

SOUTH ASIA HEALTH ATLAS 2016

UNICEF Regional Office for South Asia



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UNICEF South Asia would like to acknowledge the support of Gavi, The Vaccine Alliance for our ongoing immunisation work and of the Bill & Melinda Gates Foundation for our ongoing work to save newborns.

Foreword

It is with great pleasure that I am writing this foreword to the *South Asia Health Atlas*. This *Atlas* does two important things for public health policy makers.

First, it highlights the importance of tackling newborn deaths and ensuring children are fully immunised. Newborn death rates are too high in South Asia and we must not let up in our quest to ensure that no family experiences the tragedy of losing a newborn baby. We also know that life is more than just surviving. Increasingly we talk about surviving, thriving and transforming. Immunisation offers an unrivalled opportunity to allow children to thrive. It is still, perhaps, the best public health intervention we have ever had. Not only does it prevent disease and the ensuing suffering and cost to families, it also allows children to play and be healthy, maybe being part of a local early childhood development centre. The cost issue is also real for families, not just the cost of seeking care for vaccine preventable diseases, but costs also constitute time, travel and lost employment income. The *Atlas* highlights the fact that challenges relating to newborn health and under-immunisation remain in the region.

Second, this *Atlas* highlights the usefulness of geospatial mapping for policy making. In today's world policy makers are inundated with information. Reports, policy briefs, data, and more data! It is frequently difficult to prioritise and make evidence based decisions. Mapping of deprivations and potential correlates offers a fast and accessible picture of the problems we face. Be it the associations between adolescent birth rates and newborn deaths, or immunisation and under five deaths, mapping offers a quick insight to the problems in a highly visual way and allows us to highlight public health problems in an engaging and informative manner.

I trust you will find these maps useful, be it for discussions with policy makers or in other meetings or online. I look forward to working with you in partnership to continue to improve the lives of children in South Asia.



Jean Gough
Regional Director, ROSA

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Regional maps

The regional maps included in the *South Asia Health Atlas* show the big problems and the differences between nations. South South cooperation is increasingly important and allows cross-country learning about successes in South Asia. Nepal, Bangladesh and Bhutan have made remarkable progress in immunisation given the other challenges they face in public health. It shows what can be done when there is detailed attention to strengthening the immunisation system. In the *Atlas* we use the third dose of diphtheria, pertussis and tetanus vaccine (DPT3) as an insight into overall immunisation rates. The rationale for this is that if a child is brought to the health centre three times within the first year of life to receive DPT, she has probably received her other recommended vaccines as well. Measurement of DPT3 also provides an insight into the overall strength of the health system. About one in seven children in South Asia remain under-immunised, and whilst issues such as poor demand play a part, many of the problems could be solved by better planning and management of health systems.

Newborn death rates are high in most South Asia countries and the region as a whole is off-track to achieve the sustainable development goal target by 2030. Pakistan, Afghanistan

and India have the biggest challenges and annual rates of reduction in these three countries need to see very significant improvements in the next few years. Solutions are not generally expensive, such as the application of chlorhexidine to the umbilical cord to prevent infections or early initiation of breastfeeding, but they also require systems for training healthcare workers, procurement of supplies and monitoring interventions over time as well as taking corrective actions where needed.

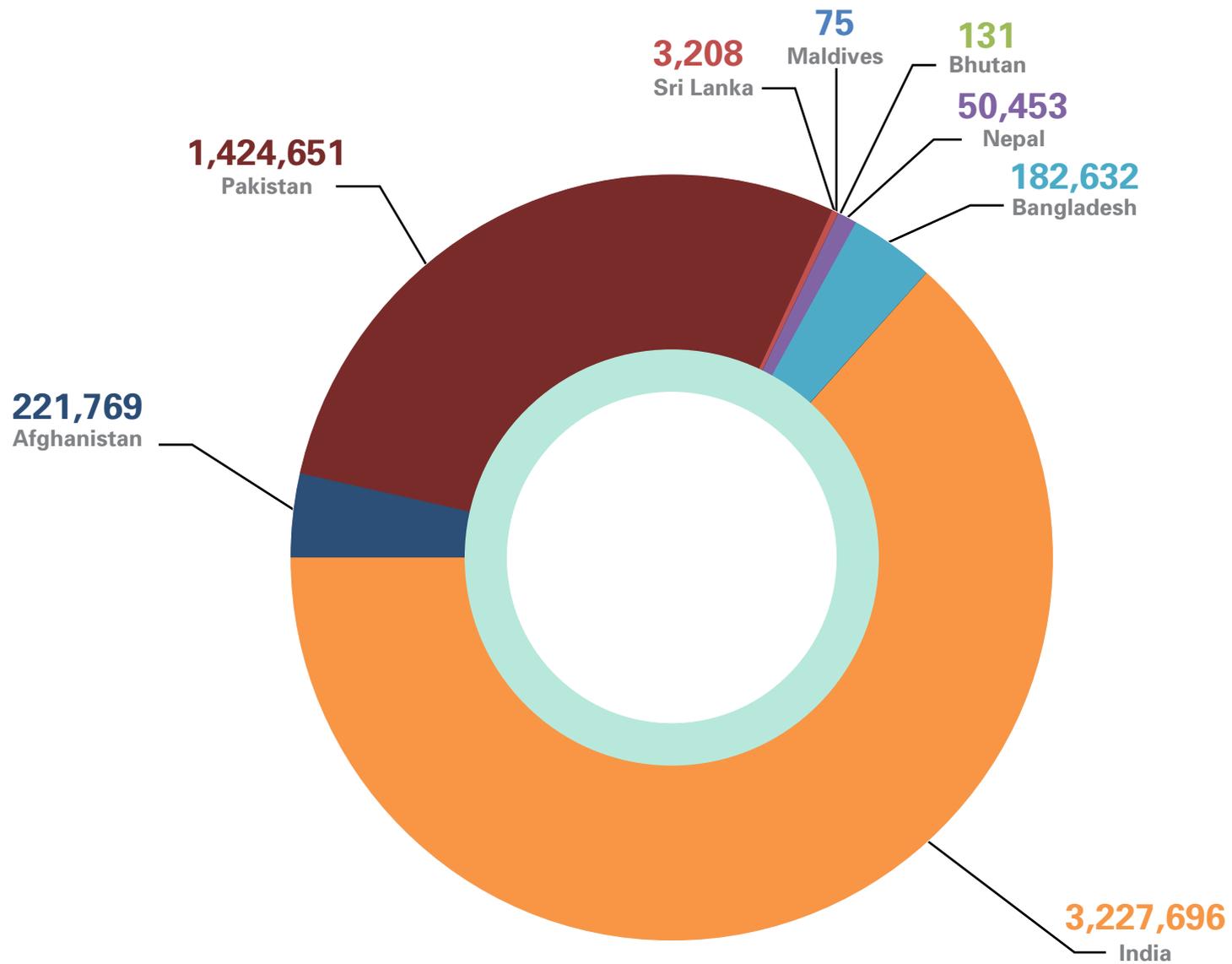
In this part of the *Atlas* we have used the relatively under-used technique of ring mapping to highlight associations. It shows what increasing immunisation rates could mean for under five death rates of children in South Asia, and the possible links between child marriage, female literacy and newborn death rates. Our maps also show that countries with the highest newborn death rates struggle the most with financing the health system and staffing it with the skilled professionals needed for sustainable change over time.



Newborns in a UNICEF supported health centre in Jalalabad province, Afghanistan

The number of under-immunised children in South Asia countries in 2015

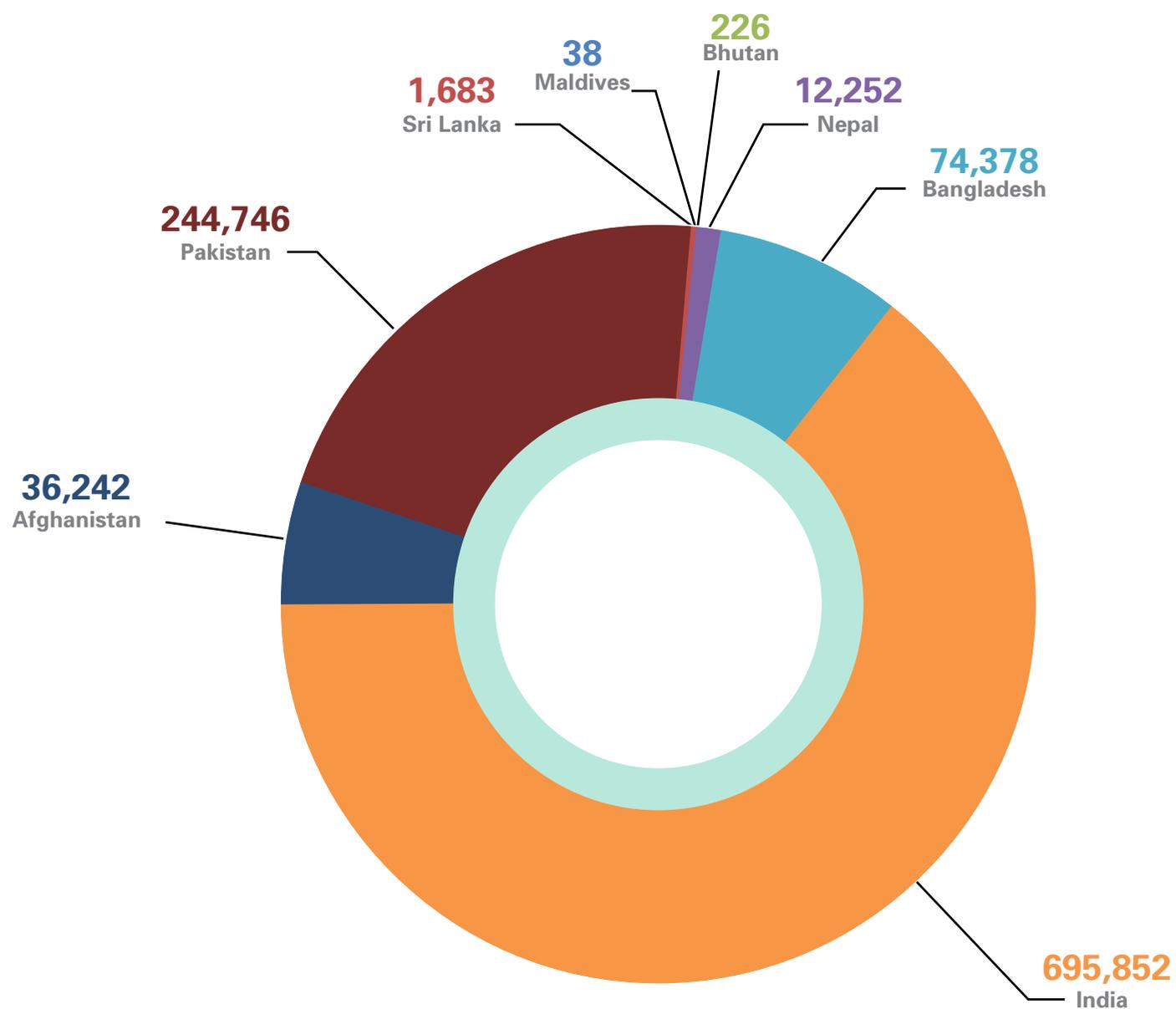
In 2015, more than 5 million children in South Asia did not receive their third dose of DPT3.



