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# The Changing Global Religious Landscape

Babies born to Muslims will begin to outnumber Christian births by 2035; people with no religion face a birth dearth

#### FOR MEDIA OR OTHER INQUIRIES:

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We also received very helpful advice and feedback on our initial religious population projections report ("The Future of World Religions: Population Growth Projections, 2010-2050," which was released in 2015) from Nicholas Eberstadt, Henry Wendt Scholar in Political Economy, American Enterprise Institute; Roger Finke, Director of the Association of Religion Data Archives and Distinguished Professor of Sociology and Religious Studies, The Pennsylvania State University; Carl Haub, Demographer Emeritus, Population Reference Bureau; Todd Johnson, Associate Professor of Global Christianity and Director of the Center for the Study of Global Christianity, Gordon Conwell Theological Seminary; Ariela Keysar, Research Professor and Associate Director of the Institute for the Study of Secularism in Society and Culture, Trinity College; Chaeyoon Lim, Associate Professor of Sociology, University of Wisconsin-Madison; Arland Thornton, Professor of Sociology and Research Professor in the Population Studies Center and Survey Research Center, University of Michigan; Jenny Trinitapoli, Associate Professor of Sociology, The University of Chicago; David Voas, Professor of Social Science and Head of Department, University College London; Robert Wuthnow, Andlinger Professor of Sociology and Director of the Center for the Study of Religion, Princeton University; and Fenggang Yang, Professor of Sociology and Director of the Center on Religion and Chinese Society, Purdue University.

A number of former Pew Research Center staff members played critical roles in producing our initial population projections including Luis Lugo, director of religion research; former Associate Director of Editorial Sandra Stencel; former Senior Researcher Brian J. Grim; visiting Senior Research Fellow Mehtab Karim; and former Research Analyst Noble Kuriakose. Additionally, Guy Abel, professor at the School of Sociology and Political Science at Shanghai University, helped construct the country-level migration flow data used in the projections.

While the data collection and projection methodology were guided by our consultants and advisers, Pew Research Center is solely responsible for the interpretation and reporting of the data.

### The Changing Global Religious Landscape

Babies born to Muslims will begin to outnumber Christian births by 2035; people with no religion face a birth dearth

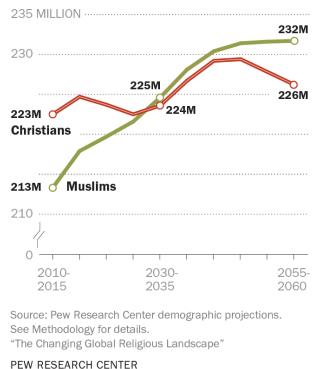
More babies were born to Christian mothers than to members of any other religion in recent years, reflecting Christianity's continued status as the world's largest religious group. But this is unlikely to be the case for much longer: Less than 20 years from now, the number of babies born to Muslims is expected to modestly exceed births to Christians, according to new Pew Research Center demographic estimates.

Muslims are projected to be the world's fastestgrowing major religious group in the decades ahead, as <u>Pew Research Center has explained</u>, and signs of this rapid growth already are visible. In the period between 2010 and 2015, births to Muslims made up an estimated 31% of all babies born around the world – far exceeding the Muslim share of people of all ages in 2015 (24%).

The world's Christian population also has continued to grow, but more modestly. In recent years, 33% of the world's babies were born to Christians, which is slightly greater than the Christian share of the world's population in 2015 (31%).

## Babies born to Muslims will begin to outnumber Christian births by 2035

Estimated number of babies born, by mother's religion, during each five-year period



While the relatively young Christian population of a region like sub-Saharan Africa is projected to grow in the decades ahead, the same cannot be said for Christian populations everywhere. Indeed, in recent years, Christians have had a disproportionately large share of the world's deaths (37%) – in large part because of the relatively advanced age of Christian populations in some places. This is especially true in Europe, where the number of deaths already is estimated to exceed the number of births among Christians. In Germany alone, for example, there were an

estimated 1.4 million more Christian deaths than births between 2010 and 2015, a pattern that is expected to continue across much of Europe in the

decades ahead.

Globally, the relatively young population and high fertility rates of Muslims lead to a projection that between 2030 and 2035, there will be slightly more babies born to Muslims (225 million) than to Christians (224 million), even though the total Christian population will still be larger. By the 2055 to 2060 period, the birth gap between the two groups is expected to approach 6 million (232 million births among Muslims vs. 226 million births among Christians).<sup>1</sup>

In contrast with this baby boom among Muslims, people who do not identify with any religion are experiencing a much different trend. While religiously unaffiliated people currently make up 16% of the global population, only an estimated 10% of the world's newborns between 2010 and 2015 were born to religiously unaffiliated mothers. This dearth of newborns among the unaffiliated helps explain why religious "nones" (including people who identity as atheist or agnostic, as well as those who have no particular religion) are projected to decline as a share of the world's population in the coming decades.

#### A note about terminology

The phrase "babies born to Christians" and "Christian births" are used interchangeably in this report to refer to live births to Christian mothers. Parallel language is used for other religious groups (e.g., babies born to Muslims, Muslim births).

This report generally avoids the terms "Christian babies" or "Muslim babies" because that wording could suggest children take on a religion at birth.

The assumption in these estimates and projections is that children tend to inherit their mother's religious identity (or lack thereof) until young adulthood, when some choose to switch their religious identity. The projection models in this report take into account estimated rates of religious switching (or conversion) into and out of major religious groups in the 70 countries for which such data are available.

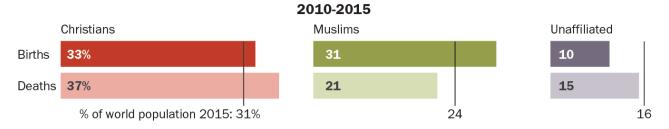
By 2055 to 2060, just 9% of all babies will be born to

religiously unaffiliated women, while more than seven-in-ten will be born to either Muslims (36%) or Christians (35%).

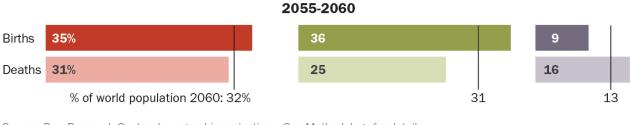
<sup>&</sup>lt;sup>1</sup> The five-year periods described in this report represent midyear to midyear time spans – for example, from July 1, 2030, to June 30, 2035 – which are standard units used in demography and by organizations including the United Nations Population Division.

#### Estimated shares of births and deaths

Compared with their share of the overall 2015 population, Christians make up larger share of all 2010-2015 deaths, Muslims a larger share of births, the unaffiliated a smaller share of births



By 2060, Christians and Muslims will make up a larger share of births, while the unaffiliated will make up a larger share of deaths



Source: Pew Research Center demographic projections. See Methodology for details. "The Changing Global Religious Landscape"

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These are among the key findings of a new Pew Research Center analysis of demographic data. This analysis is based on – and builds on – the same database of more than 2,500 censuses, surveys and population registers used for the 2015 report "<u>The Future of World Religions:</u> <u>Population Growth Projections, 2010-2050</u>." Both reports share the same demographic projection models, but the figures on births and deaths in this analysis have not been previously released.

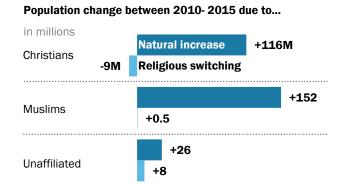
In addition, this report provides updated global population estimates, as of 2015, for Christians, Muslims, religious "nones" and adherents of other religious groups. And the population growth projections in this report extend to 2060, a decade further than in the original report.

The projections do *not* assume that all babies will remain in the religion of their mother. The projections attempt to take religious switching (in all directions) into account, but conversion patterns are complex and varied. In some countries, including the United States, it is fairly common for adults to leave their childhood religion and switch to another faith (or no faith). For example, many people raised in the U.S. as Christians become unaffiliated in adulthood, and vice versa – many people raised without any religion join a religious group later in their lives. But in some other countries, changes in religious identity are rare or even illegal.<sup>2</sup>

At present, the best available data indicate that the worldwide impact of religious switching alone, absent any other factors, would be a relatively small increase in the number of Muslims, a substantial increase in the number of unaffiliated people, and a substantial decrease in the number of Christians in coming decades. Globally, however, the effects of religious switching are overshadowed by the impact of differences in fertility and mortality. As a result, the unaffiliated are projected to decline as a share of the world's total population despite the boost they are expected to receive from people leaving Christianity and other religious groups in Europe, North America and some other parts of the world. And the number of Christians is projected to rise, though not as fast as the number of Muslims.

#### Most religious population change between 2010 and 2015 came from natural increase (births minus deaths)

In demographic models, the net impact of religious switching accounted for an estimated 23% of unaffiliated growth and 0.3% of Muslim growth while reducing Christian growth by 7%



Note: Religious switching modeled in 70 countries among young adults ages 15 to 29. Natural increase is calculated based on estimated number of births minus deaths during the period. Source: Pew Research Center demographic projections. See Methodology for details.

"The Changing Global Religious Landscape"

<sup>&</sup>lt;sup>2</sup> For further discussion of religious switching patterns, see McClendon, David, and Conrad Hackett. November 2014. "<u>When People Shed</u> <u>Religious Identity in Ireland and Austria: Evidence from Censuses</u>." Demographic Research.

#### Global population projections, 2015 to 2060

Christians were the largest religious group in the world in 2015, making up nearly a third (31%) of Earth's 7.3 billion people. Muslims were second, with 1.8 billion people, or 24% of the global population, followed by religious "nones" (16%), Hindus (15%) and Buddhists (7%). Adherents of folk religions, Jews and members of other religions make up smaller shares of the world's people.

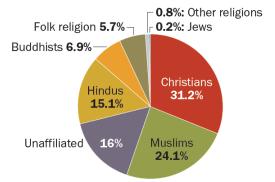
Between 2015 and 2060, the world's population is expected to increase by 32%, to 9.6 billion. Over that same period, the number of Muslims – the major religious group with the youngest population and the highest fertility – is projected to increase by 70%. The number of Christians is projected to rise by 34%, slightly faster than the global population overall yet far more slowly than Muslims.

