SCIENTISTS SET A FORMAL DEFINITION FOR "BLUE ZONES"

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New York, NY — After two decades of fascination, imitation and debate, an international team of longevity scientists says it has reached a formal scientific definition for a "blue zone" — establishing a measurable standard for places where people live the longest.

The announcement applies to the best-known blue zones — Nicoya in Costa Rica, Okinawa in Japan, and six villages in Sardinia's Ogliastra region — and sets a clear scientific bar for evaluating any future blue zone claims. The new criteria are intended to replace loose popular usage with a definition grounded in validated demographic evidence and transparent review.

The move comes at a pivotal moment for the field. Scientific interest in blue zones accelerated after they were definitively validated in a Gerontologist article last year, which helped settle long-running doubts about whether these exceptional longevity populations were real. That validation shifted the discussion from whether blue zones existed to how they should be defined, measured, and studied going forward.

Today, that next step has arrived. A group of scientists with expertise in demography, aging and age validation has proposed rigorous criteria for identifying blue zones. The scientific article describing the test of these methods is currently under review at a major science journal. In practical terms, the methods for confirming both extraordinary ages and longevity-outlier populations such as blue zones have now been successfully tested.

The researchers say the term "blue zone" refer to something more exacting and measurable: places where the data show unusually strong longevity after age 70 and unusually high odds of reaching 100, conditional on surviving to 70.

Those two benchmarks — a longevity metric and a survival metric — form the core of the proposed definition. Researchers say both are necessary because each captures a different aspect of exceptional survival. Over time, they expect future work to expand beyond longevity to include healthspan, or the number of years people live in good health.

Just as important, the scientists say, are the records behind the claims. A place cannot be recognized as a blue zone without administrative data strong enough to support age validation and without a willingness to allow qualified outside researchers to examine the evidence. In other words, blue zone status must be earned through scrutiny, not anecdote.

Under the framework, a location would qualify if either men or women exceed a composite benchmark based on those two demographic measures relative to three of the longest-lived countries. Counts of centenarians will still matter as useful context, when available, but the researchers say centenarian totals alone should not determine whether a place qualifies.

The effort to study blue zones is now being guided by the American Federation for Aging Research, or AFAR, an organization long known for scientific rigor and for supporting many of the most prominent researchers in the field of aging. Organizers say AFAR will help ensure that the criteria used to establish blue zones are communicated with scientific rigor and public transparency.

S. Jay Olshansky, Ph.D., who led the effort, said the criteria emerged from an unusual collaboration among experts who have sometimes approached longevity claims from different directions. He said their shared aim was to make the term “blue zone” scientifically precise and publicly understandable. The consensus, he said, emerged as a byproduct of a forthcoming paper documenting that some blue zones may be disappearing.

“For years, the term ‘blue zone’ has been used as shorthand for a place where people live remarkably long lives,” said Dan Buettner, National Geographic Fellow who along with Gianni Pes and Michel Poulain created the blue zones concept. “But it has remained on the fringes of science. This gives the term a scientific standard and will attract more researchers seeking to study these extraordinary outlier populations.”

Notes AFAR Scientific Director Steven N. Austad, PhD: “The data-backed definition of a ‘blue zone’ will encourage scientific rigor when studying these long-lived communities. Today, blue zones offer many disciplines opportunities to learn more about the biological and social influences on living long, healthy lives.”

Dr. Austad co-authored the peer-reviewed paper published in *The Gerontologist* that provided the most comprehensive scientific response to date addressing recent critiques of blue zones, detailing decades of demographic research showing that ages in the original blue zones have been rigorously validated using the highest standards of modern gerontological demography.

Affiliated experts are available for interviews.

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About AFAR The American Federation for Aging Research (AFAR) is a national non-profit organization that supports and advances pioneering biomedical research that is revolutionizing how we live healthier and longer. For nearly half a century, AFAR has served as the field’s talent incubator, providing $225,316,000 to 4,539 investigators at premier research institutions to date — and growing. In 2025, provided approximately $12,816,000 to 79 investigators through a range of programs. A trusted leader and strategist, AFAR also works with public and private funders to steer high quality grant programs and inter-disciplinary research networks. AFAR-funded researchers are finding that modifying basic cellular processes can delay — or even prevent — many chronic diseases, often at the same time. They are discovering that it is never too late — or too early — to improve health. This groundbreaking science is paving the way for innovative new therapies that promise to improve and extend our quality of life — at any age. Learn more at www.afar.org.