Data Source: World Health Organisation and UNICEF 2015 estimates of immunisation coverage

The number of newborns who died in South Asia countries in 2015

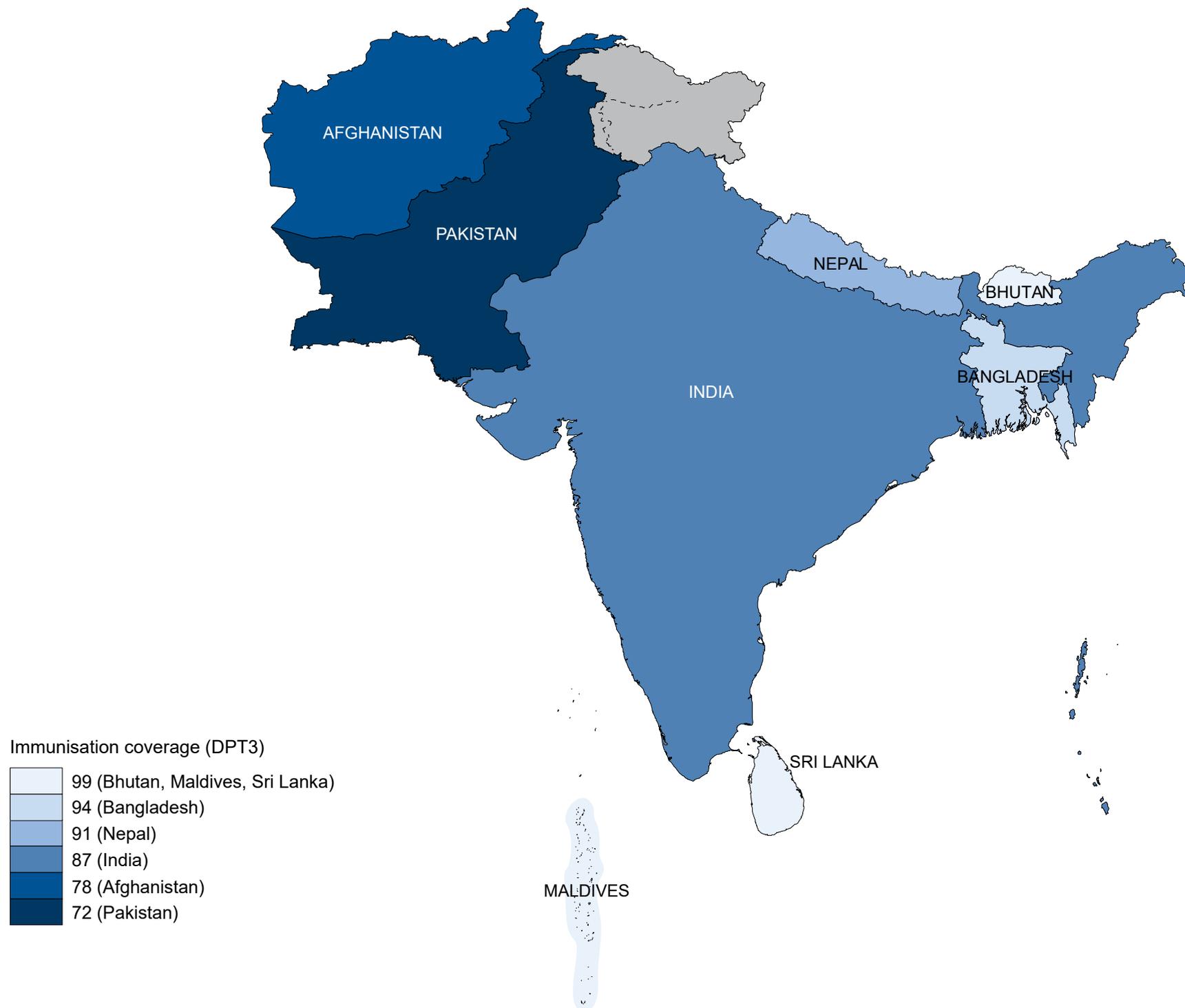
More than one million newborns died in South Asia in 2015. Most of these deaths occurred in India, Pakistan and Bangladesh.



Data Source: United Nations Inter agency Group for Child Mortality Estimation (UNIGME) 2015

Immunisation coverage in South Asia 2015

Progress in immunisation in South Asia is strong, but many children still do not receive all the lifesaving vaccinations they need

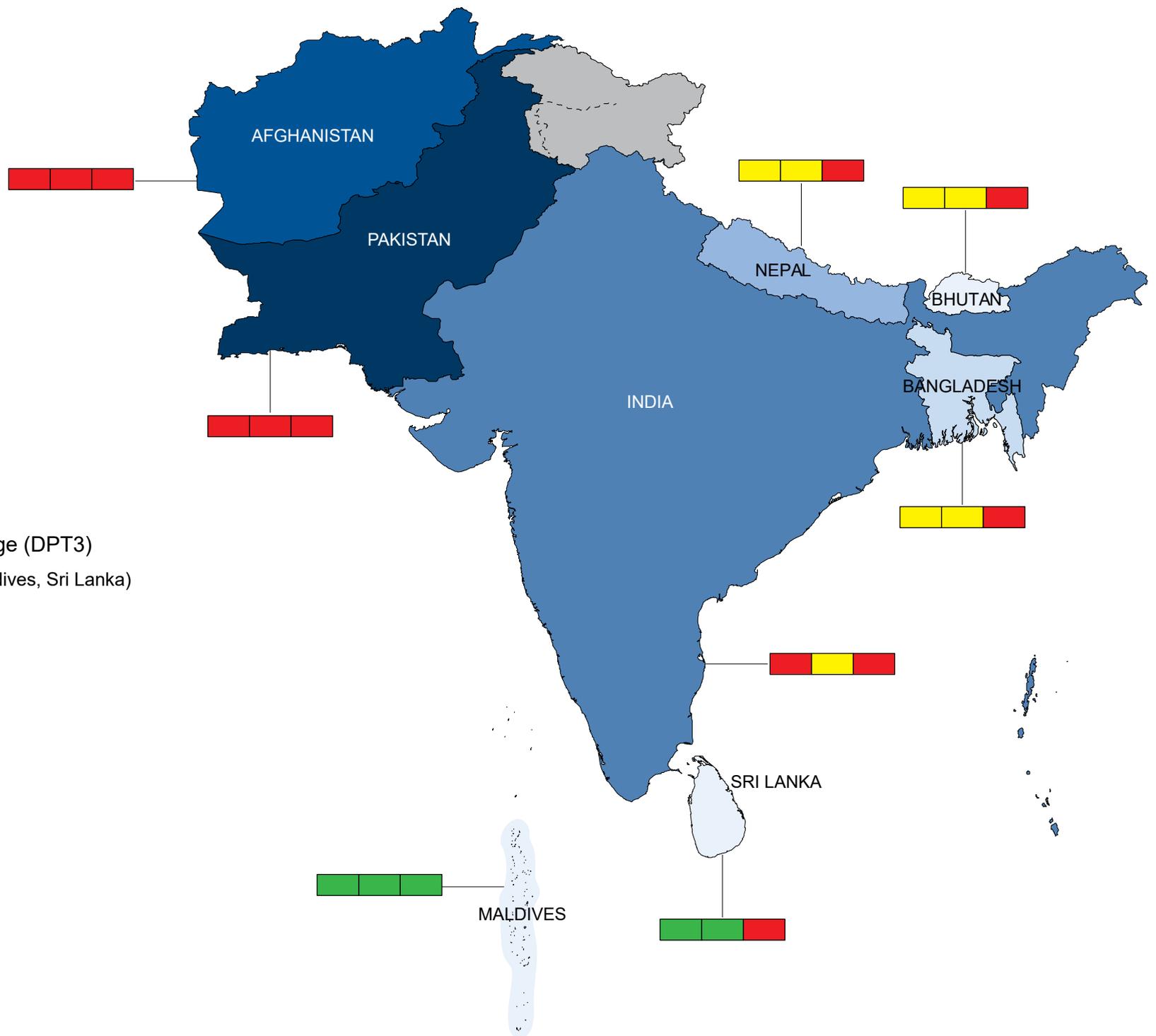


Data Source: World Health Organization and UNICEF 2015 estimates of immunisation coverage

Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

Immunisation coverage in South Asia in 2015

Countries with higher levels of DPT3 coverage tend to have lower deaths among young children and better female literacy



Immunisation coverage (DPT3)

99 (Bhutan, Maldives, Sri Lanka)
94 (Bangladesh)
91 (Nepal)
87 (India)
78 (Afghanistan)
72 (Pakistan)

Ring Key

Under 5 mortality per 1000 live births	Female literacy (%)	Out of pocket expenditure (%)
≤10	≥90	≤19
11-39	50-89	N/A
≥40	≤49	≥20

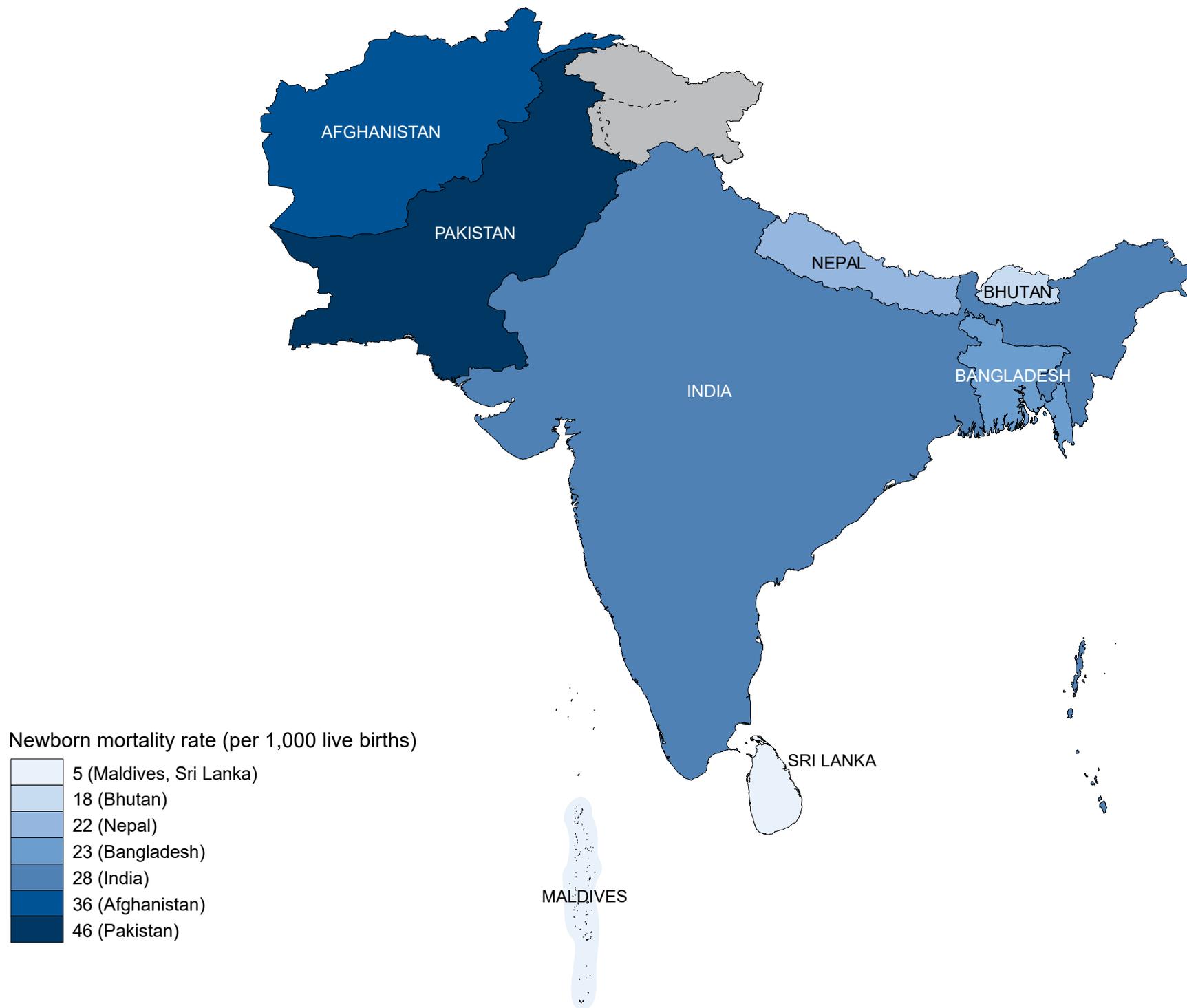
↑ Progress

Data Sources:
 UNICEF (2016) State of the World's Children; UNESCO Institute of Statistics Data Centre and World Health Organisation Global Health Expenditure database

Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

Newborn mortality in South Asia 2015

South Asia must accelerate progress on newborn deaths in order to achieve the 2030 Sustainable Development Goal target of 12 deaths per 1,000 live births

