The Importance of Rural and Urban Differences in Alberta, Canada. World Academy of Science, Engineering and Technology. Issue 76, 871-880.
- Bjornlund, H., Xu, Wei; Zhao, X. (2013): Same Region, different Policy Preferences, CWRA annual conference in Saskatoon, may
- Bjornlund, H. (2014): Water Governance and Civil Society. Paper presented as part of the plenary panel on 'Adaptability of Water Governance at Different Levels and Regional Context' at the third Istanbul Water Forum
- Emami, Xu, and Bjornlund (2014): Procedural Justice in the Alberta Regional Plan. Paper presented at the annual conference of the Canadian Association of Geography, May
- Montgomery, Xu, and Bjornlund (2013) A tale of good governance: using stakeholder perceptions to evaluate water governance in the South Saskatchewan River Basin, Alberta. Presented 2013 CMOS-CGU-CWRA Annual Meeting, Saskatoon, Saskatchewan, May 26-29, 2013.
- Parastoo, Xu and Bjornlund (2014) Evaluating Procedural Justice in Alberta Regional Plan: With Focus on the Lower Athabasca Regional Plan and the South Saskatchewan Regional Plan. CWRA 2014 Canada Water Resources Congress. Hamilton, Ontario, June 2-4.

- Xu, Khoshroo, and Bjornlund (2014) Evaluating alternative water allocation policies among competing users in Bow River Basin, Alberta, Canada. HIC 2014 – 11th International Conference on Hydroinformatics, New York, August 17 – 21, 2014.
- Xu, Montgomery and Bjornlund (2014) Alberta's water resource governance: an evaluation. CWRA 2014 Canada Water Resources Congress. Hamilton, Ontario, June 2-4.
- Zhang, W., Bjornlund, H. and Klein, K. (2013): Values and Attitudes of the farm family in the context of water policy reform: An empirical study in Alberta, Canada. Poster presentation at the Conference of Natural Resources and Development held in Vina del Mar, Chile, November

## Résultats

Les résultats comprennent notamment :

- Des relations renforcées avec les chercheurs. Les chercheurs et des étudiants des cycles supérieurs ont participé à de nombreuses conférences, réunions et ateliers professionnels et universitaires ayant permis d'approfondir les relations avec d'autres chercheurs.
- Des relations renforcées entre les partenaires. Un étudiant diplômé travaille pour Alberta Environnement et un doctorant travaille auprès du consortium de la rivière Bow.
- Des relations renforcées entre les utilisateurs finaux. Nos étudiants diplômés ont réalisé des entrevues, dirigé des groupes de discussion et participé à des conférences et à des ateliers au sein de l'industrie qui leur ont permis de collaborer étroitement avec des partenaires et des utilisateurs finaux.
- Des connaissances accrues. Des publications dans des revues spécialisées et des présentations de haute qualité d'un vaste éventail de documents dans le cadre de conférences et de réunions provinciales, nationales et internationales.
- Des possibilités accrues de recherche à venir. Cette année, nous avons formé trois étudiants à la maîtrise et un au doctorat. Nous avons ainsi créé de nouvelles capacités de recherche et relevé plusieurs autres domaines de recherche que nous approfondirons au cours des cycles de financement à venir.

## Équipe de recherche et partenaires :

### Équipe de recherche :

Henning Bjornlund, Ph. D., professeur, Université de Lethbridge  
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