CLIMATE CHANGE

Better Management of Exposure to Potential Future Losses Is Needed for Federal Flood and Crop Insurance

GAO Highlights

Highlights of GAO-15-28, a report to congressional requesters

Why GAO Did This Study

The May 2014 National Climate Assessment indicates that the frequency and/or severity of many weather and climate extremes may increase with climate change. Public and private property insurers can bear a large portion of the financial impact of such weather-related losses. In the public sector, federal insurance includes NFIP, managed by FEMA, and the federal crop insurance program, managed by RMA.

GAO was asked to review climate change's effect on insurers. This report examines (1) how federal and private exposure to losses has changed since GAO's 2007 report on the subject, and what is known about how climate change may affect insured and uninsured losses; (2) how public insurers are preparing for climate change, and any challenges they face; and (3) how private insurers are preparing for climate change and any challenges they face. GAO reviewed 20 studies, examined federal and private sector data on exposure to losses from 2000 to 2013, reviewed agency documents, and interviewed agency officials and a nonprobability sample of eight insurers and reinsurers.

What GAO Recommends

GAO recommends that FEMA and RMA take additional steps to encourage flood and crop insurance policyholders to adopt building and agricultural practices that reduce long-term risk and federal exposure to losses. FEMA agreed with GAO's recommendation, and RMA neither agreed nor disagreed with GAO's recommendation.

View GAO-15-28. For more information, contact J. Alfredo Gómez at (202) 512-3841 or gomezj@gao.gov.

What GAO Found

Since GAO's 2007 report on flood and crop insurance, exposure growth in hazard-prone areas has increased losses, and climate change and related increases in extreme weather events may further increase such losses in coming decades. Scientific and industry studies GAO reviewed generally found that increasing growth and property values in hazard-prone areas have increased losses to date and that climate change may compound this effect. From 2007 through 2013, data from the Federal Emergency Management Agency (FEMA) and the Risk Management Agency (RMA) show that exposure to potential losses for insured property grew from $1.3 trillion to $1.4 trillion (8 percent). According to industry data, private sector exposure to such loss grew from $60.7 trillion to $66.5 trillion (10 percent) from 2007 through 2012. Federal exposure to uninsured loss also increased by 46 percent over this period, based on a 2013 analysis by the Congressional Research Service. According to the studies GAO reviewed, climate change may substantially increase losses by 2040 and increase losses from about 50 to 100 percent by 2100.

FEMA and RMA have taken some steps to better understand and prepare for climate change's potential effects under the National Flood Insurance Program (NFIP) and the federal crop insurance program by, for example, commissioning climate change studies. However, both agencies face challenges that may limit their ability to minimize long-term federal exposure to climate change. For example, because of the short-term nature of insurance (i.e., contracts typically estimate and communicate risk of property losses for the 1-year term of a policy), FEMA and RMA face a challenge in encouraging policyholders to reduce their long-term exposure to climate change risks. Specifically, flood insurance policyholders who build to NFIP standards—which are based on current flood risk and not on long-term risks—may unintentionally increase their vulnerability to climate change as sea-level rises. Also, while federal law prohibits crop insurance from covering losses due to a farmers' failure to follow good farming practices, such as various irrigation methods, some of these practices maintain short-term production but may inadvertently increase the vulnerability of agriculture to climate change through increased erosion and inefficient water use. A recent executive order directed federal agencies to reform policies that may, perhaps unintentionally, increase the vulnerability of economic sectors or communities to climate change. Without encouraging NFIP and crop insurance policyholders to adopt building and agricultural practices that reduce long-term risk, FEMA and RMA may send policyholders signals that unintentionally encourage their vulnerability to climate change, counter to the direction of the executive order, which could exacerbate federal exposure to losses.

Many private insurers and reinsurers have taken steps since 2007 to better understand and prepare for climate change effects and related challenges, including participating in industry climate change surveys, and issuing reports that identify and assess climate change risks and trends in weather-related losses. According to industry officials, they can manage their exposure to climate change and related challenges through risk-based premiums, reinsurance, and other practices, although estimating weather-related risks still includes elements of uncertainty.