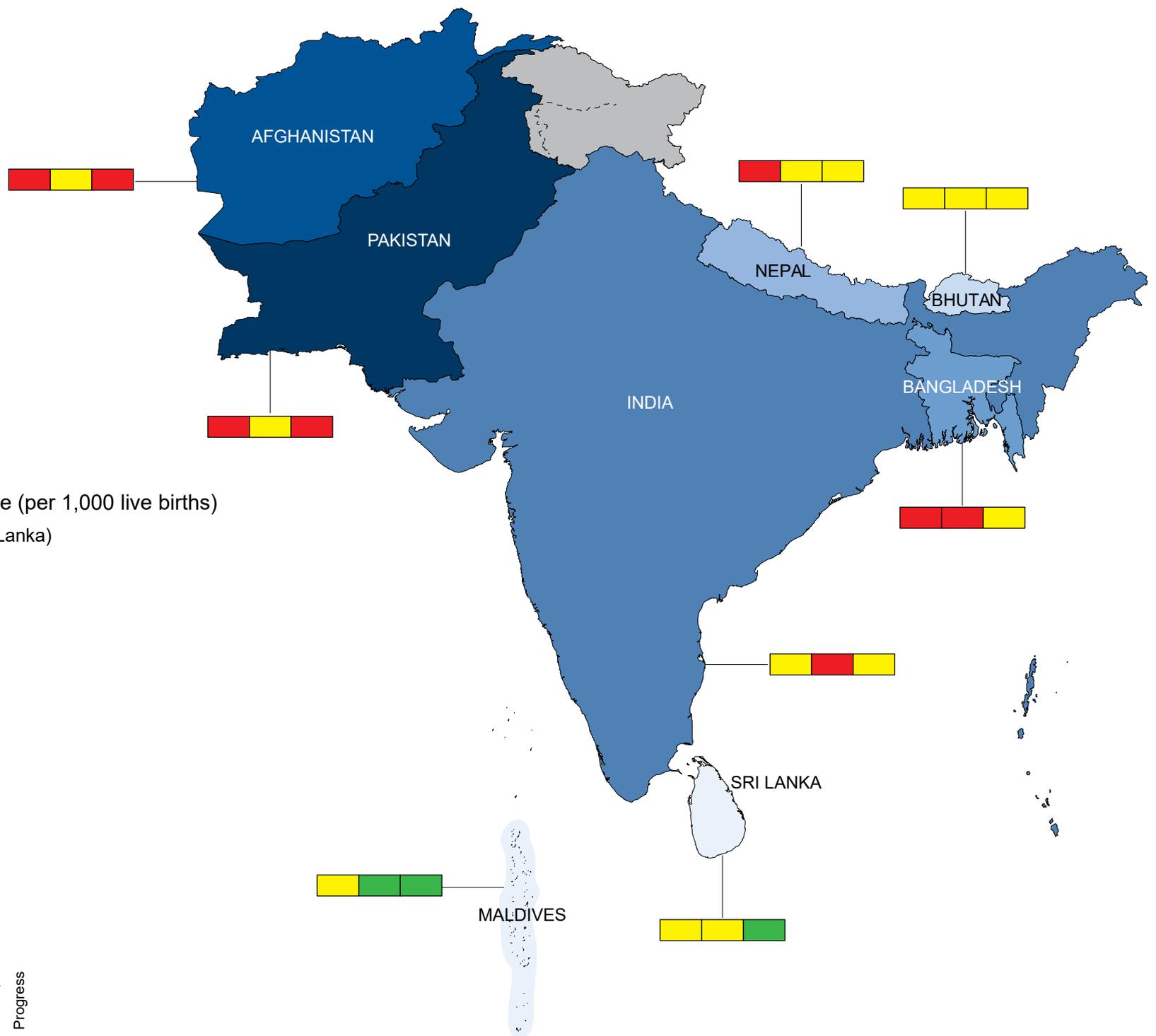


Data Source: UNICEF (2016) State of the World's Children

Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

Newborn mortality in South Asia 2015

South Asia countries with high newborn mortality also have problems with adolescent births, child marriage and female literacy



Newborn mortality rate (per 1,000 live births)



Ring Key



Adolescent births per 1000 population	Child marriage (%)	Female literacy (%)
≤ 9	≤ 9	≥ 90
10-39	10-39	50-89
≥ 40	≥ 40	≤ 49

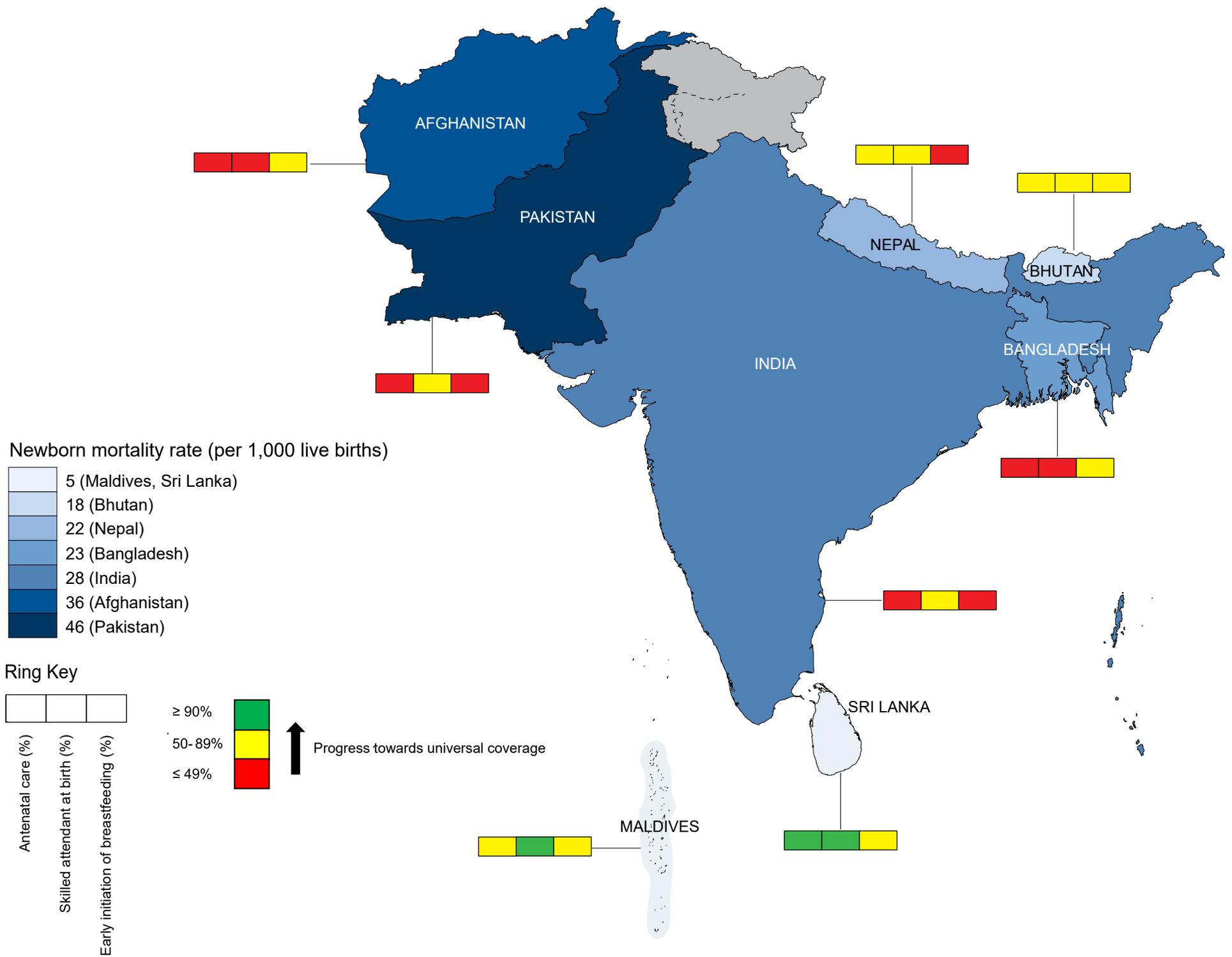


Data Sources:
 UNICEF (2016) State of the World's Children;
 UNESCO Institute of Statistics Data Centre and United Nations Population Fund World
 Population Dashboard

Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

Newborn mortality in South Asia 2015

South Asia countries with high newborn mortality need to ensure skilled healthcare workers support women in pregnancy and at birth

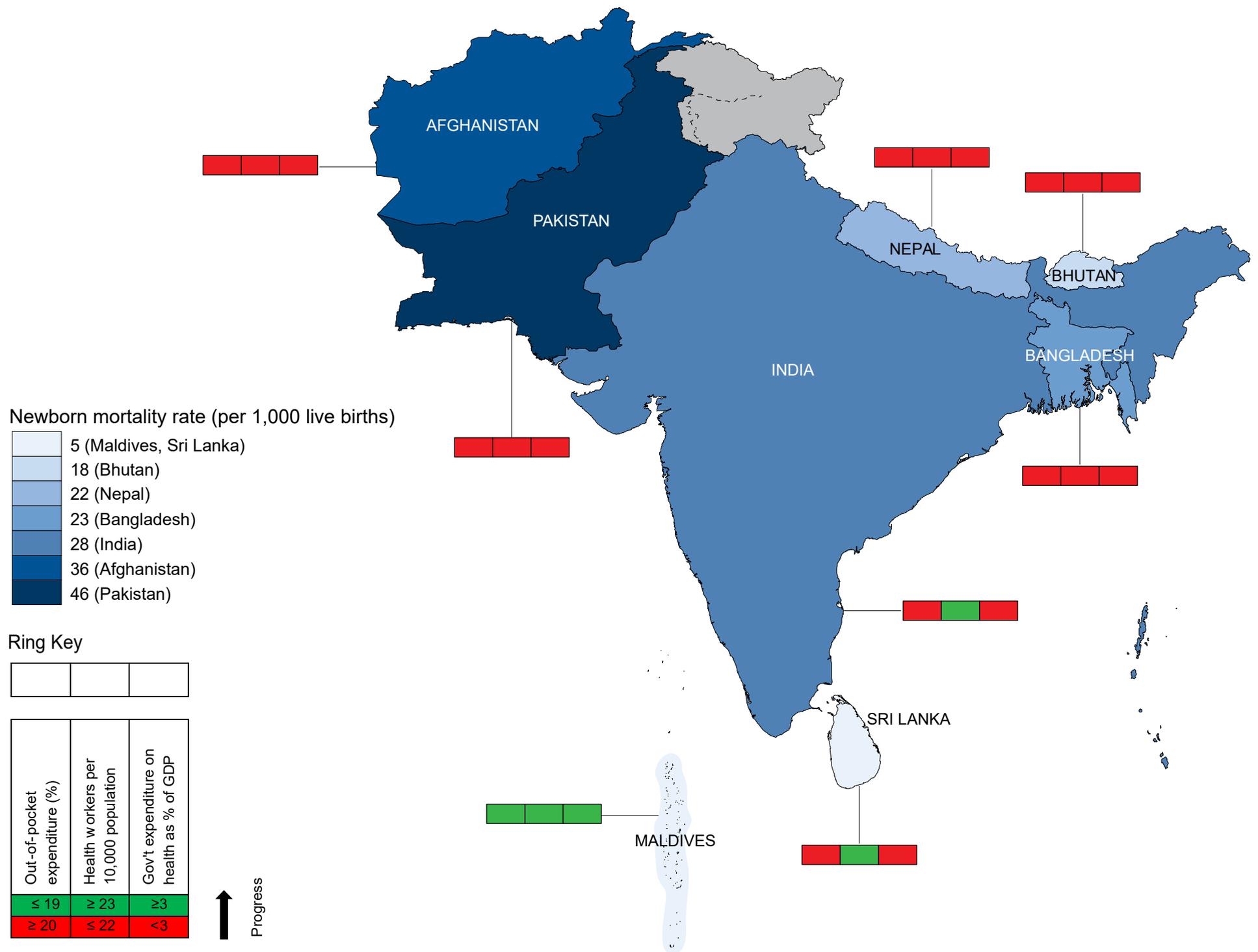


Data Source: UNICEF (2016) State of the World's Children

Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

Newborn mortality in South Asia 2015

Almost all countries in South Asia have not met global aspirations for financing and staffing health systems



Data Sources:
 UNICEF (2016) State of the World's Children; World Health Organisation and UNICEF 2015 estimates of immunisation coverage and WHO and World Bank (2015) Tracking Universal Health Coverage. First Global Monitoring Report

Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

Country maps



A lady health worker speaks with women and their children about the importance of immunization, at the basic health unit in Damuanna Village in Sheikhpura District, in Punjab Province, Pakistan

Issues related to newborns have received renewed focus since the launch of the global Every Newborn Action Plan in 2014. The main causes of newborn deaths can be reduced by increasing antenatal care visits, ensuring a skilled attendant at birth, and promoting early initiation of breastfeeding. Skilled birth attendance and delivery in facilities marry closely to a newborn's chances of survival.

