

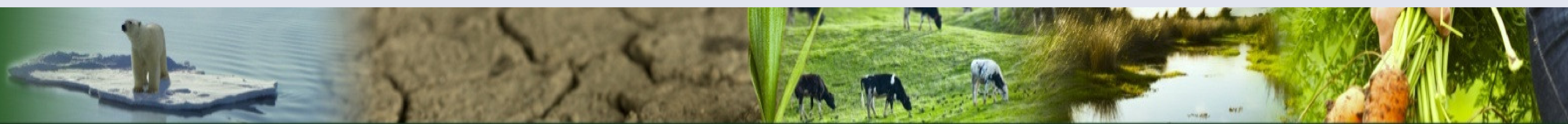
SOCIAL NORMS AND VALUES IN AGRICULTURAL WATER QUALITY MANAGEMENT

Julia Baird, Ken Belcher and Mike Quinn
School of Environment and Sustainability
University of Saskatchewan

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Social norms and values in agricultural water quality management

Julia Baird¹, Ken Belcher¹ and Mike Quinn²

¹ School of Environment and Sustainability, University of Saskatchewan; ²Faculty of Environmental Design, University of Calgary
Corresponding author: Julia Baird (julia.baird@usask.ca)

Rationale

- Agricultural landowners' practices must conform to society's standards related to acceptable environmental practices
- Social norms and values related to agricultural practices and the environment, and water quality in particular, change over time
- The successful implementation of a new policy instrument depends, in significant part, on its fit within the current social value system

Objectives

- To evaluate the social acceptability of the principles of performance-based instruments by:
- Assessing the perceived rights and responsibilities of agricultural landowners
 - Understanding the economic, ecological social priorities of the residents of the area under study

What are performance-based policy instruments?

Tools used to implement policies that focus on achieving a specific water quality outcome, rather than practice-based instruments (for example, cost-sharing) that focus on inputs

Alberta study sites

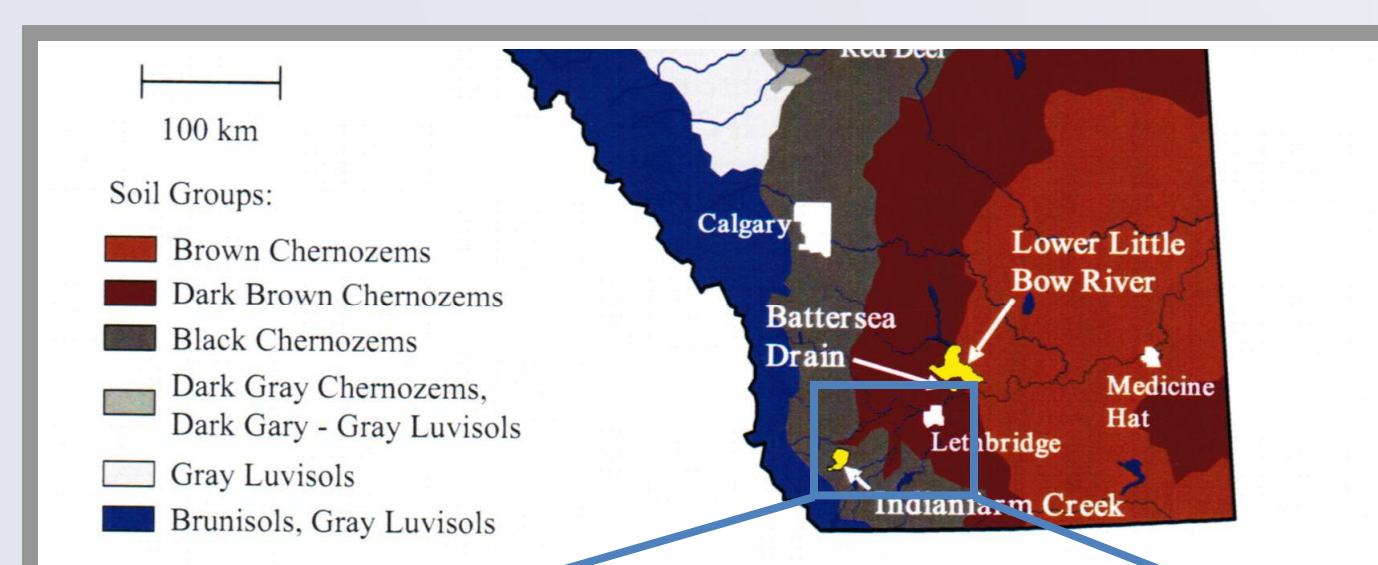


Figure 1. Map courtesy of Alberta Agriculture and Rural Development



Rural and urban survey sites

Methods

- Interviews performed in Whelp Creek, Battersea Drain and Indianfarm Creek watersheds (Figure 1)
- Surveys sent by mail to six communities, rural and urban, along the Oldman River in southern Alberta (Figure 1)
- Questions asked respondents to rate statements based on degree of agreement or disagreement
- Assessed attitudes and values toward water and agricultural practices, rights, and responsibilities