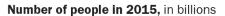
As a result, according to Pew Research Center projections, by 2060, the count of Muslims (3.0 billion, or 31% of the population) will near the Christian count (3.1 billion, or 32%).<sup>3</sup>

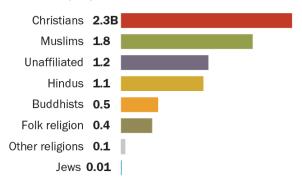
Except for Muslims and Christians, all major world religions are projected to make up a smaller percentage of the global population in 2060 than

## Christians are the largest religious group in 2015

#### % of world population







Source: Pew Research Center demographic projections. See Methodology for details. "The Changing Global Religious Landscape"



they did in 2015.<sup>4</sup> While Hindus, Jews and adherents of folk religions are expected to grow in absolute numbers in the coming decades, none of these groups will keep pace with global population growth.

<sup>&</sup>lt;sup>3</sup> When these projections are <u>extended beyond 2060</u>, Muslims are expected to reach parity with Christians in 2070. By 2075, Muslims are expected to outnumber Christians, even as both groups continue to increase as a share of the world's population, largely due to their concentration in countries with relatively high fertility rates. By 2100, Muslims are expected to make up 34.9% of the world's population and Christians to make up 33.8%.

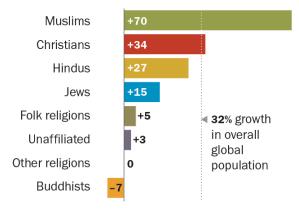
<sup>&</sup>lt;sup>4</sup> Jews are such a small share of the global population, however, that the projected change is not visible when percentages are rounded to one decimal place. Jews constituted 0.20% of the world's population in 2015 and are projected to constitute 0.17% in 2060. Both figures round to 0.2% (two-tenths of 1%) in the charts and tables in this report.

Worldwide, the number of Hindus is projected to rise by 27%, from 1.1 billion to 1.4 billion, lagging slightly behind the pace of overall population growth. Jews, the smallest religious group for which separate projections were made, are expected to grow by 15%, from 14.3 million in 2015 to 16.4 million worldwide in 2060.<sup>5</sup> And adherents of various folk religions – including African traditional religions, Chinese folk religions, Native American religions and Australian aboriginal religions, among others – are projected to increase by 5%, from 418 million to 441 million.

Buddhists, meanwhile, are projected to *decline* in absolute number, dropping 7% from nearly 500 million in 2015 to 462 million in 2060. Low fertility rates and aging populations in countries such as China, Thailand and Japan are the main demographic reasons for the expected shrinkage in the Buddhist population in the years ahead.

#### Muslims projected to be fastestgrowing major religious group

*Estimated percent change in population size,* 2015-2060



Source: Pew Research Center demographic projections. See Methodology for details. "The Changing Global Religious Landscape"

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All other religions combined – an umbrella category that includes Baha'is, Jains, Sikhs, Taoists and many smaller faiths – also are projected to decrease slightly in number, from a total of approximately 59.7 million in 2015 to 59.4 million in 2060.<sup>6</sup>

The religiously unaffiliated population is projected to shrink as a percentage of the global population, even though it will increase modestly in absolute number. In 2015, there were slightly fewer than 1.2 billion atheists, agnostics and people who did not identify with any particular

 <sup>&</sup>lt;sup>5</sup> These projections are based on estimates of people who self-identify as Jewish when asked about their religion on national censuses and large-scale surveys. They do not include "cultural" or "ethnic" Jews – people who have direct Jewish ancestry and who consider themselves at least partially Jewish but who describe themselves, religiously, as atheist, agnostic or nothing in particular. For the purposes of the religious group projections in this report, these people are categorized as unaffiliated. The worldwide estimate of Jews could be larger if this group were included, or smaller if a narrower definition of who is Jewish (such as an unbroken line of matrilineal Jewish descent) were used.
 <sup>6</sup> Although some faiths in the "other religions" category have millions of adherents around the world, censuses and surveys in many countries do not measure them specifically. Because of the scarcity of census and survey data, Pew Research Center has not projected the size of individual religions within this category. Estimates of the global size of these faiths generally come from other sources, such as the religious groups themselves. By far the largest of these groups is Sikhs, who numbered about 25 million in 2015, according to the World Religion Database.

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religion around the world.<sup>7</sup> By 2060, the unaffiliated population is expected to reach 1.2 billion. But as a share of all people in the world, religious "nones" are projected to decline from 16% of the total population in 2015 to 13% in 2060. While the unaffiliated are expected to continue to increase as a share the population in much of Europe and North America, people with no religion will decline as a share of the population in Asia, where 75% of the world's religious "nones" live.

Geographic differences like these play a major role in patterns of religious growth. Indeed, one of the main determinants of future growth is where each group is geographically concentrated today. For example, the religiously unaffiliated population is heavily concentrated in places with aging populations and low fertility, such as China, Japan, Europe and North America. By contrast, religions with many adherents in developing countries – where birth rates are high and infant mortality rates generally have been falling – are likely to grow quickly. Much of the worldwide growth of Islam and Christianity, for example, is expected to take place in sub-Saharan Africa.

	Projected 2015 population	% of world population in 2015	Projected 2060 population	% of world population in 2060	Population growth 2015-2060
Christians	2,276,250,000	31.2%	3,054,460,000	31.8	778,210,000
Muslims	1,752,620,000	24.1	2,987,390,000	31.1	1,234,770,000
Unaffiliated	1,165,020,000	16.0	1,202,300,000	12.5	37,280,000
Hindus	1,099,110,000	15.1	1,392,900,000	14.5	293,790,000
Buddhists	499,380,000	6.9	461,980,000	4.8	-37,400,000
Folk religions	418,280,000	5.7	440,950,000	4.6	22,670,000
Other religions	59,710,000	0.8	59,410,000	0.6	-290,000
Jews	14,270,000	0.2	16,370,000	0.2	2,100,000
World	7,284,640,000	100.0	9,615,760,000	100.0	2,331,120,000

#### Size and projected growth of major religious groups, 2015-2060

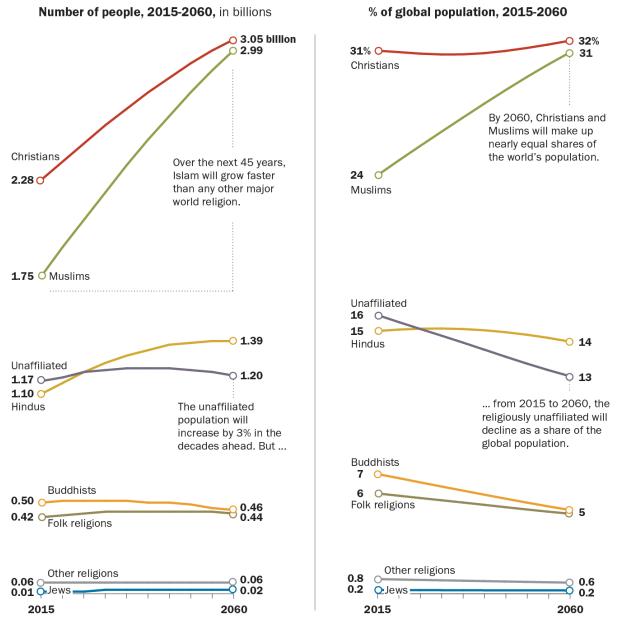
Source: Pew Research Center demographic projections. See Methodology for details.

"The Changing Global Religious Landscape"

<sup>&</sup>lt;sup>7</sup> In many countries, censuses and demographic surveys do not enumerate atheists and agnostics as distinct populations, so it is not possible to reliably estimate the global size of these subgroups within the broad category of the unaffiliated.

#### Projected change in global population, 2015-2060

Most major religious groups are expected to increase in number by 2060. But some will not keep pace with global population growth, and, as a result, are expected to make up a smaller percentage of the world's population in 2060 than they did in 2015.



Source: Pew Research Center demographic projections. See Methodology for details. "The Changing Global Religious Landscape"

#### Change in where groups are concentrated

The regional distribution of religious groups is also expected to shift in the coming decades. For example, the share of Christians worldwide who live in sub-Saharan Africa is expected to increase dramatically between 2015 and 2060, from 26% to 42%, due to high fertility in the region. Meanwhile, religious switching and lower fertility will drive down the shares of the global Christian population living in Europe and North America.

Sub-Saharan Africa is also expected to be home to a growing share of the world's Muslims. By 2060, 27% of the global Muslim population is projected to be living in the region, up from 16% in 2015. By contrast, the share of Muslims living in the Asia-Pacific region is expected to decline over the period from 61% to 50%. The share of Muslims in the Middle East and North Africa is expected to hold steady at 20%.

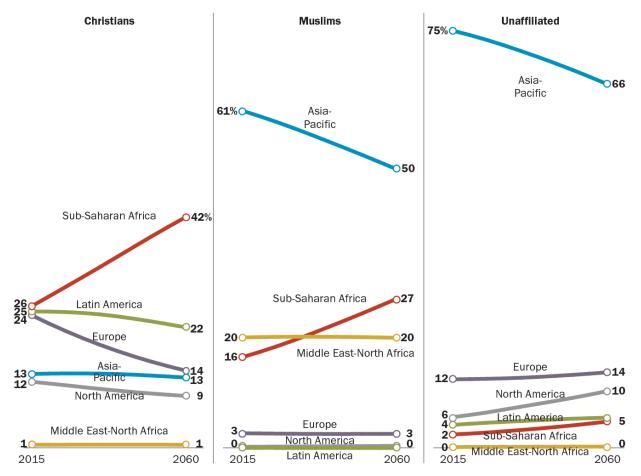
As of 2015, three-in-four unaffiliated people live in Asia and the Pacific. But that share is expected to decline to 66% by 2060 due to low fertility and population aging. At the same time, a growing share of the unaffiliated will live outside of the Asia-Pacific, particularly in Europe and North America. By 2060, 9% of the global unaffiliated population will live in the United States alone, according to the projections.

