

NEWS

In Brief

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Decreased water use in the U.S. Estimated water use in the United States in 2005 was slightly less than the estimated use in 2000 and about 5% less than total withdrawals in the peak year of 1980, despite a 30% population increase during the past 25 years, according to a new report from the U.S. Geological Survey (USGS), "Estimated use of water in the United States in 2005," issued on 29 October.

In 2005, about 410 billion gallons per day (Bgal/d) were withdrawn for all categories of water use indicated in the report, including public supply, irrigation, industrial use, and thermoelectric power generation. Freshwater withdrawals accounted for 349 Bgal/d, with fresh groundwater withdrawals in 2005 about 5% less than in 2000 and fresh surface-water withdrawals about the same. Withdrawals for the two largest uses of water, thermoelectric power generation and irrigation, have stabilized or decreased since 1980, while withdrawals for public supply and domestic uses have increased steadily since USGS estimates began in 1950, according to the report.

The report attributes water use declines to the use of more efficient irrigation systems

and alternative technologies at power plants. "Because electricity generation and irrigation together accounted for a massive 80% of our water use in 2005, the improvements in efficiency and technology give us hope for the future," said Anne Castle, Assistant Secretary of the Interior for Water and Science. The complete report is available at <http://pubs.usgs.gov/circ/1344>.

Measuring soil moisture and ocean salinity The European Space Agency (ESA) lofted two satellites into orbit atop a single launch vehicle on 2 November: the Soil Moisture and Ocean Salinity (SMOS) mission and the second demonstration satellite under ESA's Project for Onboard Autonomy (Proba-2). SMOS, the first satellite designed to map sea surface salinity and monitor soil moisture on a global scale, features the Microwave Imaging Radiometer Using Aperture Synthesis (MIRAS), an interferometer that connects 69 receivers to measure the temperature of the reflection of Earth's surface in the microwave frequency range. The temperature is linked to the actual temperature of the surface and its conductive characteristics, which are linked to soil moisture and water salinity. Piggybacking on the SMOS launch, Proba-2 will demonstrate 17 advanced satellite technologies, including a miniaturized star-tracker, digital Sun sensor, miniaturized

wide-angle camera, high-precision magnetometer, and dual-frequency global positioning system space receiver.

"We are extremely pleased with this double 'lucky strike' that will provide Europe with new tools to better understand our planet and climate change, as well as new technology breakthroughs that will enhance the competitiveness of European industry on the world-wide market, thus contributing to the global economy," said ESA Director General Jean-Jacques Dordain.

Threats to species continue Of 47,677 assessed species, 17,291 are threatened with extinction, according to the latest update of the Red List of Threatened Species issued by the International Union for Conservation of Nature (IUCN) on 3 November. The list indicates that amphibians are the most threatened group of species known to date, with 1895 (nearly 30%) of 6285 amphibians in danger of extinction. Thirty-nine are already extinct or extinct in the wild, 484 are critically endangered, 754 are endangered, and 657 are vulnerable, according to IUCN.

Under threat are 21% of mammals, 30% of amphibians, 12% of birds, 28% of reptiles, 37% of freshwater fishes, 70% of plants, and 35% of invertebrates assessed to date. "We have only managed to assess 47,663 species so far; there are many more millions out there which could be under serious threat," according to IUCN Red List Unit Manager Craig Hilton-Taylor. For more information, visit <http://www.iucnredlist.org>.

—RANDY SHOWSTACK, Staff Writer

G E O P H Y S I C I S T S

Honors

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The Geological Society of America (GSA) recently honored a number of AGU members. **Jaime D. Barnes**, Department of Geological Sciences, University of Texas at Austin, was honored with the 2009 Subaru Outstanding Woman in Science Award. The award, sponsored by Subaru of America and in memory of Doris M. Curtis, GSA's 103rd president, is awarded "as a means to encourage women in the geosciences" to a woman within 3 years of having received a Ph.D. who has "impacted the field of the geosciences in a major way based on [her] Ph.D. research." **Karl E. Karlstrom**, Department of Earth and Planetary Sciences, University of New Mexico, Albuquerque, received the 2009 GSA Distinguished Service Award, which "recognizes individuals for exceptional service to the Society." **Bruce F. Molnia**, U.S. Geological Survey, Reston, Va., received

the 2009 GSA Public Service Award in honor of Eugene and Carolyn Shoemaker "for contributions that have materially enhanced the public's understanding of the earth sciences, or significantly served decision-makers in the application of scientific and technical information in public affairs and public policy related to the earth sciences."

GSA also recognized **Xavier Le Pichon**, Collège de France, Aix-en-Provence, selecting him as a 2009 Honorary Fellow. **Jonathan G. Price**, Nevada Bureau of Mines and Geology, Mackay School of Earth Sciences and Engineering, University of Nevada, Reno, received the 2009 AGI Medal in Memory of Ian Campbell for Superlative Service to the Geosciences. The medal, considered the most distinguished AGI award, is presented "in recognition of outstanding performance in and contribution to the profession of geology."

The Groundwater Resources Association of California (GRA) has recognized **T. N. Narasimhan**, Department of Materials

Science and Engineering, University of California, Berkeley, with its 2009 Lifetime Achievement Award. The award is presented annually to individuals "for their exemplary contributions to the groundwater industry and for contributions that have been in the spirit of GRA's mission and organization objectives. Individuals [who] receive GRA's Lifetime Achievement Award have dedicated their lives to the groundwater industry and have been pioneers in their field of expertise."

The association also awarded the 2009 Kevin J. Neese Award to the California Water Science Center of the U.S. Geological Survey (USGS) for developing a new, three-dimensional groundwater-modeling tool for California's Central Valley. The work led to the creation of *U.S. Geological Survey Professional Paper* "Groundwater availability of the Central Valley aquifer, California," edited by **Claudia Faunt** of USGS. Contributors included **Randall T. Hanson** and **Kenneth Belitz**, also with USGS, and **Wolfgang Schmid**, Department of Hydrology and Water Resources, College of Engineering, University of Arizona, Tucson.