Unusually heavy rains followed by flooding and landslides, and at the other extreme severe droughts leading to loss of crops and livestock, indicate that the effects of climate change have not bypassed Brazil.

According to global reinsurer Swiss Re, in the last decade river floods and subsequent landslides accounted on average for annual losses of US$250 million in Brazil. Today, 9.4% of the population, mainly in the southeast, is exposed to river flooding and 6.9% to the risk of flash floods. And the frequency and severity of floods and droughts are expected to increase.

“In roads managed by the private sector, the rains early this year are causing financial losses more pronounced than the historical average,” says Rodrigo Belloube, a department head with German insurer Munich Re. Similarly exposed were telecommunications and agriculture. He believes that “risks previously considered attractive due to the large pooling may deserve a review.”

Rolf Steiner, Swiss Re regional CEO in São Paulo state, says that Brazilian people and companies do not have enough insurance against natural disasters. In the mountainous region of Rio de Janeiro state that suffered floods and landslides earlier this year, he says, “insurance penetration was less than 20%.” The heavy rains there caused more than 900 deaths. In Nova Friburgo city, a textile center, many companies were badly damaged. “We lost 70 tons of products, worth around R$2.5 million,” says Carlos José Hieke, general manager of the Hak Aviamentos company. That is not even counting lost earnings of R$4 million in the 10 days the company was closed.

Roberto Santos, vice president of the Union of Insurers of Rio de Janeiro and Espirito Santo, says that no insurance company lost much because “less than 15% [of those affected] had insurance against floods, flash floods, and landslides.” Cars are the only property where insurance coverage is high, at 95%. For Brazilians car insurance is an expense that comes with purchase of a car; they do not think in those terms about homes and businesses.

A rural problem as well
Natural disasters are also affecting Brazilian agriculture, where “we do not have the [insurance] culture of Canada, the United States, or European countries,” says José Alcindo de Souza Avila, direc-
tor of the Federation of Agriculture of Rio Grande do Sul state, adding that 95% of crops are not insured. “People need to understand that insurance is the kind of thing we buy planning on not using it. Someone taking out a life insurance policy, for instance, does not think of dying.”

But Avila also says that large insurers are not very interested in the agricultural market, “especially in Rio Grande do Sul state, where we plant wheat, soybeans, and rice and have many and severe periods of drought and rain.” Ideally, he says, insurance offered to producers should take into account three points: producer resources, funding, and expected income, adding that “banks that finance farming should also finance crop insurance.”

**Environmental risks:**

**High premiums**

Like the financial market, Belloube says, “Insurance and reinsurance normally operate in cycles, with periods when there is an upward movement in premiums and more restrictions on coverage, followed by periods when there is a general fall in premiums.” The cycle depends heavily, he says, on “the rising cost of capital for insurers, which is reflected in premiums, particularly those with more complex risks — infrastructure or offshore operations, for example.”

Belloube believes that in Brazil, increases in premiums will be more gradual, but “given the internationalization of the Brazilian market, it is unthinkable to imagine that we will not be affected.”

Some insurance companies are already working to better price risks and to use new technologies to protect clients and themselves. They are considering, for example, agreements with weather forecasters. “The idea is, with at least a few hours advance notice, to… send text messages via mobile phone to insureds in that region, warning about the possibility of, say, flash floods,” Santos explains.

Belloube adds that there is interest in controlling risk portfolios by region and in models that simulate catastrophic scenarios so that insurers and reinsurers can better scale their exposures to risk and price accordingly.