Results

'Proper' management

- Agricultural producers are generally considered to be good stewards
- There is a standard of care that should be adhered to by all agricultural producers (Figure 2)
 - Beyond this standard of care, producers should be compensated for environmental improvements
 - Those that do not achieve the standard of care should be penalized

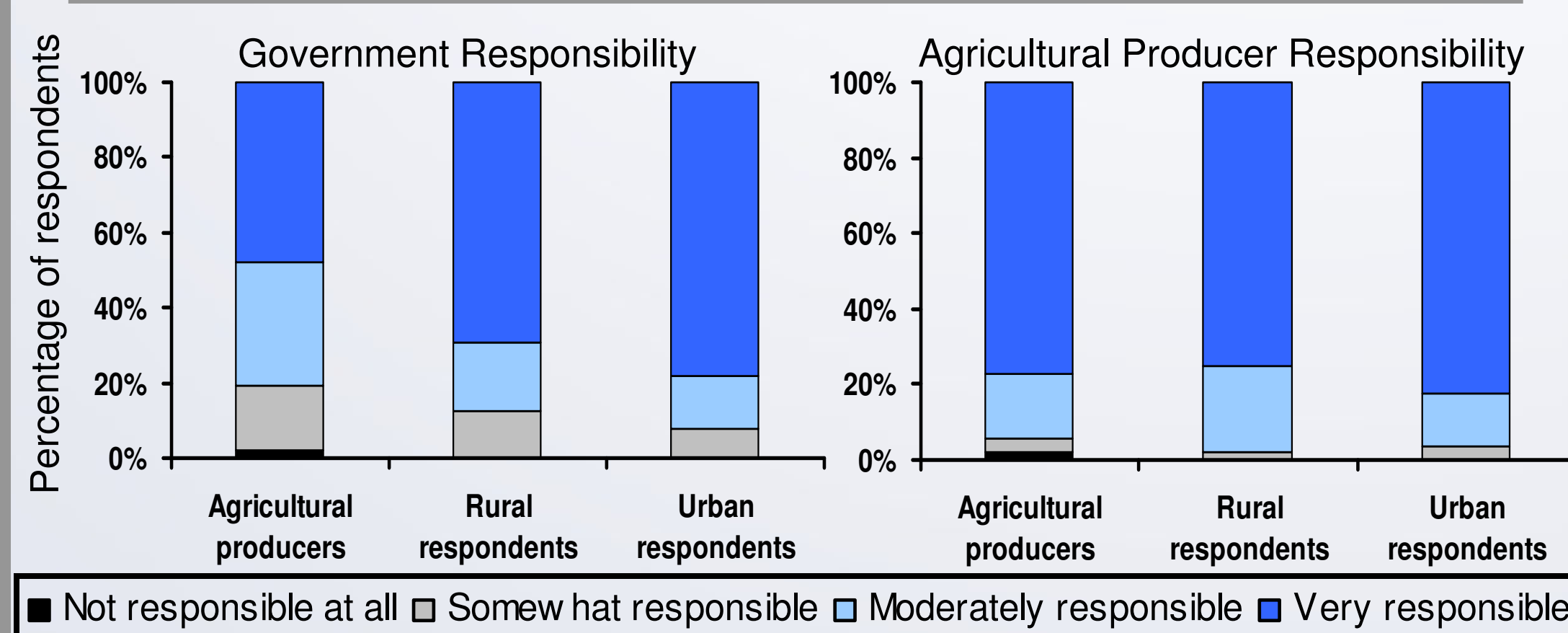
Figure 2. Phrases used to describe the standard of care expected from agricultural producers by respondents. The larger the font, the more frequently the phrase was expressed by respondents.

Conclusions

Based on the responses, performance-based policy instruments could be implemented in southern Alberta

- Most respondents expect governments to be involved in delivering programs that manage water quality. The type of government involvement (regulatory or not) considered acceptable varied by respondent group
- The policy instrument should take into account respondents' priorities: social and environmental concerns were most prevalent; however, many also felt that agri-economic concerns, such as financial support for producers, are also important
- To be compatible with the social values of respondents, the policy instrument should operate as a minimum standard coupled with payments for incremental improvements to water quality achieved above that standard ('proper' management)

Who is responsible for agricultural water quality?



