

# Center for Community-Based Resource Management (CBRM)

Natural Resources Institute, University of Manitoba

## CBRM Database

<b>Date:</b>	<b>2013-03-03</b>	<b>Entry Number:</b>	<b>1259</b>
<b>Case Study Name:</b>	A participatory approach for integrating risk assessment into rural decision-making: A case study in Santa Catarina, Brazil		
<b>Author:</b>	Bacic, I.L.Z., Bregt, A.K., and Rossiter, D.G.		
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<b>Region:</b>	Latin America and the Caribbean		
<b>Country:</b>	Brazil		
<b>Ecosystem Type:</b>	Temperate, Other (Agricultural Ecosystem)		
<b>Social Characteristics:</b>	Other (Rural, Agricultural)		
<b>Scale of Study:</b>	District		
<b>Resource Type:</b>	Agriculture including		
<b>Type of Initiative:</b>	Development project/international development agency		
<b>Community-Based Work:</b>	Other (risk assessment)		
<b>Keywords:</b>	Rural decision-making; Participatory; Risk; Uncertainty; Land evaluation		
<b>Summary:</b>	Incomplete information is one of the main constraints for decision-making, which are then by definition risky. In this		

study, formal risk concepts were introduced in decision-makers' meetings according to local demands and following a participatory approach, as a first step towards integrating risk assessment into rural decision-making in Santa Catarina, Brazil. Semi-structured interviews and meetings were conducted with extensionists and farmers. The following information was presented and discussed: (1) the time series and frequency distribution of maize yield predictions, simulated by the GAPS computer program for 16 feasible planting dates, representing climatic risks, both within and between years; and (2) a simple economic analysis (gross margin) and income probabilities for seven land-use options over a recent five-year period, followed by an interactive exercise where probabilities of achieving user-supplied target gross margins were calculated according to participants' actual information, using the computer program @RISK. This paper also investigates decision-makers' attitudes towards risk, and how these were influenced by objective information. Although results from a study such as this are not definitive, considering that the effects of the information on actual decision-making require some time to become evident, it was already possible to conclude that the risk-orientated information presented according to local demands and following a participatory approach had a positive impact on decision-makers' understanding and perceptions. This approach should be further explored to effectively integrate risk assessment into rural decision-making.