The vast majority of Hindus and Buddhists (98-99%) will continue to live in the Asia-Pacific region in the next several decades. Most adherents of folk religions, too, will remain in Asia and the Pacific (79% in 2060), although a growing share are expected to live sub-Saharan Africa (7% in 2015 vs. 16% in 2060). Roughly equal shares of the world's Jews live in Israel (42%) and the United States in 2015 (40%). But, by 2060, over half of all Jews (53%) are projected to live in Israel, while the U.S. is expected to have a smaller share (32%).

#### Growing shares of Christians and Muslims expected to live in sub-Saharan Africa

Declining shares of the world's Muslim and unaffiliated populations will live in Asia and the Pacific





Source: Pew Research Center demographic projections. See Methodology for details. "The Changing Global Religious Landscape"

#### Age and fertility are major factors behind growth of religious groups

The current age distribution of each religious group is an important determinant of demographic growth. Some groups' adherents are predominantly young, with their prime childbearing years still ahead, while members of other groups are older and largely past their childbearing years. The median ages of Muslims (24 years) and Hindus (27) are younger than the median age of the world's overall population (30), while the median age of Christians (30) matches the global median. All the other groups are older than the global median, which is part of the reason why they are expected to fall behind the pace of global population growth.<sup>8</sup>

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#### Muslims and Hindus are the youngest religious populations

Median age, by religion, 2015

Source: Pew Research Center demographic projections. See Methodology for details. "The Changing Global Religious Landscape"

	KEY	B: Buddhists	C: Christians	F: Folk religions	H: Hindus
PEW RESEARCH CENTER	J: Jews	M: Muslims	0: Other religions	U: Unaffillated	A: All

<sup>&</sup>lt;sup>8</sup> Expected changes to the religious landscape among older adults are discussed in Skirbekk, Vegard, Michaela Potančoková, Conrad Hackett and Marcin Stonawski. November 2016. "<u>Religious Affiliation Among Older Age Groups Worldwide: Estimates for 2010 and Projections Until</u> 2050." The Journals of Gerontology Psychological Sciences and Social Sciences Series B.

Moreover, Muslims have the highest fertility rate of any religious group – an average of 2.9 children per woman, well above replacement level (2.1), the minimum typically needed to maintain a stable population.<sup>9</sup> Christians are second, at 2.6 children per woman. Hindu and Jewish fertility (2.3 each) are both just below the global average of 2.4 children per woman. All other groups have fertility levels too low to sustain their populations.

#### Muslims and Christians have more children per woman than other religious groups

1.6 2.3 2.4 2.6 1.8 2.9 **~**0 🖸 World G A Latin America-Caribbean Õ Europe Asia-Pacific ACHM North America 0 AJC JA Middle East-North Africa Sub-Saharan Africa UC A ⎄ TOTAL FERTILITY RATE 1.0 1.5 2.0 2.5 3.0 3.5 4.5 5.0 5.5 4.0 Source: Pew Research Center demographic projections. See Methodology for details.

F: Folk religions H: Hindus

A: All

Total fertility rate, by religion, 2015-2020

<sup>&</sup>quot;The Changing Global Religious Landscape" B: Buddhists C: Christians KEY PEW RESEARCH CENTER J: Jews M: Muslims O: Other religions U: Unaffiliated

<sup>&</sup>lt;sup>9</sup> The standard measure of fertility in this report is the total fertility rate. In countries with low infant and child mortality rates, a total fertility rate close to 2.1 children per woman is sufficient for each generation to replace itself. Replacement-level fertility is higher in countries with elevated mortality rates.

In addition to fertility rates and age distributions, religious switching is likely to play a role in the changing sizes of religious groups.

Pew Research Center projections attempt to incorporate patterns of religious switching in 70 countries where surveys provide information on the number of people who say they no longer belong to the religious group in which they were raised.<sup>10</sup> In the projection model, all directions of switching are possible, and they may partially offset one another. In the United States, for example, surveys find that although it is particularly common for people who grew up as Christians to become unaffiliated, some people who were raised with no religious affiliation also have switched to become Christians.<sup>11</sup> These types of patterns are projected to continue as future generations come of age. (For more details on how and where switching was modeled, see the Methodology.)

Between 2015 and 2020, Christians are projected to experience the largest losses due to switching. Globally, about 5 million people are expected to become Christians in this five-year period, while 13 million are expected to leave Christianity, with most of these departures joining the ranks of the religiously unaffiliated.

The unaffiliated are projected to add 12 million and lose 4.6 million via switching, for a net gain of 7.6 million between 2015 and 2020. The projected net changes due to switching for other religious groups are smaller.

<sup>&</sup>lt;sup>10</sup> These 70 countries were home to 43% of the world's population in 2010, and they include many countries where switching between having a religious affiliation and not having a religious affiliation is common, such as the United States, France, Australia and New Zealand. The most populous countries for which switching was not modeled are China and India. Prior to this study, the most extensive analysis of religious switching covered 40 countries. See Barro, Robert J., Jason Hwang and Rachel McCleary. 2010. "Religious Conversion in 40 Countries." Journal for the Scientific Study of Religion. It is difficult to formally project religious switching in China without reliable information on recent or likely patterns of switching. For example, it is not clear at what rate people in China may be converting to Christianity from other groups, and retention patterns among Christians are not known. Nor is it clear at what rate Islam, Buddhism and other faiths may be gaining adherents in China. If China experiences a net movement toward religious affiliation via switching in the decades ahead, that would tilt the needle toward a more religiously affiliated global population, particularly since China is currently home to a majority of the worldwide unaffiliated population. When these projections were made, no current, nationally representative survey of Indians was available to provide reliable data on both respondents' childhood religion and on their current religious affiliation (the basis for calculating switching rates). However, a 1990 World Values Survey in India found that nearly all Indian respondents who grew up as Hindu still identified as Hindu.

<sup>&</sup>lt;sup>11</sup> Studies of religious switching indicate that this phenomenon is often concentrated in young adult years, roughly between ages 15 and 29. Change in religious affiliation may occur as young adults move away from their parents and partner with someone of a different affiliation status. While some religious switching may take place at other ages, switching is modeled as a life course phenomenon in which some young adults change their religious affiliation status. There may be some time periods during which people of all ages are prone to religious switching, such as when political circumstances in a country encourage or discourage religious identity or lack of religious identity. Our models do not attempt to include such period effects.

#### Ranks of unaffiliated are expected to grow due to religious switching

#### Religious switching, 2015-2020

	Switching in	Switching out	Net change	
Unaffiliated	12,220,000	4,640,000	+7,570,00	0
Muslims	1,300,000	880,000	+420,00	00
Folk religions	760,000	410,000	+350,00	00
Other religions	370,000	130,000	+240,00	00
Hindus	30,000	30,000	<10,00	00
Jews	40,000	80,000	-40,000	
Buddhists	470,000	830,000	-370,000	
Christians	4,960,000	13,140,000	-8,180,000	

Source: Pew Research Center demographic projections. See Methodology for details. "The Changing Global Religious Landscape"

## Sidebar: The demographic challenges of the religiously unaffiliated

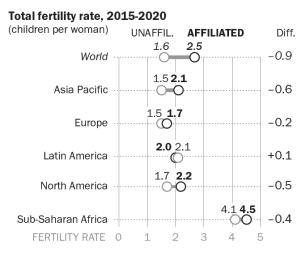
Although current patterns of religious switching favor the growth of the religiously unaffiliated population – particularly in Europe, North America, Australia and New Zealand – religious "nones" are projected to *decline* as a share of the world's population in the coming decades due to a combination of low fertility and an older age profile.

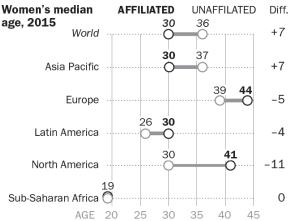
Between 2015 and 2020, religious "nones" are projected to experience a net gain of 7.6 million people due to religious switching; people who grew up as Christians are expected to make up the overwhelming majority of those who switch into the unaffiliated group.<sup>12</sup> Still, if current religious switching patterns continue, gains made through religious disaffiliation will not be large enough to make up for population losses due to other demographic factors.

For example, the 2015 to 2020 total fertility rate for religiously unaffiliated women is projected to be 1.6 children per woman, nearly a full child less than the rate of 2.5 children per woman for religiously affiliated women. And although religious "nones" tend to be younger than religiously affiliated people in the United States, the opposite is true at the global level: Unaffiliated women are *older* than the affiliated and thus more likely to be past their prime childbearing years. In 2015, the global median age for the female unaffiliated population was 36, compared with 30 for the religiously affiliated.

These demographic patterns are heavily influenced by the situation in Asia, and particularly China, which was home to 61% of the world's unaffiliated population in 2015.

#### Religiously affiliated women are younger and have more children than religiously <u>unaffiliated</u> women





### % of total unaffiliated population, 2015Europe N. Am.Asia-Pacific: 75%1246

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Note: Differences calculated based on unrounded numbers. Subtotals in bar do not add to 100% due to rounding. Percent of total unaffiliated population for Middle East-North Africa rounds to zero. Source: Pew Research Center demographic projections.

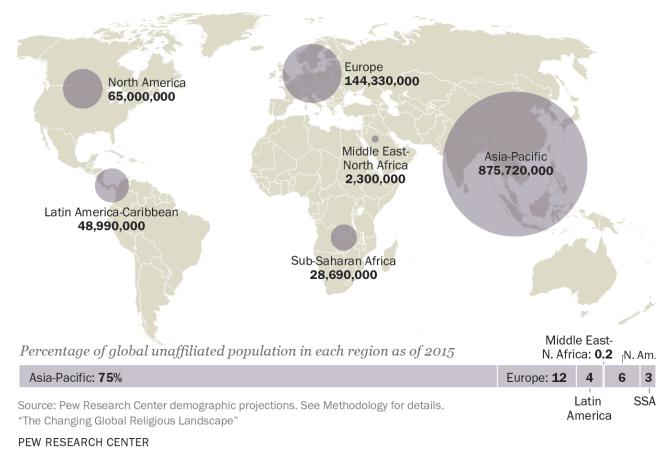
Source, rew Research Center demographic projections. See Methodology for details.