- Most respondents agreed that agricultural producers have carry a lot of responsibility for water quality on their land
- Agricultural producers were more hesitant to give governments responsibility for water quality than other groups of respondents; responsibility was often equated with increased regulation:
 - "The government today is not to be trusted to do anything with a problem this large" (S5)
 - "We should not have to have a bunch of rules and regulations telling us how to manage and operate our business or farms" (L154)
 - "Keep the government out of it" (M225)

Results

Public priorities

Using Principal Components Analysis (PCA), respondents' priorities can be described by two groups:

- Agri-economic priorities:** value economic priorities such as financial incentives to agricultural producers and social priorities that ensure strong property rights for agricultural landowners
- Socio-environmental priorities:** value social and environmental priorities that ensure good water quality for the future

The largest group of respondents felt strongly about both priority groups, as shown by the cluster of responses near the intersection of priority groups in Figure 3

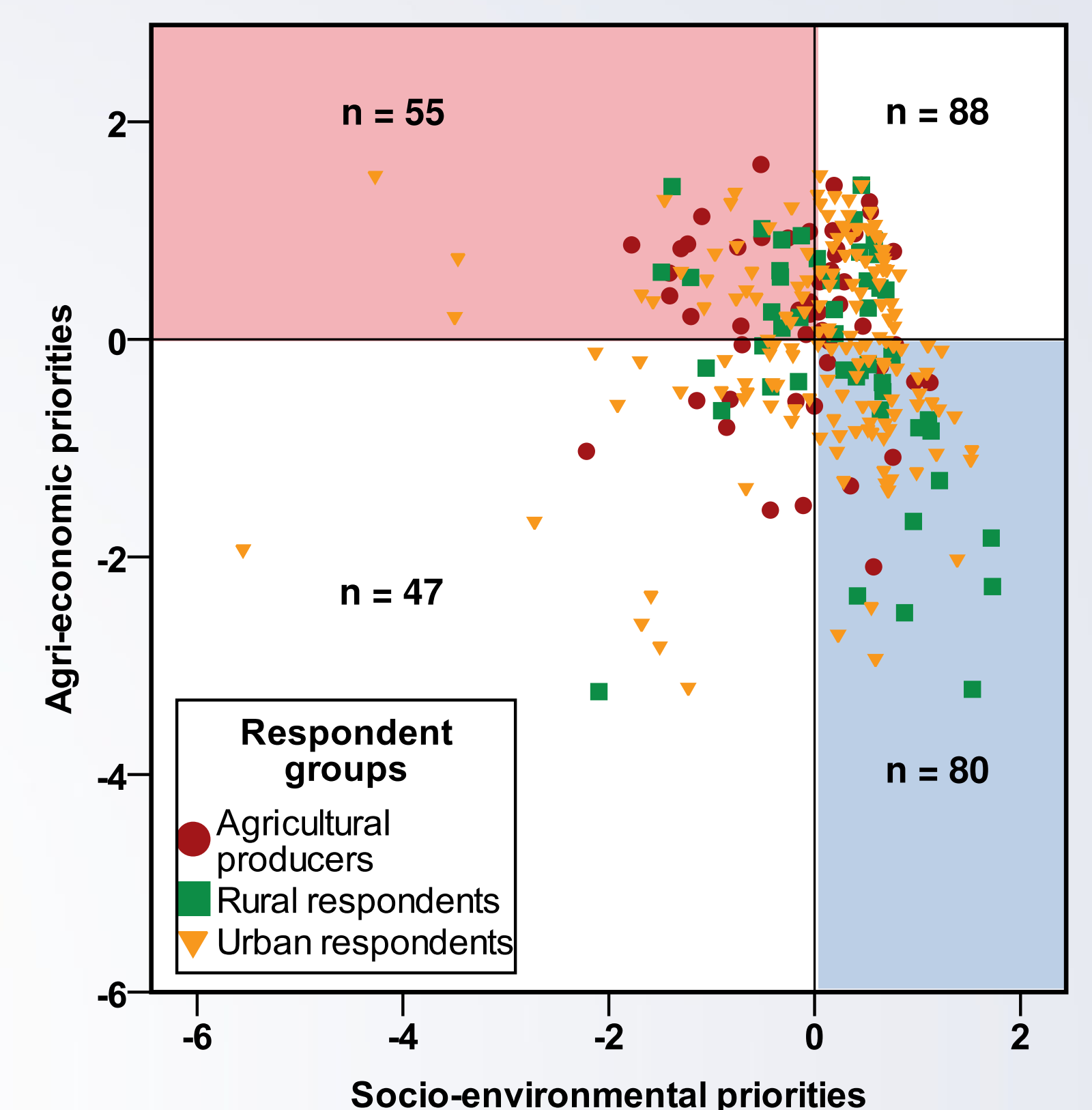


Figure 3. Coefficients calculated using PCA for each respondent's priorities for agri-environmental programs. Respondents that fall within the **blue section** of the figure are more interested in social and environmental outcomes from programs; respondents that fall within the **red section** are more interested in economic incentives and maintaining strong agricultural property rights. Respondents that fall within the **white sections** either feel strongly about both sets of priorities (top right), or do not feel strongly about either set of priorities (bottom left).