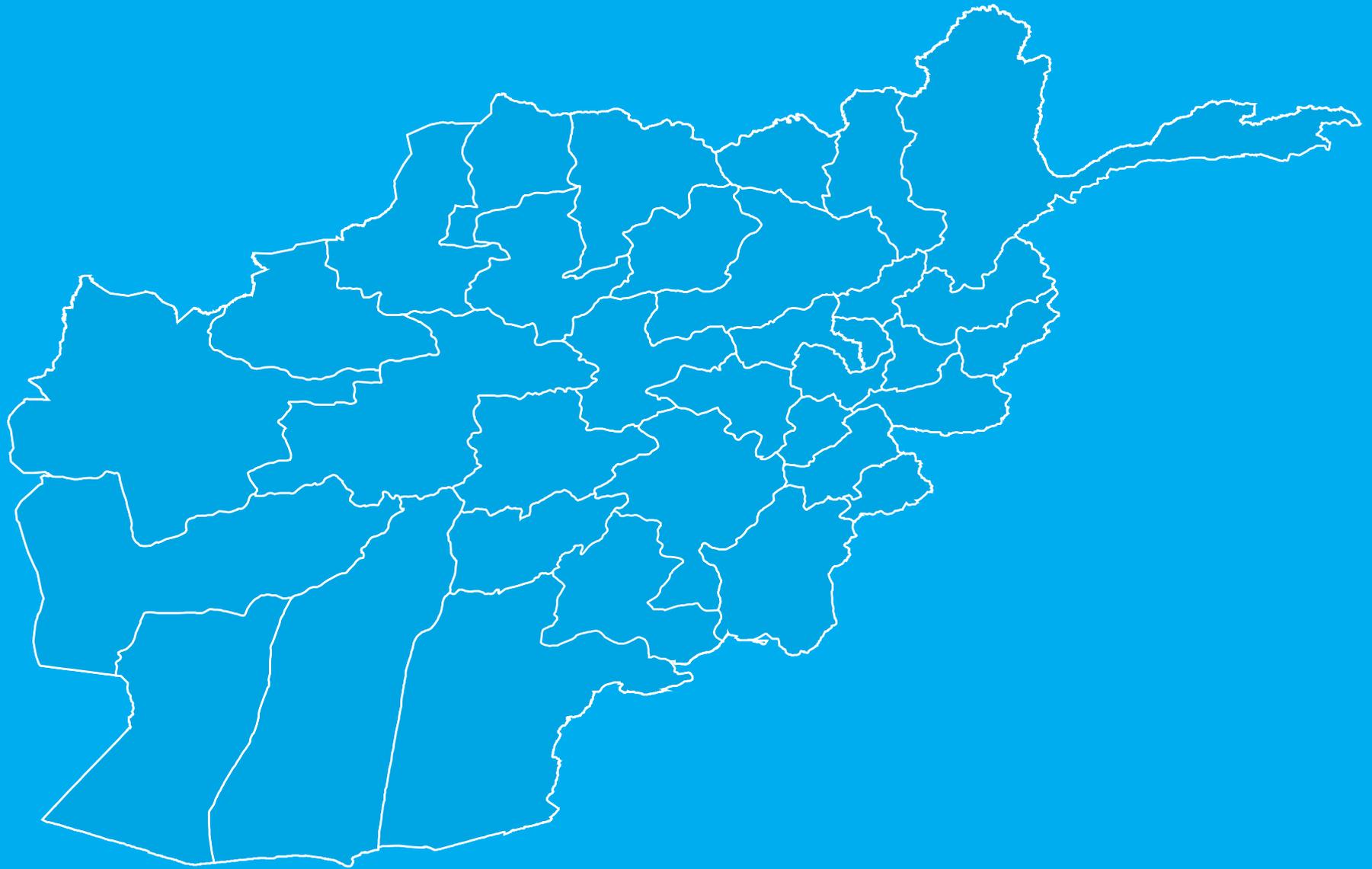
Yet, overall deliveries with skilled birth attendance are less than 50 percent in Afghanistan and Bangladesh, and between 50 percent and 60 percent in India, Nepal, and Pakistan. The maps show how these gaps are accentuated even further in the lowest performing geographical areas, for example ranging from 1.1 percent in Nooristan Province to 84.5 percent in Kabul Province, Afghanistan. Universal health coverage is clearly needed. But, that does not mean doing the same for everyone. The most deprived areas need a disproportionate focus, in terms of budgetary support, human resources and infrastructure.

In addition, 5.1 million of 19 million under-immunised children globally live in South Asia. Inequities in immunisation among different geographical areas are also commonplace, ranging from, for example, 27.1 percent in Balochistan to 91.2 percent in ICT Islamabad, Pakistan. Improving immunisation systems

relies not just on remunerated and motivated vaccinators close to the people who need vaccines, but also infrastructure for vaccine storage and delivery that requires ongoing monitoring and training to ensure the highest possible standards. Planning is key and the 'reaching every community' (REC) approach offers an excellent opportunity for ensuring careful planning and monitoring. Behaviour change is also needed, and communication for development interventions in immunisation can help – too often we don't know enough about why a vaccine is not being given, or why it is refused.

The maps bring to life the issues and in this section we burrow into the detail country by country with the lowest reliable geographical data available. This enables highlighting the deprivations within nations, both for the key areas of immunisation and newborn death rates, and underlying contributing factors. Geographical inequities are commonplace, and some of the gaps are very wide despite solutions being well known.

Afghanistan

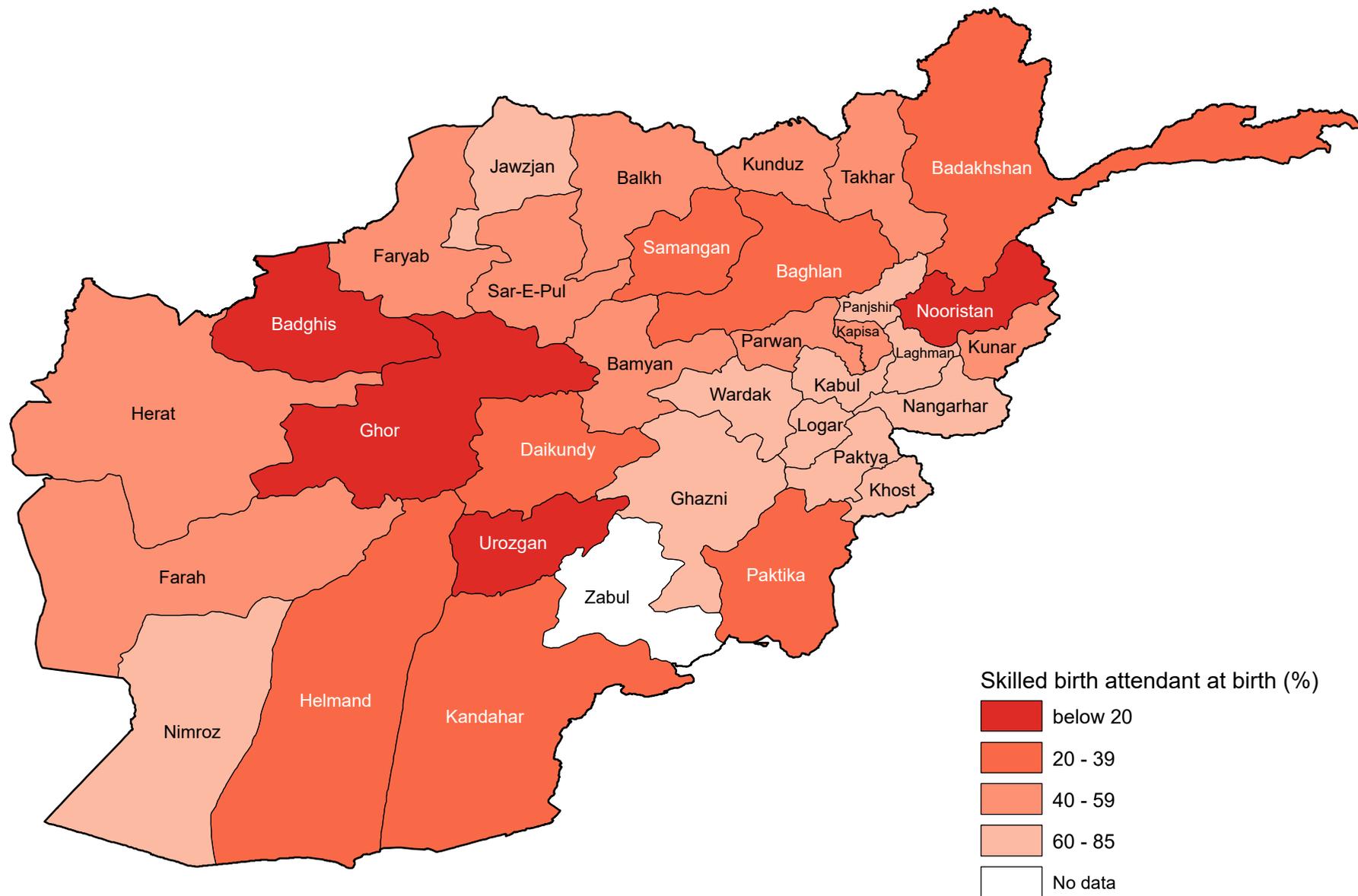


Antenatal care coverage in Afghanistan by province

Most women do not receive the recommended four antenatal care visits during pregnancy

Skilled birth attendance in Afghanistan by province

Women in the eastern part of the country are more likely to benefit from a skilled provider at birth

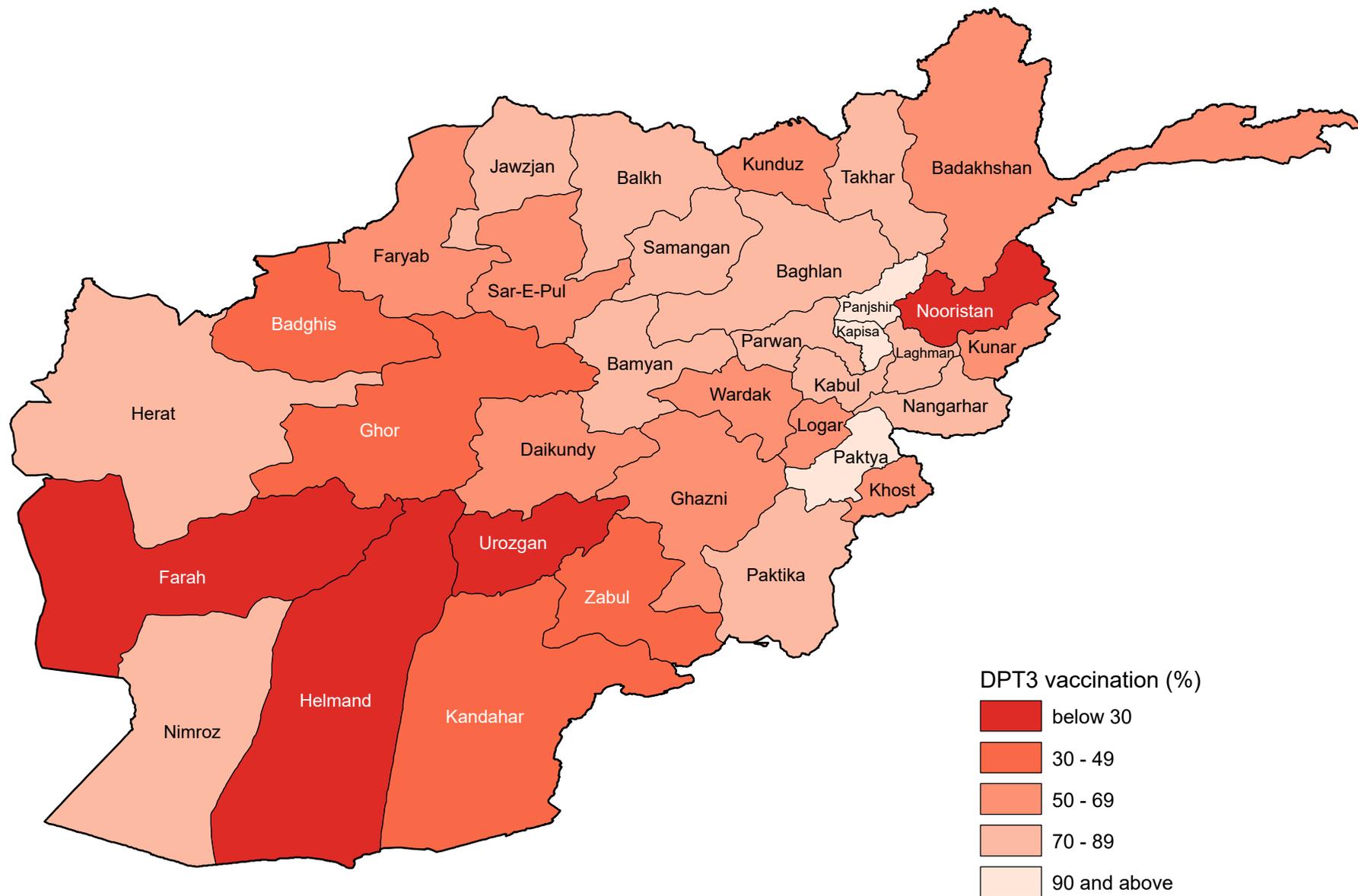


Data Source: Afghanistan Demographic and Health Survey Key Indicators Report (2015)

Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

DPT3 vaccination coverage in Afghanistan by province

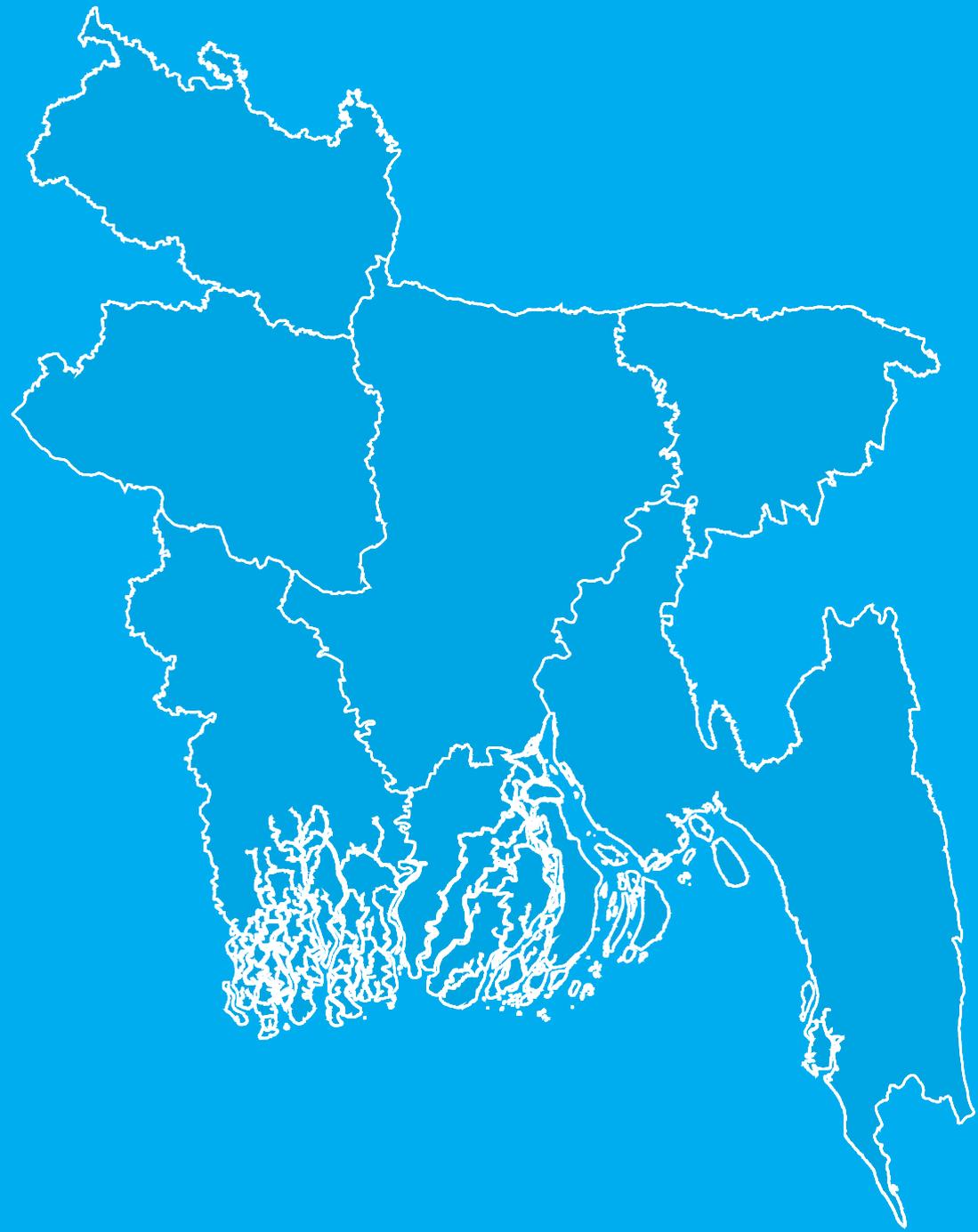
Immunisation coverage among children ages 12-23 months varies widely across the country



Data Source: National Immunisation Coverage Survey Afghanistan (2013)

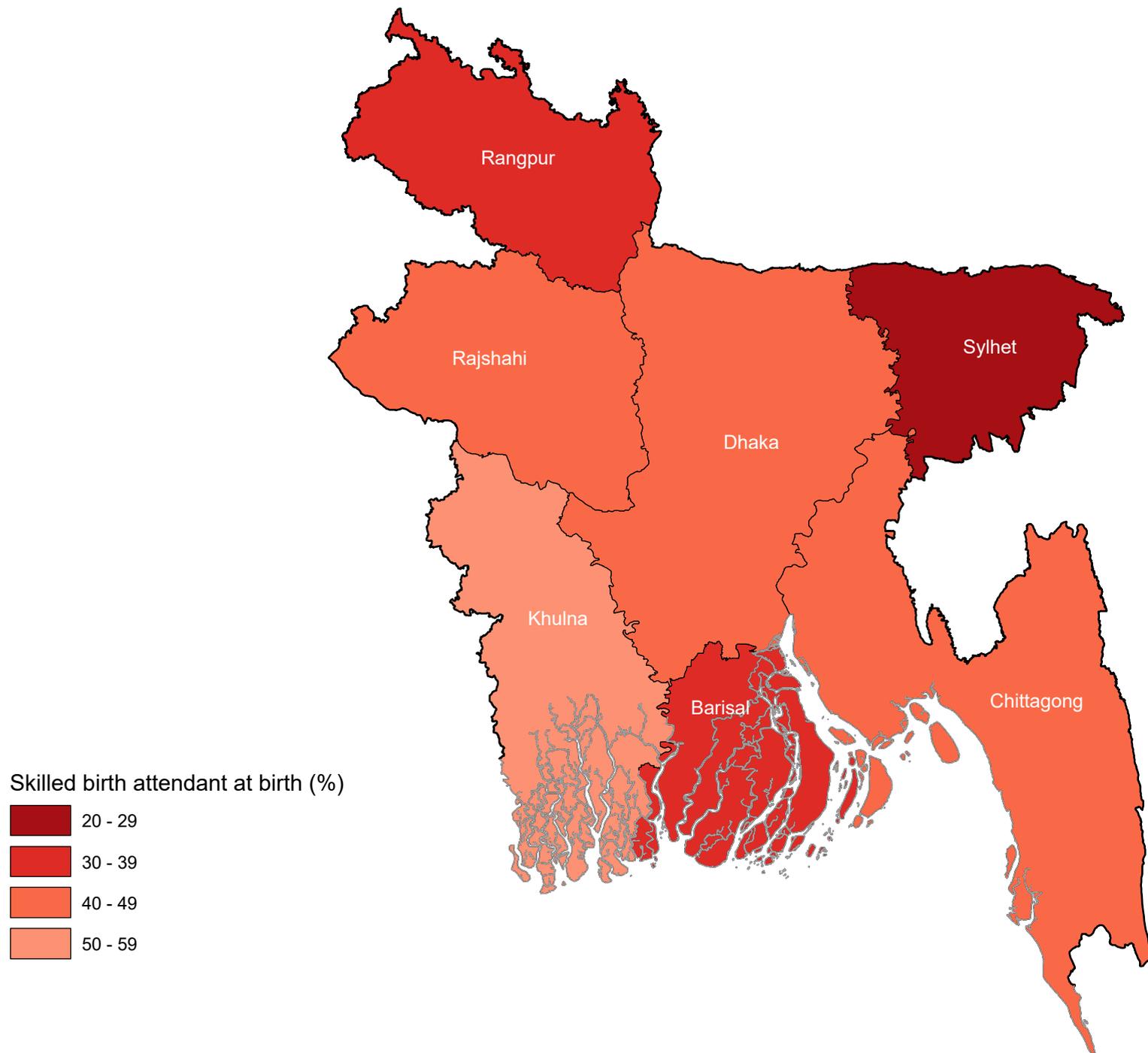
Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

Bangladesh



Skilled birth attendance in Bangladesh by division

Most women still do not benefit from having a skilled provider at birth

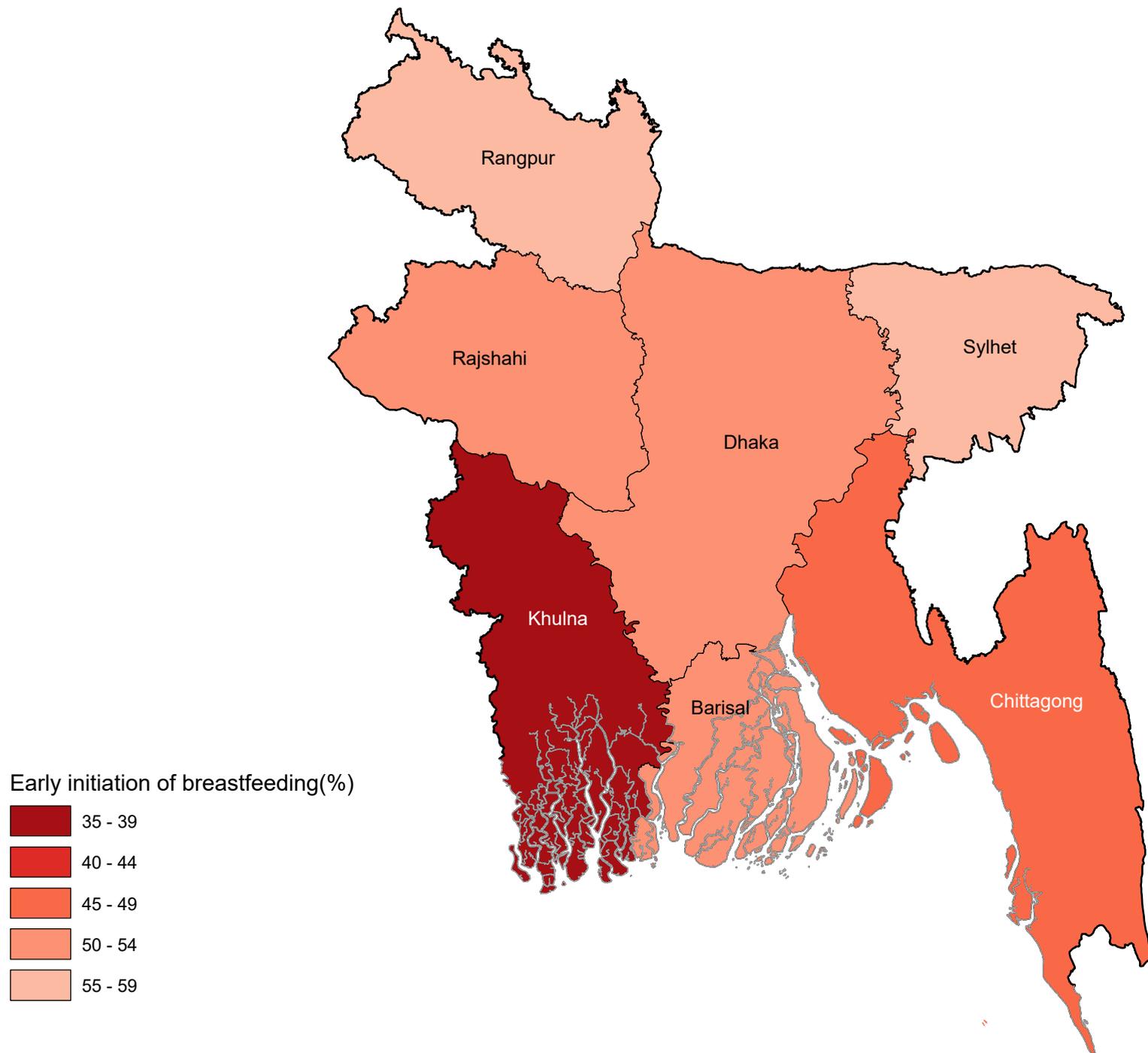


Data Source: Bangladesh Demographic and Health Survey 2014 (March 2016 version)

Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

Early initiation of breastfeeding in Bangladesh by division

Only between 40 to 60 percent of newborns are breastfed within one hour of birth
across the country