"The Changing Global Religious Landscape"

<sup>&</sup>lt;sup>12</sup> For further analysis of the different trajectories of religiously affiliated and unaffiliated populations, see Hackett, Conrad, Marcin Stonawski, Michaela Potančoková, Brian J. Grim and Vegard Skirbekk. 2015. "<u>The Future Size of Religiously Affiliated and Unaffiliated Populations</u>." Demographic Research.

#### The majority of the global unaffiliated population lives in Asia and the Pacific

Population by region as of 2015



#### Sidebar: What Americans believe and expect about the global size of religious groups

Before releasing <u>projections of the future size of</u> religious groups in 2015, Pew Research Center asked members of the <u>American Trends Panel</u> a few questions about their perceptions of the global religious landscape – and their expectations for its future.

About half of Americans (52%) have an accurate idea of which religious group is currently the largest in the world, correctly saying that Christians make up the largest religious group, while a quarter think (incorrectly) that Muslims are largest. Fewer U.S. adults say that people with no religion (15%) or Hindus (6%) are the largest religious group.

The survey also asked Americans how they expect the share of the global population with no religion to change in the coming decades. Most Americans (62%) predict

#### About half of Americans know that Christians are largest global religious group

% of U.S. adults who say the world's largest religious group is currently ...

Christians	52%
Muslims	25
People with no religion	15
Hindus	6
Don't know/refused	<u>2</u>
	100

Source: Survey conducted Nov. 17-Dec.15, 2014. "The Changing Global Religious Landscape"

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that the global share of religious "nones" will increase between now and 2050 – an expectation perhaps colored by what is happening on a national level.

Indeed, in the U.S. and many other Western nations, the unaffiliated share of the population has been increasing

and is expected to continue to rise as many Christians and others shed their religious identity and as younger, less religious generations replace older, more religious ones. However, because most religious "nones" live in Asia, where the religiously unaffiliated population is relatively old and has relatively low fertility, Pew Research Center projects that the global unaffiliated population will *decline* in the decades ahead, even after factoring in expected gains via religious switching. Only 15% of U.S. adults surveyed expect that people with no religion will decline as a share of the global population by 2050.<sup>13</sup>

Asked which group they expect to have the most adherents globally in 2050, Americans are closely

#### Most predict global growth of religious 'nones' in coming decades

% of U.S. adults who expect the share of the world's population with no religion to \_\_\_\_\_ between now and 2050

Increase	62%
Increase	0270
Decrease	15
Stay about the same	22
Don't know/refused	<u>2</u>
	100

Source: Survey conducted Nov. 17-Dec.15, 2014. "The Changing Global Religious Landscape"

<sup>&</sup>lt;sup>13</sup> Although projections in this report extend to 2060, the <u>first report</u> on Pew Research Center's global projections for major religious groups stopped at 2050. The survey questions discussed in this sidebar were developed before the first report was released, which is why they ask about expectations for the size of religious groups in 2050 (rather than 2060).

divided among those who say religious "nones" (33%), Christians (32%) and Muslims (29%). A small share (4%) anticipates that Hindus will be the largest group.

Expectations about which group will become the largest vary by respondents' age, religion and political party affiliation. For instance, nearly half (46%) of U.S. adults under 30 predict that people with no religion will outnumber Christians, Muslims and Hindus in 2050, while only about three-in-ten of those ages 50 and older anticipate that religious "nones" will be the largest group at mid-century. Meanwhile, older Americans are more likely than young adults (under 30) to say that Muslims will be the largest group.

# Young adults and the religiously unaffiliated among most likely to think people with no religion will be the largest group in 2050

% of U.S. adults who say the largest group globally will be ...

	People with no religion	Christians	Muslims	Hindus	Don't know/ refused
Total	33%	32%	29%	4%	2%
Ages 18-29	46	29	20	4	<1
30-49	32	35	27	5	2
50-64	28	34	32	3	3
65+	29	26	38	1	6
Christian	31	36	28	3	3
Unaffiliated	44	22	26	7	1
Republican/lean Rep.	29	31	36	2	2
Democrat/lean Dem.	35	33	25	4	2

Source: Survey conducted Nov. 17-Dec. 15, 2014. "The Changing Global Religious Landscape"

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Christians are more likely than religious "nones" to say that Christians will be the largest group in 2050 (36% vs. 22%). And the unaffiliated are more likely than Christians to say people with no religion will be the largest group at mid-century: 44% of religious "nones" say this will be the case, compared with 31% of Christians.

Differences in expectations about the future size of religious groups also are apparent across the political spectrum. Americans who identify with or lean toward the Republican Party are more likely than those who identify as or lean Democratic to predict that Muslims will make up the largest religious group in the world in 2050 (36% vs. 25%). By contrast, Democrats are more likely than Republicans (35% vs. 29%) to expect that people with no religion will be the largest group.

#### How births and deaths are changing religious populations

As the world's largest religious group, Christians had the most births and deaths of any group between 2010 and 2015. During this five-year period, an estimated 223 million babies were born to Christian mothers and roughly 107 million Christians died, meaning that the *natural increase* in the Christian population – i.e., the number of births minus the number of deaths – was 116 million over this period.

Muslims had the second-largest number of births between 2010 and 2015, with 213 million babies born to Muslim mothers. But Muslims saw the largest natural increase of any religious group – more than 152 million people – due to the relatively small number of Muslim deaths (61 million). This large natural increase results from both high Muslim fertility and the concentration of the Muslim population in younger age groups, which have lower mortality rates.

Compared with the overall size of the religiously unaffiliated population (16% of the world's

With wide gulf between births and deaths, Muslims saw more growth than any other religious group due to natural population increase between 2010-2015

	Births	Deaths	Natura	al increase
Muslims	213M	61M ·	+152M	
Christians	223		+116	
Hindus	109	42	+67	
Unaffiliated	68	42	+26	
Folk religion		15	+13	
Buddhists	32	20	+12	
Other religio		3	+1	
Jews	1	0.6	+0.5	

Source: Pew Research Center demographic projections. See Methodology for details. "The Changing Global Religious Landscape"

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people), there were relatively few recent births to unaffiliated mothers (10% of all births between 2010 and 2015). Religious "nones" are the third-largest group overall, and yet due to lower levels of fertility, they rank fourth behind Hindus in terms of babies born. Between 2010 and 2015, an estimated 68 million babies were born to unaffiliated mothers, compared with 109 million to Hindu mothers. Hindus also saw a much larger natural increase than the religiously unaffiliated (67 million vs. 26 million).

Births also outnumbered deaths among other major religious groups between 2010 and 2015, including among Buddhists, Jews and members of folk or traditional religions.

Beyond 2015, Christian and Muslim mothers are expected to give birth to increasing numbers of babies through 2060. But Muslim births are projected to rise at a faster rate – so much so that by 2035 the number of babies born to Muslim mothers will narrowly surpass the number born to Christian mothers. Between 2055 and 2060, the birth gap between the two groups is expected to approach 6 million (232 million births among Muslims vs. 226 million births among Christians).

By contrast, the total number of births is projected to decline steadily between 2015 and 2060 for all other major religious groups. The drop-off in births will be especially dramatic for Hindus – who are expected to see 33 million fewer births between 2055 and 2060 than between 2010 and 2015 – due in large part to declining fertility in India, which is home to 94% of the global Hindu population as of 2015.

The number of deaths is projected to increase for all religious groups between 2015 and 2060, as the world's population continues to grow - and grow older.<sup>14</sup>

#### Estimated shares of births and deaths

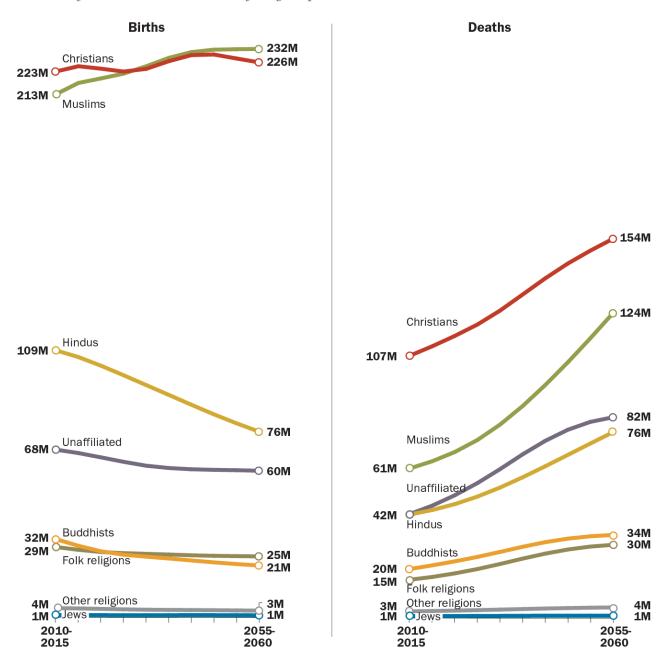
	Christians	Muslims	Unaffilated	Hindus	Buddhists	6 Folk	Other	Jews
% of world population <b>2015</b>	31.2%	24.1%	16.0%	<b>15</b> .1%	6.9%	5.7%	0.8%	0.2%
% of all births, 2010-15	32.8	31.4	10.1	<u>16.</u> 0	4.7	4.2	0.6	0.2
% of all deaths, 2010-15	36.8	20.9	14.5	<mark>14</mark> .5	6.9	5.3	0.9	0.2
% of world population <b>2060</b>	31.8	31.1	12.5	<mark>14</mark> .5	4.8	4.6	0.6	0.2
% of all births, 2055-60	35.1	36.0	9.3	<b>11</b> .8	3.3	3.9	0.4	0.1
% of all deaths, 2055-60	30.6	24.6	16.2	<mark>15</mark> .0	6.7	5.9	0.8	0.2

Source: Pew Research Center demographic projections. See Methodology for details. "The Changing Global Religious Landscape"

<sup>&</sup>lt;sup>14</sup> These projections do not take into account potential future medical or technological advancements that could increase lifespans.

#### Only Muslims and Christians are expected to have increasing number of births; all groups expected to have rising number of deaths due to population aging

Number of births and deaths in each five-year period



Source: Pew Research Center demographic projections. See Methodology for details.