Willingness to pay for incremental water quality improvements

Respondents expressed concern for how water quality would be measured; however, agricultural producers in particular were interested in payments for incremental improvements to water quality (Figure 5)

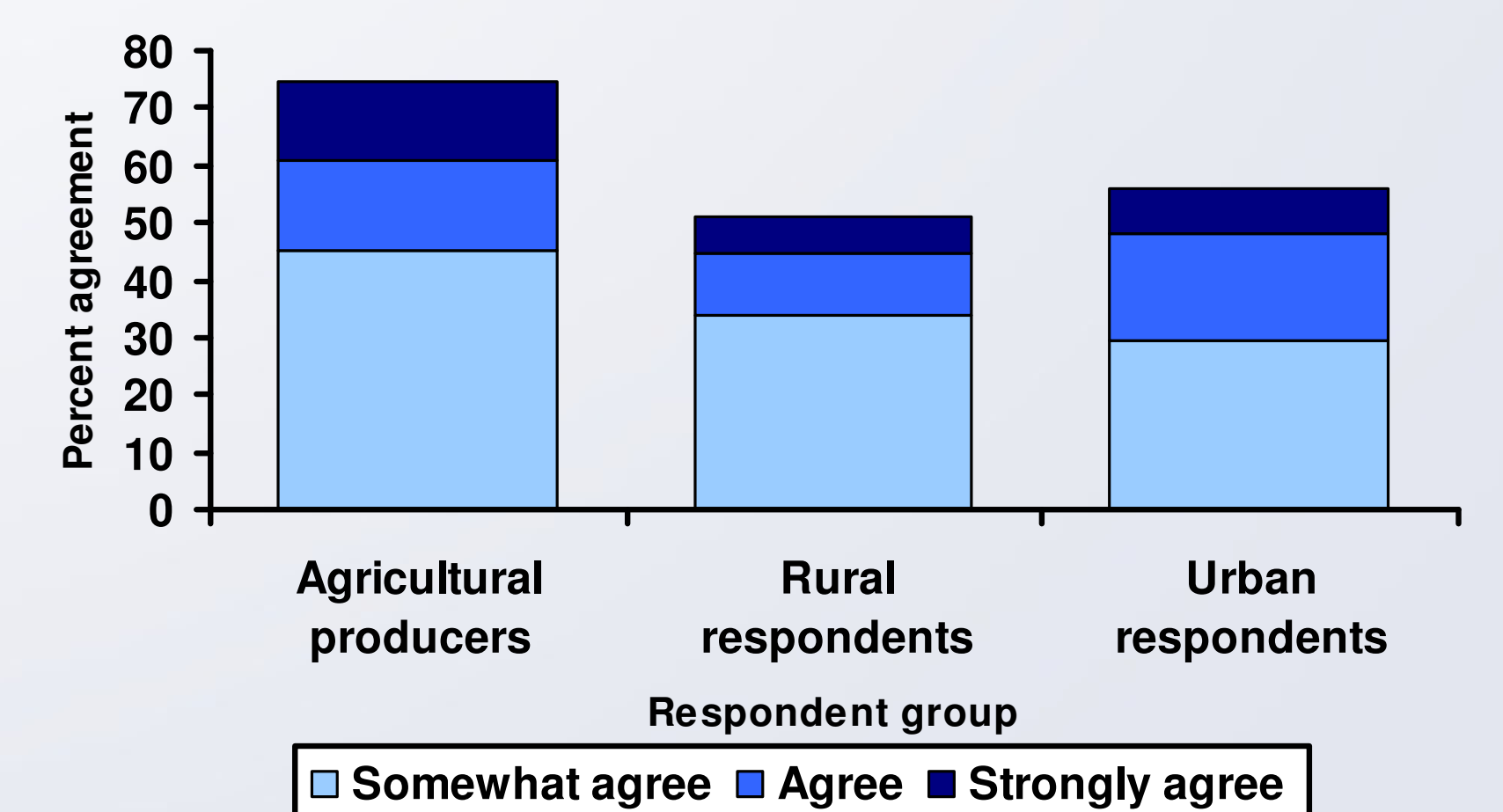


Figure 5. Agreement with payments to agricultural producers for water quality based on the degree of improvement

Acknowledgements

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