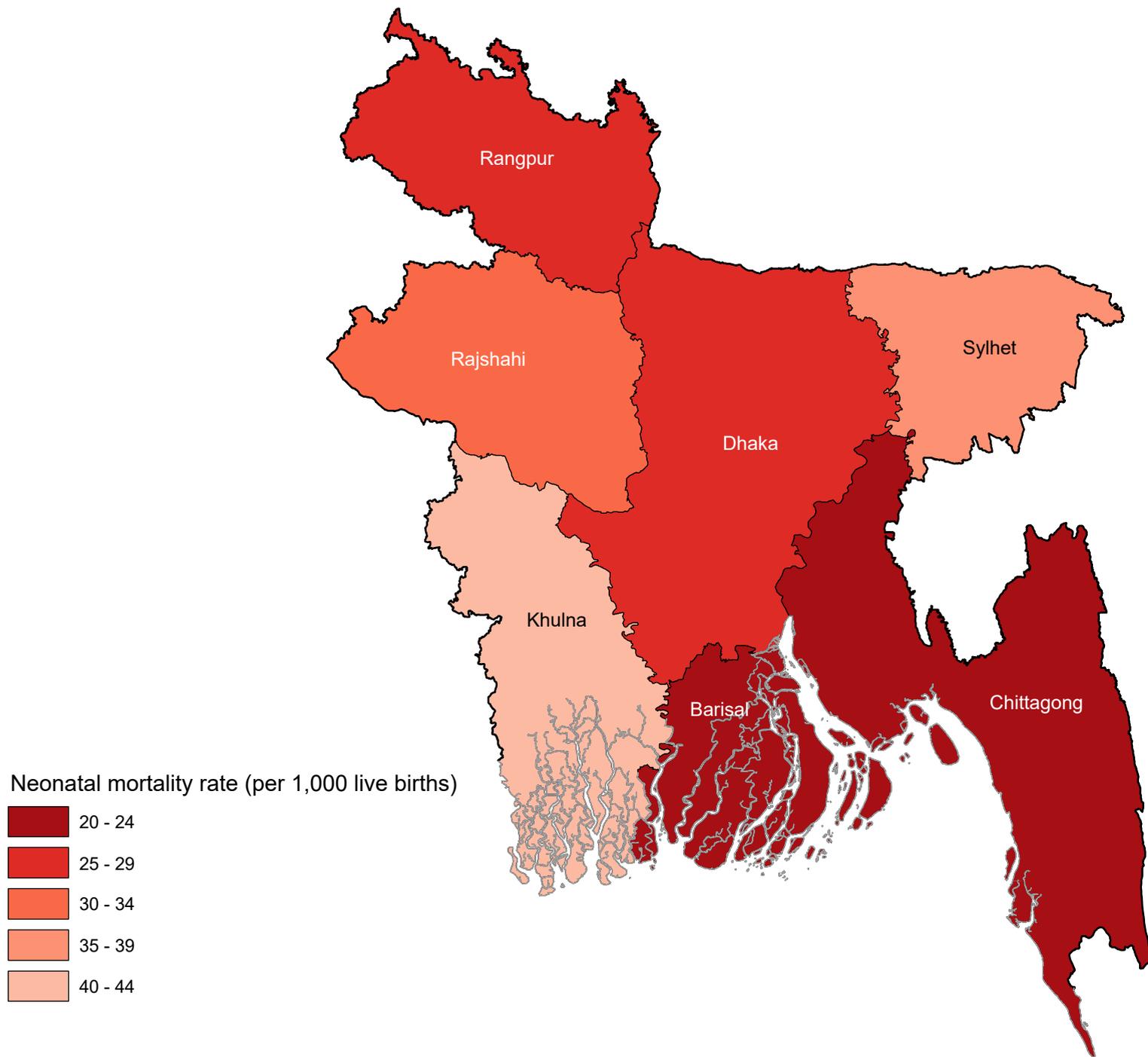


Data Source: Bangladesh Demographic and Health Survey 2014 (March 2016 version)

Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

Newborn mortality rate in Bangladesh by division

No division has yet met the Sustainable Development Goal target of
12 deaths per 1000 live births



Data Source: Bangladesh Demographic and Health Survey 2014 (March 2016 version)

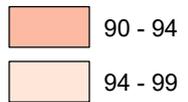
Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

DPT3 vaccination coverage in Bangladesh by division

Across the country, immunisation has been a huge success



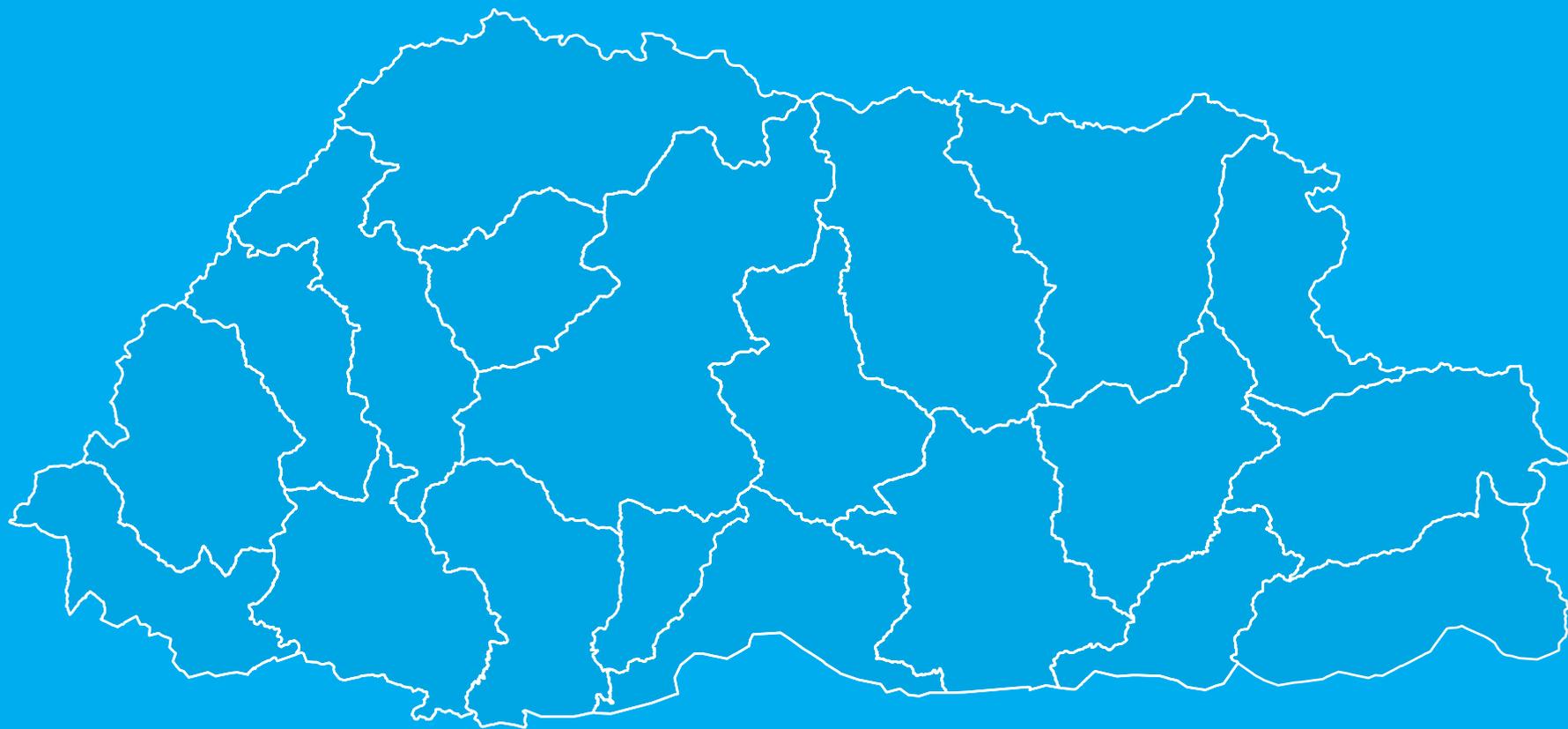
DPT3 vaccination



Data Source: Bangladesh EPI Coverage Evaluation Survey (2014)

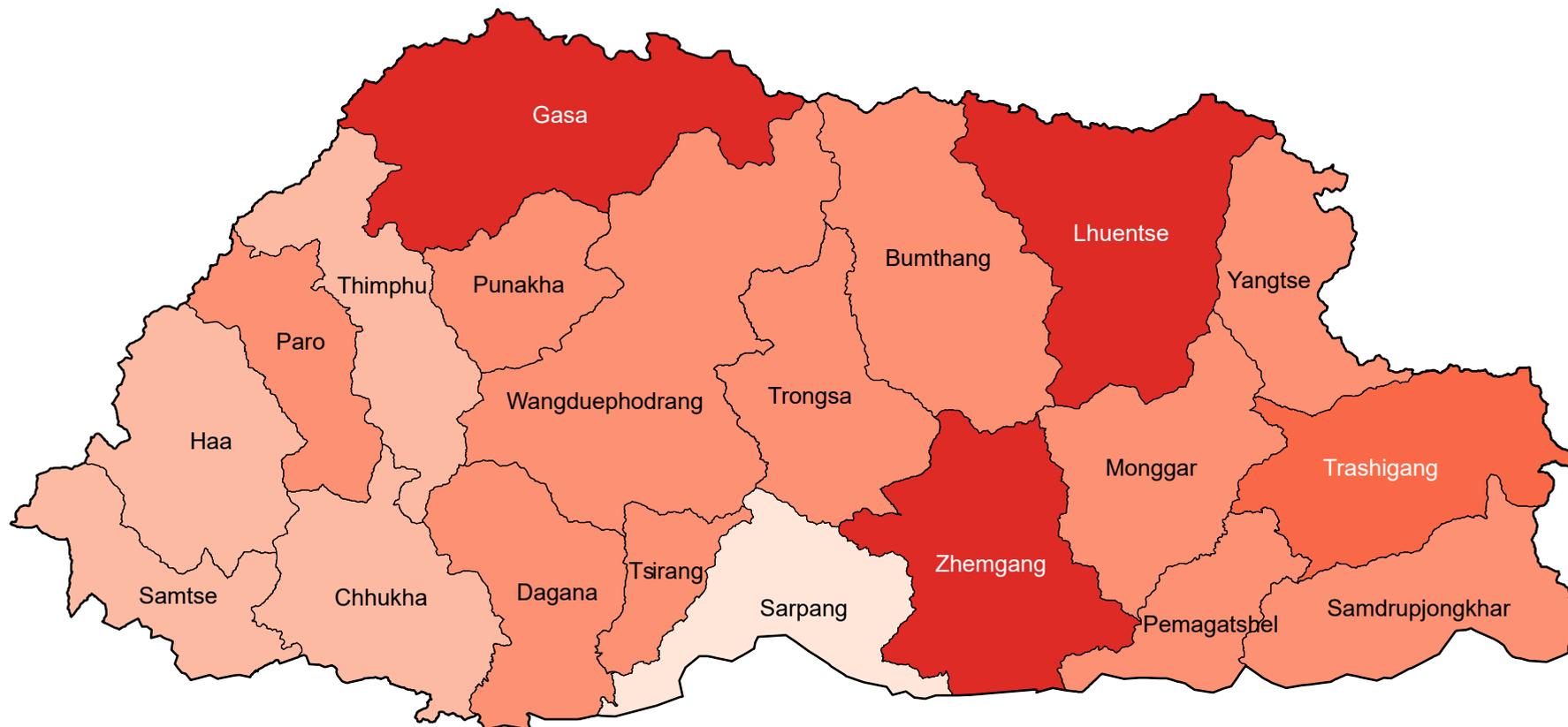
Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

Bhutan

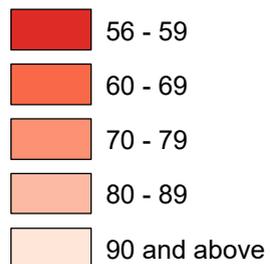


Antenatal care coverage in Bhutan by dzongkhag

The majority of women receive the recommended four antenatal care visits during pregnancy



Antenatal care coverage at least 4 times (%)

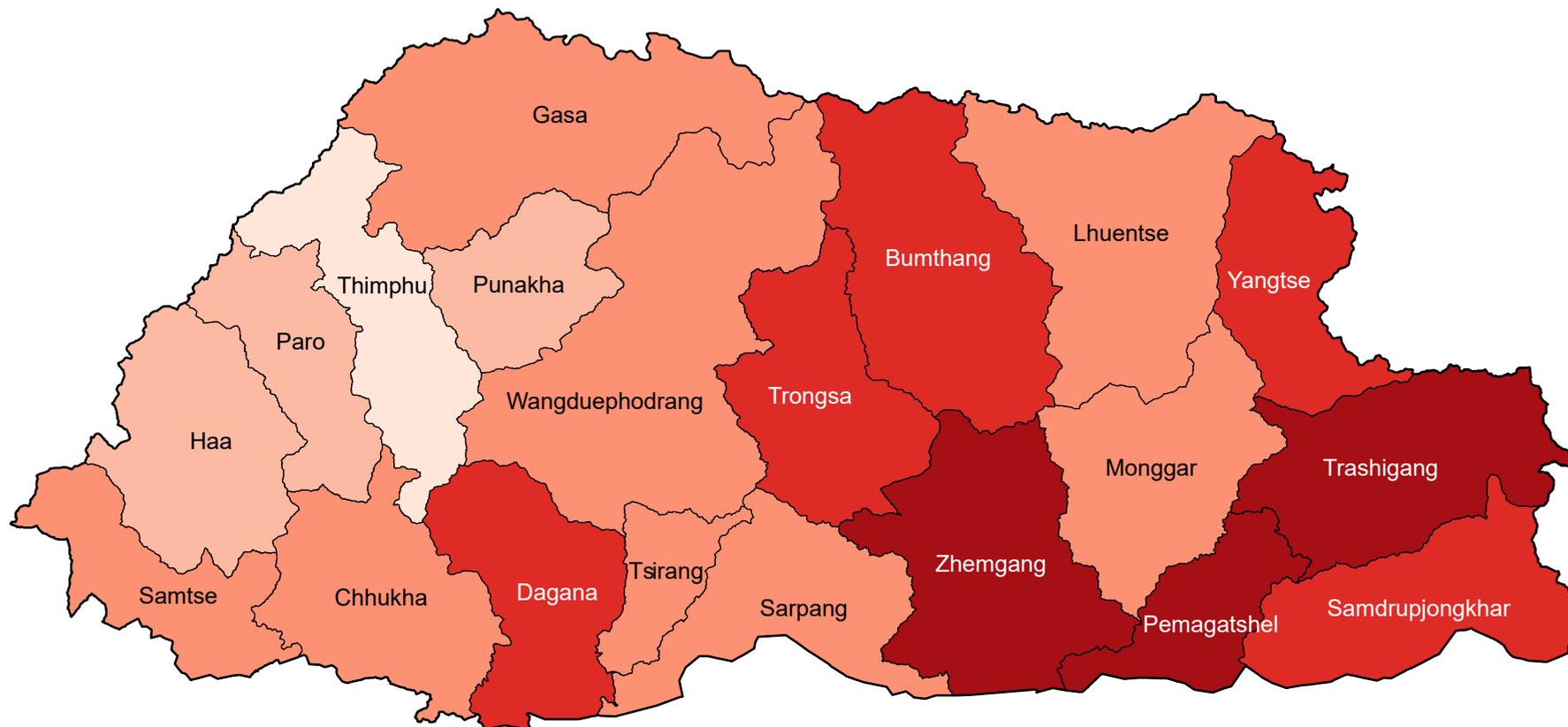


Data Source: Bhutan Multiple Indicator Survey (2010)