"The Changing Global Religious Landscape"

#### Regional and country-level patterns of births and deaths

For religious groups in most countries, there is currently either positive natural increase (more births than deaths) or little net change due to births and deaths. But many European countries are experiencing a natural *decrease* (more deaths than births) in the populations of certain religious groups, especially Christians.

Throughout Eastern Europe and parts of Western Europe, deaths outnumbered births among Christians between 2010 and 2015 in 24 of 42 countries. Deaths also outnumbered births by at least 10,000 among religiously unaffiliated populations in Austria, Ukraine and Russia. But religious "nones" in most European countries saw either a positive natural increase (in 19

countries) or little net change during the period from 2010 to 2015 (in 20 countries). This reflects the relatively young age profile of the religiously unaffiliated compared with the Christian population in Europe.

Among Muslims, there were no European countries where the number of deaths exceeded the number of births. Throughout most of the region, the number of babies born to Muslim women exceeded the number of Muslim deaths between 2010 and 2015 (in 21 countries). In Germany, the United Kingdom, Italy, Russia and France, there were at least 250,000 more Muslim births than deaths in each country over that period. At the same time, migration is also driving <u>Muslim population growth in Europe</u>.

#### Natural increase by religion, 2010-2015

Number of countries where estimated ...

	Births exceeded deaths by 10,000+						
Christians	131	24					
Muslims	106						
Unaffiliated	87	3					
Hindus	22	1					
Buddhists	21	1					
Folk religions	46	2					
Jews	4						
Other religions	12	1					
Total population	165	18					
Note: Counts of countries for which differences are less than 10,000 not shown.							

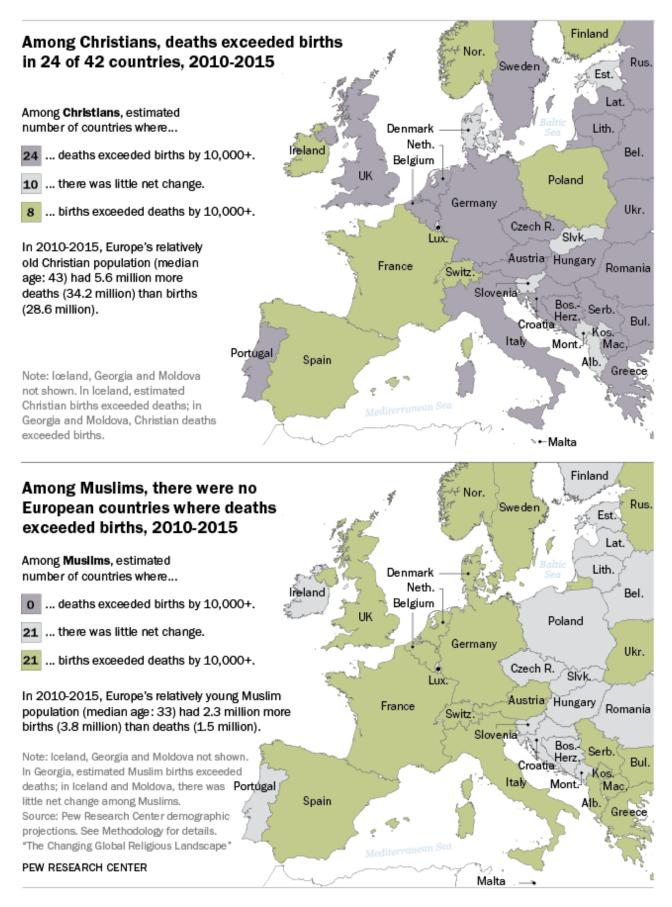
10,000 not shown. Source: Pew Research Center demographic projections. See Methodology for details. "The Changing Global Religious Landscape"

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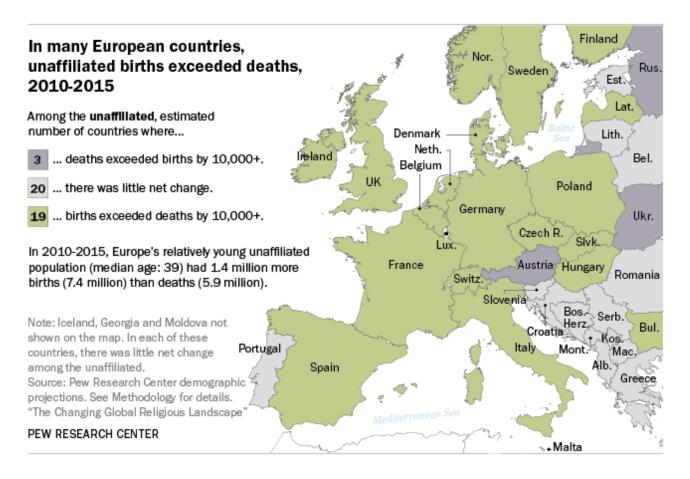
No Christian, Muslim or unaffiliated

populations living in countries outside of Europe experienced more deaths than births in the 2010 to 2015 period. Similarly, other religious groups saw either positive natural increase or little net change, with a few exceptions: Buddhists in Japan, Hindus in South Africa and adherents of folk religions in South Korea and Tanzania had a larger number of deaths than births between 2010 and 2015.

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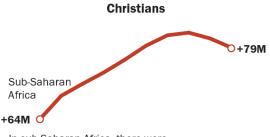
There are important regional differences in birth and death trends for some religious groups. Among Christians, for example, sub-Saharan Africa experienced the biggest natural increase between 2010 and 2015 – with 64 million more births than deaths – followed by smaller Christian increases in Latin America and the Caribbean, Asia and the Pacific and North America.

In Europe, however, Christian deaths already outnumber births – a deficit that is projected to grow through 2060. And in North America, the number of Christian deaths will begin to exceed the number of births by around 2050.

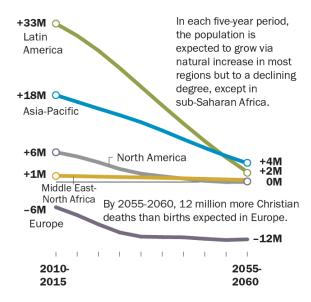
These trends signal that much of Christianity's future growth is likely to be in the global South, particularly in sub-Saharan Africa – the only region where natural increases in the Christian population are expected to grow even larger in the coming decades. (This means that not only will there continue to be more Christian births than deaths in sub-Saharan Africa, but births will exceed deaths by even larger numbers in upcoming fiveyear periods.) In Latin America and the Asia-Pacific region, the number of Christian births will continue to exceed the number of deaths through 2060, but the natural increases in the 2055 to 2060 time period will be much smaller than they are now as these regions experience significant declines in fertility.

#### Sub-Saharan Africa is the only region where births expected to increasingly outnumber deaths among Christians

Natural increase (births minus deaths), by region, over each five-year period, 2010-2060



In sub-Saharan Africa, there were 64 million more Christian births than deaths in 2010-2015.



Source: Pew Research Center demographic projections. See Methodology for details. "The Changing Global Religious Landscape"

## Christian population shares and projected natural increase by region, 2010-2060

	% global Christian population 2015	% global Christian population 2060	Christian natural increase 2010-2015	Christian natural Increase 2055-2060
Sub-Saharan Africa	26%	42%	64,480,000	79,380,000
Latin America-Caribbean	25	22	32,570,000	1,690,000
Asia-Pacific	13	13	17,680,000	3,530,000
Europe	24	14	-5,640,000	-12,320,000
North America	12	9	5,810,000	-380,000
Middle East-North Africa	1	1	910,000	30,000
Global	100	100	115,820,000	71,930,000

Source: Pew Research Center demographic projections. See Methodology for details. "The Changing Global Religious Landscape"

The global Muslim population also is projected to undergo an important geographic shift toward sub-Saharan Africa. Currently, more Muslims live in Asia and the Pacific than in any other region, and as a result, this region had the largest natural increase in the Muslim population between 2010 and 2015.

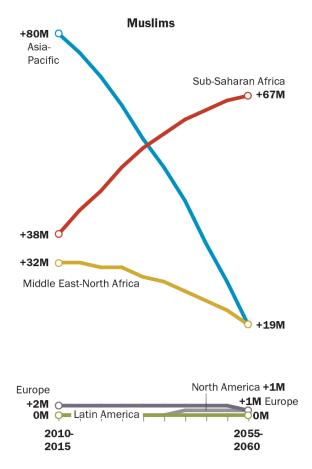
But sub-Saharan Africa's Muslims also experienced far more births than deaths during this period, and the natural increases in the Muslim population in sub-Saharan Africa are projected to grow even larger in the five-year periods ahead, driven by high fertility. By about 2040, the natural increase in the Muslim population in sub-Saharan Africa is expected to exceed the natural increase in Asia.

Muslims in Asia and the Middle East-North Africa region will experience slower growth in the coming decades as Muslim fertility in these regions declines. These populations will continue to have more births than deaths through 2060, but they will grow at a slower rate.

Muslims in Europe and North America also are expected to have more births than deaths through 2060.

#### Muslim population growth is expected to slow down in Asia-Pacific and speed up in sub-Saharan Africa

Natural increase (births minus deaths), by region, over each five-year period, 2010-2060



Source: Pew Research Center demographic projections. See Methodology for details. "The Changing Global Religious Landscape"

## Muslim population shares and projected natural increase by region, 2010-2060

	% global Muslim population 2015	% global Muslim population 2060	Muslim natural increase 2010-2015	Muslim natural Increase 2055-2060
Asia-Pacific	61%	50%	79,520,000	19,070,000
Middle East-North Africa	20	20	32,090,000	19,330,000
Sub-Saharan Africa	16	27	38,240,000	67,340,000
Europe	3	3	2,290,000	1,480,000
North America	0.2	0.4	320,000	520,000
Latin America-Caribbean	<0.1	<0.1	20,000	-20,000
Global	100	100	152,500,000	107,730,000

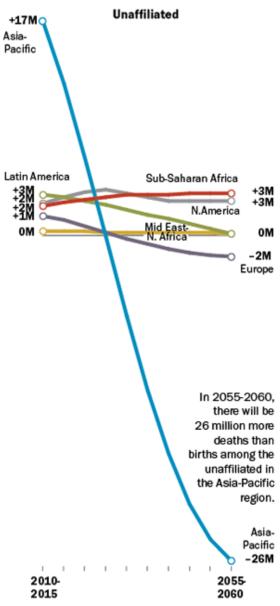
Source: Pew Research Center demographic projections. See Methodology for details. "The Changing Global Religious Landscape"

Currently, there are more births than deaths among religious "nones" in all regions, led by the Asia-Pacific region, which is home to a majority of the global religiously unaffiliated population.

