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**Case Study Name:** A participatory approach for integrating risk assessment into rural decision-making: A case study in Santa Catarina, Brazil

**Author:** Bacic, I.L.Z., Bregt, A.K., and Rossiter, D.G.

**Document Type:** Published report

**Year:** 2006

**Language:** English

**Document Location:** *Agricultural Systems, 87*(2), 229-244


**Region:** Latin America and the Caribbean

**Country:** Brazil

**Ecosystem Type:** Temperate, Other (Agricultural Ecosystem)

**Social Characteristics:** Other (Rural, Agricultural)

**Scale of Study:** District

**Resource Type:** Agriculture including

**Type of Initiative:** Development project/international development agency

**Community-Based Work:** Other (risk assessment)

**Keywords:** Rural decision-making; Participatory; Risk; Uncertainty; Land evaluation

**Summary:** 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.