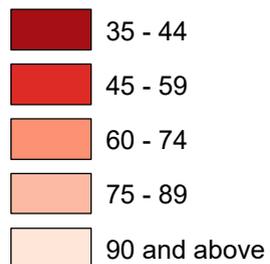
Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

Skilled attendant at birth in Bhutan by dzongkhag

Access to a skilled provider at birth varies widely across the country



Skilled birth attendant at birth (%)

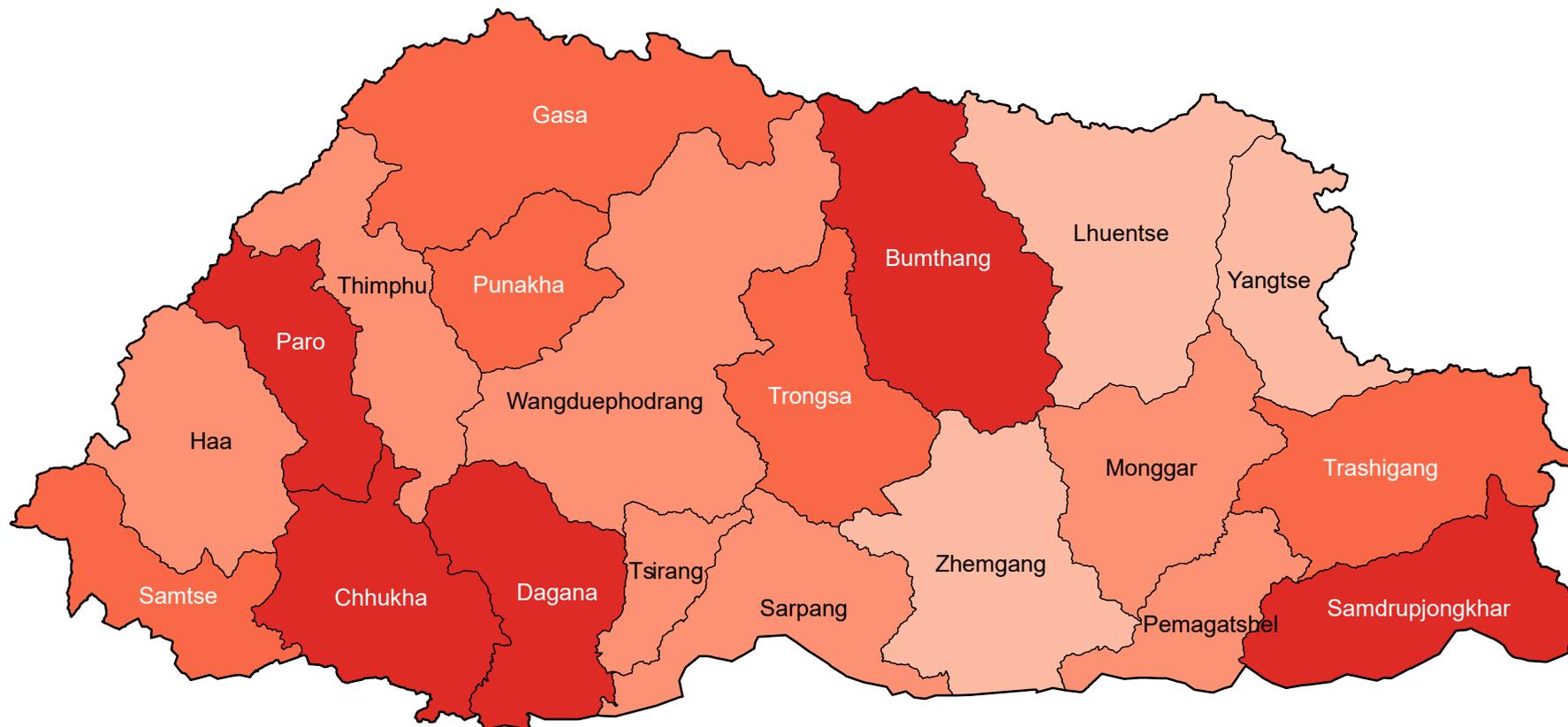


Data Source: Bhutan Multiple Indicator Survey (2010)

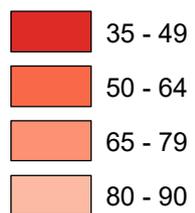
Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

Early initiation of breastfeeding in Bhutan by dzongkhag

There is wide variation across the country among newborns that are breastfed within one hour of birth



Early initiation of breastfeeding (%)



Data Source: Bhutan Multiple Indicator Survey (2010)

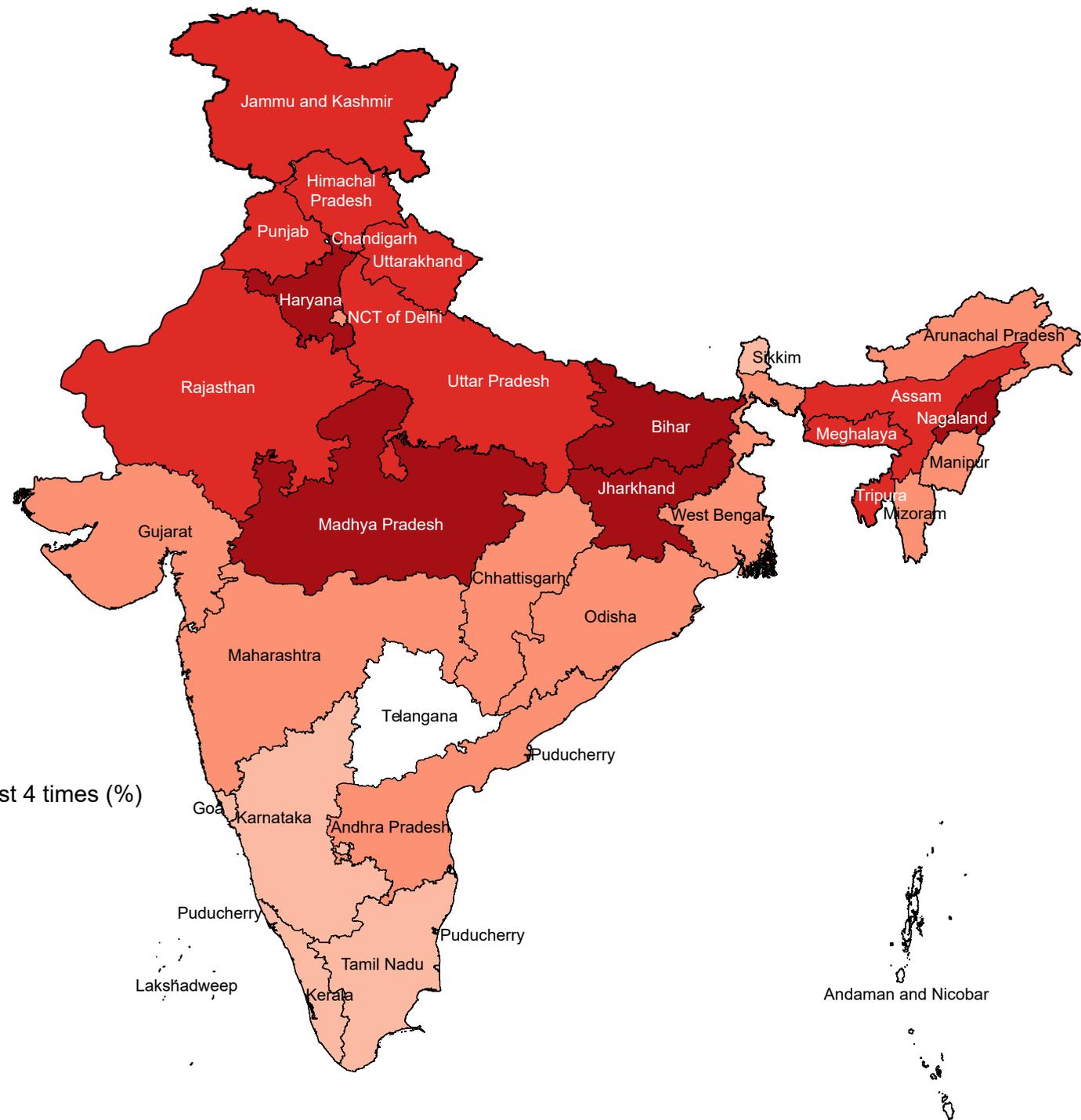
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India

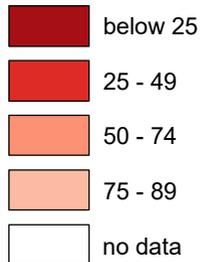


Antenatal care coverage in India by state

Women living in the north and eastern parts of the country are less likely to receive the recommended four antenatal care visits during pregnancy



Antenatal care coverage at least 4 times (%)



Data Source: Rapid Survey on Children (RSOC) 2013-14 National Report

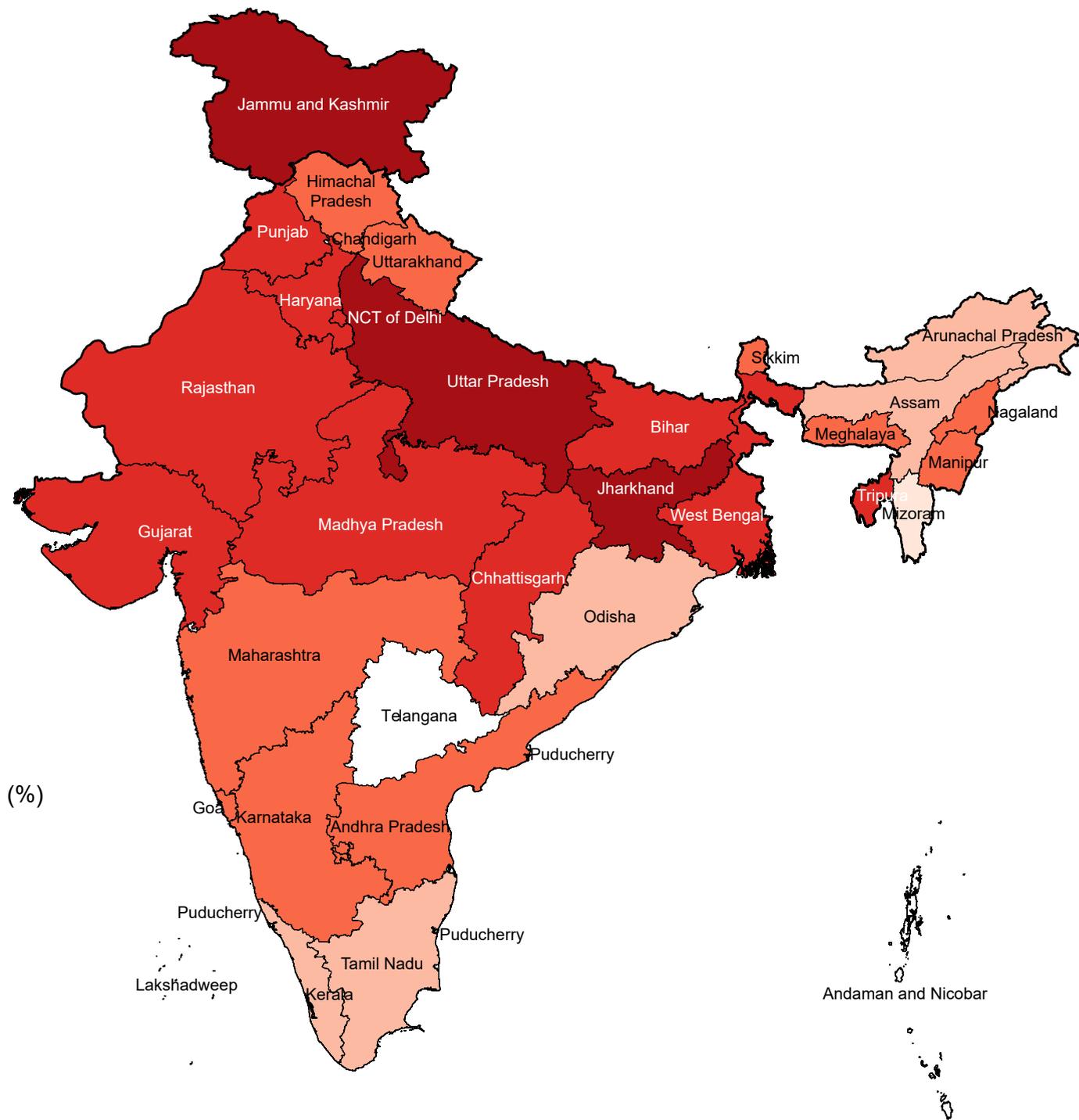
Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