But this will change in the coming years. For people with no religion in Asia, the number of deaths will begin to exceed the number of births to unaffiliated mothers by 2030, a change driven by low fertility and a relatively old unaffiliated population in China. By 2035, unaffiliated deaths are expected to outnumber births in Europe as well.

#### By 2030, more deaths than births among the unaffiliated in the Asia-Pacific, where majority reside

Natural increase (births minus deaths), by region, over each projected five-year period, 2010-2060



Source: Pew Research Center demographic projections. See Methodology for details. "The Changing Global Religious Landscape"

## Unaffiliated population shares and projected natural increase by region, 2010-2060

	% global unaffiliated population 2015	% global unaffiliated population 2060	Unaffiliated natural increase 2010-2015	Unaffiliated natural Increase 2055-2060
Asia-Pacific	75%	66%	16,850,000	-25,870,000
Europe	12	14	1,440,000	-1,790,000
North America	6	10	2,380,000	2,640,000
Latin America-Caribbean	4	5	3,130,000	-30,000
Sub-Saharan Africa	2	5	2,250,000	3,240,000
Middle East-North Africa	0.2	0.3	190,000	50,000
Global	100	100	26,240,000	-21,780,000

Source: Pew Research Center demographic projections. See Methodology for details. "The Changing Global Religious Landscape"

# Appendix A: Natural increase (number of births minus number of deaths) by country and religion: 2010-2015

*Positive values indicate more births than deaths; negative values indicate more deaths than births. \*Indicates absolute value of natural increase during the period was less than 10,000 people* 

REGION	CHRISTIAN	MUSLIM	UNAFFIL.	HINDU	BUDDHIST	FOLK	OTHER	JEWISH	ALL
World	115,820,000	152,500,000	26,240,000	66,900,000	12,050,000	13,330,000	1,320,000	450,000	388,600,000
Asia-Pacific	17,680,000	79,520,000	16,850,000	66,460,000	11,720,000	9,600,000	960,000	*	202,790,000
Europe	-5,640,000	2,290,000	1,440,000	70,000	50,000	20,000	20,000	*	-1,750,000
Latin America- Caribbean	32,570,000	20,000	3,130,000	20,000	10,000	260,000	50,000	10,000	36,080,000
Middle East- North Africa	910,000	32,090,000	190,000	130,000	40,000	130,000	20,000	370,000	33,890,000
North America	5,810,000	320,000	2,380,000	190,000	230,000	50,000	100,000	70,000	9,150,000
Sub-Saharan Africa	64,480,000	38,240,000	2,250,000	30,000	*	3,260,000	180,000	*	108,450,000

COUNTRY	CHRISTIAN	MUSLIM	UNAFFIL.	HINDU	BUDDHIST	FOLK	OTHER	JEWISH	ALL
Afghanistan	*	4,560,000	*	*	*	*	*	*	4,570,000
Albania	*	90,000	*	*	*	*	*	*	100,000
Algeria	*	2,570,000	50,000	*	*	*	*	*	2,630,000
Angola	2,420,000	*	140,000	*	*	110,000	*	*	2,680,000
Argentina	1,630,000	*	220,000	*	*	*	*	*	1,870,000
Armenia	90,000	*	*	*	*	*	*	*	90,000
Australia	290,000	70,000	320,000	30,000	40,000	10,000	10,000	*	770,000
Austria	-40,000	30,000	-30,000	*	*	*	*	*	-30,000
Azerbaijan	*	550,000	*	*	*	*	*	*	560,000
Bahamas	20,000	*	*	*	*	*	*	*	20,000
Bahrain	*	80,000	*	*	*	*	*	*	100,000
Bangladesh	30,000	9,710,000	*	610,000	60,000	*	*	*	10,430,000
Belarus	-130,000	*	*	*	*	*	*	*	-140,000
Belgium	-120,000	70,000	90,000	*	*	*	*	*	50,000
Belize	30,000	*	*	*	*	*	*	*	30,000
Benin	660,000	330,000	80,000	*	*	220,000	*	*	1,290,000
Bhutan	*	*	*	10,000	40,000	*	*	*	50,000
Bolivia	920,000	*	40,000	*	*	*	*	*	980,000
Bosnia- Herzegovina	-40,000	*	*	*	*	*	*	*	-40,000
Botswana	80,000	*	*	*	*	*	*	*	90,000
Brazil	7,300,000	*	1,100,000	*	*	80,000	*	*	8,490,000
Brunei	*	20,000	*	*	*	*	*	*	30,000
Bulgaria	-220,000	10,000	10,000	*	*	*	*	*	-190,000
Burkina Faso	570,000	1,810,000	10,000	*	*	410,000	*	*	2,810,000

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POPULATION GROWTH	PROJECTIONS, 2010-2015

COUNTRY	CHRISTIAN	MUSLIM	UNAFFIL.	HINDU	BUDDHIST	FOLK	OTHER	JEWISH	ALL
Burma (Myanmar)	140,000	160,000	10,000	40,000	1,570,000	120,000	*	*	2,050,000
Burundi	770,000	30,000	*	*	*	70,000	*	*	870,000
Cambodia	*	20,000	*	*	990,000	*	*	*	1,020,000
Cameroon	1,450,000	500,000	140,000	*	*	70,000	60,000	*	2,220,000
Canada	120,000	60,000	330,000	40,000	10,000	20,000	20,000	20,000	640,000
Cape Verde	30,000	*	*	*	*	*	*	*	40,000
Central African Republic	390,000	40,000	*	*	*	*	*	*	440,000
Chad	720,000	900,000	40,000	*	*	20,000	*	*	1,680,000
Chile	650,000	*	70,000	*	*	*	*	*	720,000
China	2,530,000	1,750,000	12,280,000	*	6,960,000	6,400,000	300,000	*	30,210,000
Colombia	2,920,000	*	240,000	*	*	30,000	*	*	3,190,000
Comoros	*	110,000	*	*	*	*	*	*	110,000
Costa Rica	240,000	*	20,000	*	*	*	*	*	260,000
Croatia	-40,000	*	*	*	*	*	*	*	-50,000
Cuba	70,000	*	30,000	*	*	20,000	*	*	110,000
Cyprus	20,000	*	*	*	*	*	*	*	30,000
Czech Republic	-150,000	*	180,000	*	*	*	*	*	30,000
Dem. Rep. of the Congo	8,960,000	140,000	120,000	*	*	60,000	*	*	9,300,000
Denmark	*	20,000	10,000	*	*	*	*	*	30,000
Djibouti	*	80,000	*	*	*	*	*	*	90,000
Dominican Republic	650,000	*	110,000	*	*	*	*	*	770,000
Ecuador	1,040,000	*	60,000	*	*	*	*	*	1,110,000
Egypt	210,000	7,090,000	*	*	*	*	*	*	7,300,000
El Salvador	360,000	*	50,000	*	*	*	*	*	420,000
Equatorial Guinea	70,000	*	*	*	*	*	*	*	80,000
Eritrea	480,000	280,000	*	*	*	*	*	*	760,000
Ethiopia	5,190,000	3,750,000	*	*	*	180,000	*	*	9,120,000
Fed. States of Micronesia	10,000	*	*	*	*	*	*	*	10,000
Fiji	40,000	*	*	20,000	*	*	*	*	60,000
Finland	20,000	*	20,000	*	*	*	*	*	40,000
France	380,000	270,000	420,000	*	*	10,000	*	20,000	1,100,000
French Guiana	20,000	*	*	*	*	*	*	*	20,000
French Polynesia	10,000	*	*	*	*	*	*	*	20,000
Gabon	110,000	20,000	*	*	*	*	*	*	150,000
Gambia	*	260,000	*	*	*	*	*	*	270,000
Georgia	-20,000	20,000	*	*	*	*	*	*	*
Germany	-1,360,000	390,000	50,000	*	*	*	*	*	-910,000
Ghana	2,100,000	630,000	70,000	*	*	140,000	*	*	2,940,000
Greece	-30,000	10,000	*	*	*	*	*	*	-30,000
Guadeloupe	10,000	*	*	*	*	*	*	*	10,000
Guam	10,000	*	*	*	*	*	*	*	10,000
Guatemala	1,910,000	*	80,000	*	*	10,000	*	*	2,000,000
Guinea	140,000	1,150,000	20,000	*	*	30,000	*	*	1,340,000

COUNTRY	CHRISTIAN	MUSLIM	UNAFFIL.	HINDU	BUDDHIST	FOLK	OTHER	JEWISH	ALL
Guinea Bissau	30,000	80,000	*	*	*	50,000	*	*	170,000
Guyana	40,000	*	*	*	*	*	*	*	50,000
Haiti	780,000	*	100,000	*	*	*	*	*	890,000
Honduras	730,000	*	90,000	*	*	10,000	*	*	840,000
Hong Kong	30,000	*	30,000	*	10,000	*	*	*	80,000
Hungary	-210,000	*	50,000	*	*	*	*	*	-160,000
Iceland	10,000	*	*	*	*	*	*	*	10,000
India	1,600,000	19,000,000	20,000	62,830,000	490,000	390,000	650,000	*	84,970,000
Indonesia	1,850,000	11,010,000	*	90,000	60,000	*	10,000	*	13,020,000
Iran	*	4,090,000	*	*	*	*	*	*	4,090,000
Iraq	40,000	4,890,000	*	*	*	*	*	*	4,930,000
Ireland	200,000	*	10,000	*	*	*	*	*	220,000
Israel	*	170,000	20,000	*	*	*	*	370,000	580,000
Italy	-700,000	280,000	40,000	*	*	*	*	*	-370,000
Ivory Coast	930,000	890,000	190,000	*	*	240,000	*	*	2,260,000
Jamaica	120,000	*	20,000	*	*	*	*	*	150,000
Japan	*	*	1,260,000	*	-1,830,000	*	-140,000	*	-730,000
Jordan	10,000	640,000	*	*	*	*	*	*	650,000
Kazakhstan	10,000	860,000	30,000	*	*	*	*	*	920,000
Kenya	5,030,000	660,000	90,000	*	*	50,000	40,000	*	5,870,000
Kosovo	*	50,000	*	*	*	*	*	*	50,000
Kuwait	30,000	130,000	*	20,000	*	*	*	*	200,000
Kyrgyzstan	10,000	460,000	*	*	*	*	*	*	470,000
Laos	*	*	*	*	270,000	230,000	*	*	510,000
Latvia	-50,000	*	10,000	*	*	*	*	*	-30,000
Lebanon	70,000	100,000	*	*	*	*	*	*	170,000
Lesotho	130,000	*	*	*	*	*	*	*	130,000
Liberia	520,000	60,000	*	*	*	*	*	*	590,000
Libya	20,000	560,000	*	*	*	*	*	*	580,000
Lithuania	-40,000	*	*	*	*	*	*	*	-50,000
Madagascar	2,610,000	110,000	270,000	*	*	160,000	*	*	3,150,000
Malawi	2,250,000	330,000	20,000	*	*	40,000	*	*	2,640,000
Malaysia	220,000	1,720,000	10,000	110,000	140,000	40,000	*	*	2,250,000
Maldives	*	20,000	*	*	*	*	*	*	20,000
Mali	50,000	2,490,000	20,000	*	*	50,000	*	*	2,610,000
Mauritania	*	430,000	*	*	*	*	*	*	430,000
Mauritius	10,000	*	*	20,000	*	*	*	*	30,000
Mayotte	*	30,000	*	*	*	*	*	*	30,000
Mexico	7,620,000	*	460,000	*	*	*	*	*	8,090,000
Moldova	-10,000	*	*	*	*	*	*	*	-20,000
Mongolia	*	10,000	90,000	*	120,000	*	*	*	230,000
Morocco	*	2,120,000	*	*	*	*	*	*	2,120,000
Mozambique	1,670,000	470,000	400,000	*	*	240,000	*	*	2,780,000
Namibia	200,000	*	*	*	*	*	*	*	200,000
Nepal	10,000	190,000	*	2,190,000	230,000	100,000	*	*	2,730,000
Netherlands	-40,000	70,000	140,000	*	*	*	*	*	190,000
New Caledonia	10,000	*	*	*	*	*	*	*	10,000

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POPULATION	GROWTH PROJECTIONS,	2010-2015

COUNTRY	CHRISTIAN	MUSLIM	UNAFFIL.	HINDU	BUDDHIST	FOLK	OTHER	JEWISH	ALL
New Zealand	40,000	*	110,000	*	*	*	*	*	160,000
Nicaragua	460,000	*	80,000	*	*	*	*	*	550,000
Niger	30,000	2,960,000	30,000	*	*	*	*	*	3,020,000
Nigeria	8,680,000	12,630,000	40,000	*	*	340,000	*	*	21,700,000
North Korea	10,000	*	360,000	*	*	60,000	70,000	*	510,000
Norway	50,000	20,000	20,000	*	*	*	*	*	100,000
Oman	10,000	170,000	*	*	*	*	*	*	200,000
Pakistan	270,000	16,810,000	*	330,000	*	*	*	*	17,420,000
Palestinian	*	620,000	*	*	*	*	*	*	630,000
territories									
Panama	230,000	*	10,000	*	*	*	*	*	260,000
Papua New	780,000	*	*	*	*	*	*	*	790,000
Guinea									
Paraguay	590,000	*	*	*	*	10,000	*	*	610,000
Peru	2,020,000	*	80,000	*	*	20,000	*	*	2,130,000
Philippines	8,310,000	700,000	*	*	*	160,000	10,000	*	9,190,000
Poland	10,000	*	50,000	*	*	*	*	*	60,000
Portugal	-80,000	*	*	*	*	*	*	*	-80,000
Puerto Rico	90,000	*	*	*	*	*	*	*	90,000
Qatar	10,000	60,000	*	10,000	*	*	*	*	100,000
Republic of Macedonia	-30,000	40,000	*	*	*	*	*	*	*
Republic of the Congo	480,000	*	20,000	*	*	10,000	*	*	520,000
Reunion	40,000	*	*	*	*	*	*	*	50,000
Romania	-210,000	*	*	*	*	*	*	*	-210,000
Russia	-1,360,000	270,000	-530,000	*	*	*	*	*	-1,630,000
Rwanda	1,610,000	40,000	20,000	*	*	*	*	*	1,670,000
Samoa	20,000	*	*	*	*	*	*	*	20,000
Sao Tome and Principe	20,000	*	*	*	*	*	*	*	20,000
Saudi Arabia	100,000	2,240,000	10,000	30,000	*	*	*	*	2,400,000
Senegal	50,000	1,780,000	*	*	*	*	*	*	1,830,000
Serbia	-140,000	20,000	*	*	*	*	*	*	-120,000
Sierra Leone	120,000	530,000	*	*	*	*	*	*	660,000
Singapore	20,000	50,000	20,000	20,000	20,000	*	*	*	130,000
Slovakia	*	*	20,000	*	*	*	*	*	20,000
Solomon Islands	70,000	*	*	*	*	*	*	*	70,000
Somalia	*	1,410,000	*	*	*	*	*	*	1,410,000
South Africa	1,460,000	30,000	150,000	-20,000	*	10,000	*	*	1,630,000
South Korea	310,000	*	620,000	*	40,000	-10,000	*	*	960,000
South Sudan	730,000	70,000	*	*	*	400,000	*	*	1,210,000
Spain	40,000	150,000	260,000	*	*	*	*	*	450,000
Sri Lanka	60,000	170,000	*	180,000	700,000	*	*	*	1,110,000
Sudan	230,000	3,850,000	40,000	*	*	120,000	*	*	4,240,000
Suriname	20,000	*	+0,000	*	*	*	*	*	30,000
Swaziland	80,000	*	*	*	*	*	*	*	90,000
Gwaziiailu	50,000								30,000

COUNTRY	CHRISTIAN	MUSLIM	UNAFFIL.	HINDU	BUDDHIST	FOLK	OTHER	JEWISH	ALL
Switzerland	20,000	30,000	10,000	*	*	*	*	*	60,000
Syria	100,000	1,820,000	40,000	*	*	*	*	*	1,960,000
Taiwan	30,000	*	50,000	*	*	20,000	*	*	100,000
Tajikistan	10,000	760,000	10,000	*	*	*	*	*	790,000
Tanzania	5,140,000	2,370,000	160,000	*	*	-30,000	*	*	7,630,000
Thailand	20,000	270,000	*	*	1,060,000	*	*	*	1,350,000
Timor-Leste	180,000	*	*	*	*	*	*	*	180,000
Тодо	240,000	90,000	40,000	*	*	270,000	*	*	650,000
Tonga	10,000	*	*	*	*	*	*	*	10,000
Trinidad and Tobago	30,000	*	*	*	*	*	*	*	40,000
Tunisia	*	560,000	*	*	*	*	*	*	560,000
Turkey	20,000	4,190,000	50,000	*	*	*	*	*	4,280,000
Turkmenistan	20,000	320,000	*	*	*	*	*	*	350,000
Uganda	5,030,000	720,000	30,000	20,000	*	50,000	*	*	5,850,000
Ukraine	-860,000	20,000	-350,000	*	*	*	*	*	-1,180,000
United Arab Emirates	50,000	330,000	*	30,000	*	*	*	*	420,000
United Kingdom	-450,000	340,000	880,000	40,000	10,000	*	*	*	820,000
United States	5,680,000	260,000	2,050,000	150,000	210,000	30,000	80,000	40,000	8,510,000
Uruguay	40,000	*	50,000	*	*	*	*	*	90,000
Uzbekistan	*	2,030,000	10,000	*	*	*	*	*	2,040,000
Vanuatu	30,000	*	*	*	*	*	*	*	30,000
Venezuela	1,990,000	*	190,000	*	*	*	*	*	2,200,000
Vietnam	520,000	*	1,500,000	*	720,000	2,030,000	20,000	*	4,800,000
Western Sahara	*	40,000	*	*	*	*	*	*	40,000
Yemen	*	4,040,000	*	30,000	*	*	*	*	4,070,000
Zambia	2,200,000	10,000	*	*	*	*	20,000	*	2,250,000
Zimbabwe	980,000	*	60,000	*	*	40,000	*	*	1,100,000

## Appendix B: Methodology for this report

This report is part of the Pew-Templeton Global Religious Futures population projections project that produced the 2015 report "<u>The Future of World Religions: Population Growth Projections,</u> 2010-2050." The figures described in this report, including estimated births and deaths by religion and 2015 global population sizes, have not been previously reported. This report also presents results from a November 2014 survey that asked U.S. adults which religious group they think is largest and their expectations for religious change in the decades ahead.

This appendix describes unique aspects of the methodology for this report. A description of the full projections methodology that accompanied the 2015 report is included as Appendix C. Note that Appendix C extensively discusses the 2010 baseline for the projections. The results in this report focus on expected change between 2010 and 2015, including estimates of 2015 population sizes, as well as expected change through 2060.

Appendix D lists the sources used for each country. Appendix E describes the major religious group categories. Finally, Appendix F is a topline describing the November 2014 survey results.

The remainder of this appendix briefly describes the methodology behind the population projections and how births and deaths were estimated for this report. It also describes the American Trends Panel, on which the November 2014 survey was conducted.

#### About the population projections

While many people have offered predictions about the future of religion, Pew Research Center has undertaken the first formal demographic projections using data on age, fertility, mortality, migration and religious switching for multiple religious groups around the world. Demographers at Pew Research Center in Washington, D.C., and the International Institute for Applied Systems Analysis (IIASA) in Laxenburg, Austria, gathered the input data from more than 2,500 censuses, surveys and population registers since 2009.<sup>15</sup>

The projections cover eight major groups: Buddhists, Christians, Hindus, Jews, Muslims, adherents of folk religions, adherents of other religions and the unaffiliated. Because censuses and surveys in many countries do not provide information on religious subgroups – such as Sunni and Shia Muslims or Catholic, Protestant and Orthodox Christians – the projections are for each

<sup>&</sup>lt;sup>15</sup> Research carried out at IIASA was also supported by a European Research Council grant (ERC-2009 StG 241003-COHORT) to Vegard Skirbekk.

religious group as a whole. Data on subgroups of the unaffiliated are also unavailable in many countries. As a result, separate projections are not possible for atheists or agnostics.

The projection model was developed in collaboration with researchers who are world leaders in population projections methodology at the Age and Cohort Change Project at IIASA. The model uses an advanced version of the cohort-component method typically employed by demographers to forecast population growth. It starts with a population of baseline age groups, or cohorts, divided by sex and religion. Each cohort is projected into the future by adding likely gains (immigrants and people switching in) and by subtracting likely losses (deaths, emigrants and people switching out) year by year. The youngest cohorts, ages 0 to 4, are created by applying age-specific fertility rates to each female cohort in the childbearing years (ages 15 to 49), with children inheriting the mother's religion.<sup>16</sup>

In the process of gathering input data and developing the projection model, Pew Research Center previously published reports on the current size and geographic distribution of major religious groups, including Muslims (2009), Christians (2011) and several other faiths (2012). An initial set of projections for one religious group, Muslims, was published in 2011, although it did not attempt to take religious switching into account. The first report on these projections was published in 2015.

Some social theorists have suggested that as countries develop economically, more of their inhabitants will move away from religious affiliation. While that has been the general experience in some parts of the world, notably Europe, it is not yet clear whether it is a universal pattern.<sup>17</sup> In any case, the projections in this report are not based on theories about economic development leading to secularization.

Rather, the projections extend the recently observed patterns of religious switching in all countries for which sufficient data are available (70 countries in all). In addition, the projections reflect the United Nations Population Division's expectation that in countries with high fertility rates, those rates gradually will decline in coming decades, alongside rising female educational attainment. And the projections assume that people gradually are living longer in most countries.

<sup>&</sup>lt;sup>16</sup> How accurate have population projections using the cohort-component method been in the past? An overview of how previous projections for general populations compare with actual population trends is provided in the National Research Council's 2000 book "<u>Beyond Six Billion:</u> <u>Forecasting the World's Population</u>."

<sup>&</sup>lt;sup>17</sup> For example, there is little evidence of economic development leading to religious disaffiliation in Muslim-majority countries. In Hindumajority India, religious affiliation remains nearly universal despite rapid social and economic change. And in China, religious affiliation – though very difficult to measure – may be rising along with economic development.

Some cautionary words about these projections are essential. Population projections are estimates built on current population data and assumptions about demographic trends, such as declining birth rates and rising life expectancies in particular countries. The projections are what will occur if the current data are accurate and current trends continue. But many events – scientific discoveries, armed conflicts, social movements, political upheavals, natural disasters and changing economic conditions, to name just a few – can shift demographic trends in unforeseen ways. For example, China's 1.4 billion people (as of 2015) loom very large in global trends. At present, about 5% of China's population is estimated to be Christian, and more than 51% is religiously unaffiliated. Because reliable figures on religious switching in China are not available, the projections do not contain any forecast for conversions in the world's most populous country. But if Christianity expands in China in the decades to come – as some experts predict – then by 2060, the global numbers of Christians may be higher than projected, and the decline in the percentage of the world's population that is religiously unaffiliated may be even sharper than projected.<sup>18</sup>

Finally, readers should bear in mind that within every major religious group, there is a spectrum of belief and practice. The projections are based on the number of people who self-identify with each religious group, regardless of their level of observance. What it means to be Christian, Muslim, Hindu, Buddhist, Jewish or a member of any other faith may vary from person to person, country to country, and decade to decade.

For a more complete description of the projections methodology that accompanied the 2015 report, see Appendix C.

#### Estimates of births and deaths

This report is based on new analysis of previously unreleased data from the population projections described in Pew Research Center's 2015 report, "<u>The Future of World Religions: Population</u> <u>Growth Projections, 2010-2050</u>." This is the first report to publish estimates of global births and deaths by religion. Estimates of births and deaths by religion are generated from a population projection model incorporating data on each group's fertility rates, age and sex distribution and the prevailing mortality rates in the countries where each group is concentrated. Unfortunately, vital statistics data recording parent's religion at birth and one's religion at death are generally not collected, so estimates of births and deaths by religion at the global level must be estimated rather than directly measured.

<sup>&</sup>lt;sup>18</sup> Although there are many news stories and anecdotes about Christian growth in China, there is little nationally representative survey data from this century that clearly validates these reports. In "A Star in the East: The Rise of Christianity in China," Rodney Stark and Xiuhua Wang also argue that Christianity in China is growing rapidly. However, they report that survey data commissioned from Horizon Ltd. found exactly the same share of Protestants and Catholics in 2007 and 2014 despite the authors' expectation that the 2014 survey would find clear evidence of rapid Christian growth in the intervening years.

Religious composition in 2015 is projected from a 2010 baseline. The projection model is built on the assumption that fertility and mortality rates will decline over time in countries that begin with high fertility and mortality rates. For the 70 countries with available data, these projections take into account patterns of religious switching. Projection results reported here extend to the year 2060.

Although this report contains different data points than the 2015 report, they share the same input data and projection modeling. Updating all the input data for global religious projections is a monumental undertaking, and in many countries the new data necessary for this work will not be available until the 2020 wave of government censuses are complete. The Center's prior global projection report focused on 2010 and 2050. By focusing on the year 2015, this report provides a more up-to-date estimate of the global religious landscape.

#### The American Trends Panel (ATP)

Data for the sidebar "What Americans believe and expect about the global size of religious groups" in this report are drawn from the November 2014 wave of Pew Research Center's American Trends Panel (ATP), a nationally representative panel of randomly selected U.S. adults living in households. This wave of the ATP was conducted Nov. 17 to Dec. 15, 2014 among 3,212 respondents (2,856 by web and 356 by mail). The margin of sampling error for the full sample of 3,212 respondents is plus or minus 2.3 percentage points.

At the time the November 2014 wave of the ATP was conducted, respondents who self-identified as internet users (representing 89% of U.S. adults) participated in the panel via monthly self-administered web surveys; those who did not use the internet participated via telephone or mail. The panel is managed by Abt SRBI.

All members of the American Trends Panel as of November 2014 were originally recruited from the 2014 Political Polarization and Typology Survey, a large (n=10,013) national landline and cellphone random-digit dial (RDD) survey conducted Jan. 23 to March 16, 2014, in English and Spanish. At the end of that survey, respondents were invited to join the panel. The invitation was extended to all respondents who use the internet (from any location) and a random subsample of respondents who do not use the internet.<sup>19</sup>

Of the 10,013 adults interviewed, 9,809 were invited to take part in the panel. A total of 5,338 agreed to participate and provided either a mailing address or an email address to which a welcome packet, a monetary incentive and future survey invitations could be sent. Panelists also receive a small monetary incentive after participating in each wave of the survey.

The ATP data were weighted in a multistep process that begins with a base weight incorporating the respondents' original survey selection probability and the fact that some panelists were subsampled for invitation to the panel. Next, an adjustment was made for the fact that the propensity to join the panel and remain an active panelist varied across different groups in the sample. The final step in the weighting uses an iterative technique that matches gender, age, education, race, Hispanic origin and region to parameters from the U.S. Census Bureau's 2012 American Community Survey. Population density is weighted to match the 2010 U.S. Decennial Census. Telephone service is weighted to estimates of telephone coverage for 2014 that were projected from the National Health Interview Survey conducted from July to December 2013. It

<sup>&</sup>lt;sup>19</sup> When data collection for the 2014 Political Polarization and Typology Survey began, non-internet users were subsampled at a rate of 25%, but a decision was made shortly thereafter to invite all non-internet users to join. In total, 83% of non-internet users were invited to join the panel.

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also adjusts for party affiliation using an average of the three most recent Pew Research Center general public telephone surveys, and for internet use using as a parameter a measure from the 2014 Survey of Political Polarization. Sampling errors and statistical tests of significance take into account the effect of weighting. The Hispanic sample in the American Trends Panel is predominantly native born and English speaking.

The following table shows the unweighted sample sizes and the error attributable to sampling that would be expected at the 95% level of confidence for different groups in the survey:

Group	Unweighted sample size	Plus or minus
Total sample	3,212	2.3 percentage points
Ages 18-29	456	6.0 percentage points
30-49	875	4.4 percentage points
50-64	1,049	4.0 percentage points
65+	817	4.5 percentage points
Christian	2,223	2.7 percentage points
Unaffiliated	705	4.9 percentage points
Republican/lean Rep.	1,347	3.5 percentage points
Democrat/lean Dem.	1,625	3.2 percentage points

Sample sizes and sampling errors for other subgroups are available upon request.

In addition to sampling error, one should bear in mind that question wording and practical difficulties in conducting surveys can introduce error or bias into the findings of opinion polls.

The web component of the November 2014 wave had a response rate of 78% (2,856 responses among 3,663web-based individuals enrolled in the panel); the mail component had a response rate of 68% (356 responses among 521 non-web individuals enrolled in the panel). <sup>20</sup> Taking account of the response rate for the 2014 Survey of Political Polarization (10.6%), the cumulative response rate for the November 2014 ATP wave is 3.5%.

<sup>&</sup>lt;sup>20</sup> Prior to the October wave, 962 web panelists who had never responded were removed from the panel. Prior to the November wave, 37 mail panelists who had never responded were removed from the panel. The web response rate including these panelists would have been 62%. The mail response rate including these panelists would have been 64%.

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Since November 2014, several additional waves of the ATP have been conducted. For more information about the ATP, see <u>http://www.pewresearch.org/methodology/u-s-survey-research/american-trends-panel/</u>.