Skilled birth attendance in India by state

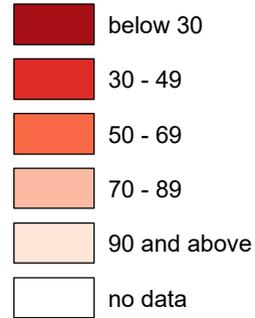
Women in the northern and eastern parts of the country are less likely to benefit from a skilled provider at birth

Early initiation of breastfeeding in India by state

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Early initiation of breastfeeding (%)

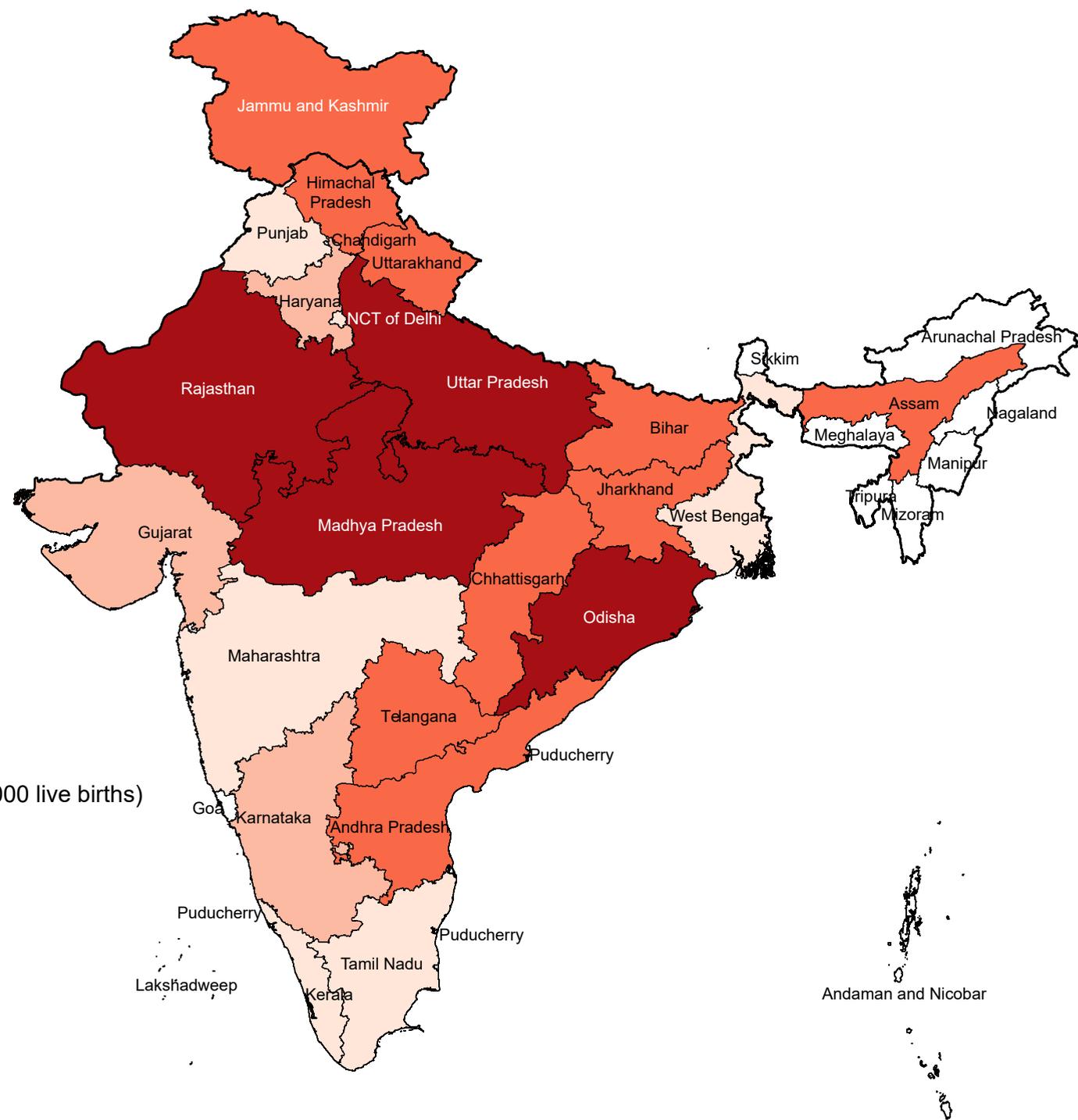


Data Source: Rapid Survey on Children (RSOC) 2013-14 National Report

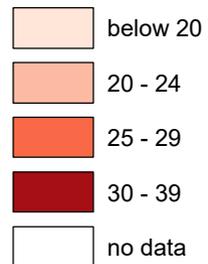
Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

Newborn mortality rate in India by state

Babies born in a few states in the southern part of the country are more likely to survive their first 28 days of life



Neonatal mortality rate (per 1,000 live births)

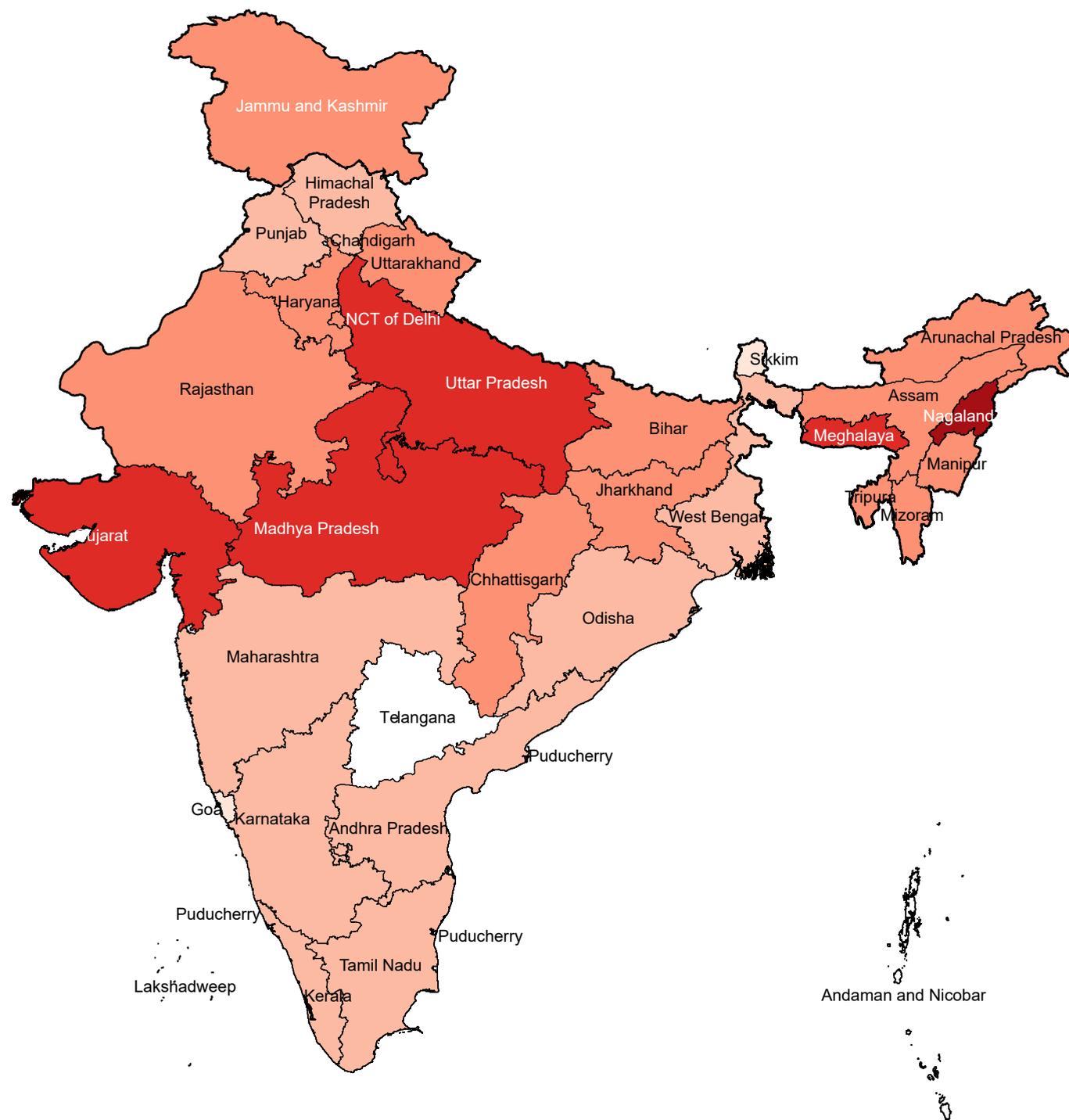


Data Source: Sample Registration System Statistical Report 2014

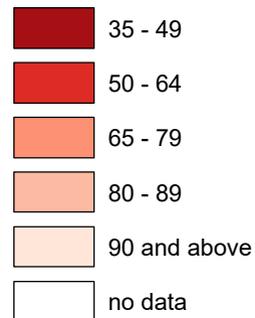
Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

DPT3 vaccination (%) coverage in India by state

Efforts must be made to reach children in the northern and eastern parts of the country with lifesaving immunisations



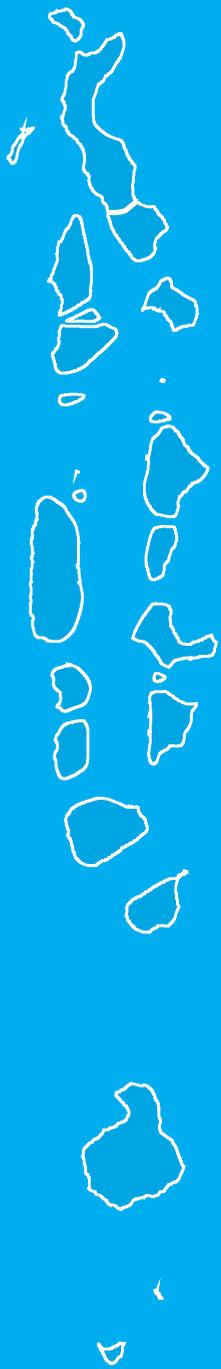
DPT3 vaccination (%)



Data Source: Rapid Survey on Children (RSOC) 2013-14 India Factsheets

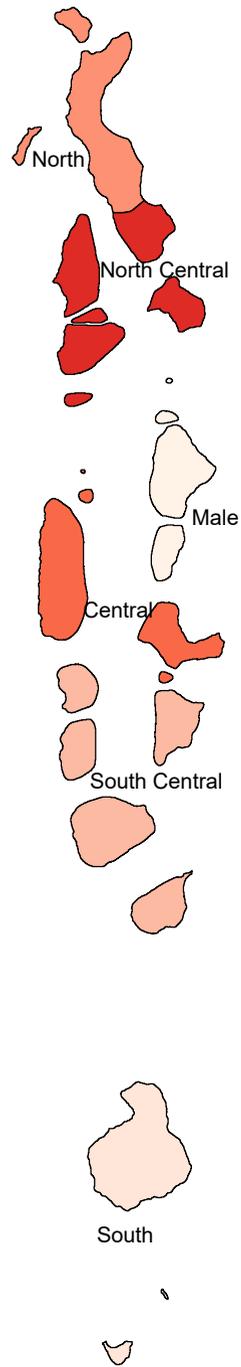
Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

Maldives

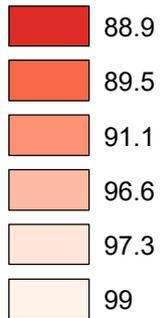


Skilled birth attendance in Maldives by region

Most women benefit from having a skilled provider at birth



Skilled attendant at birth (%)

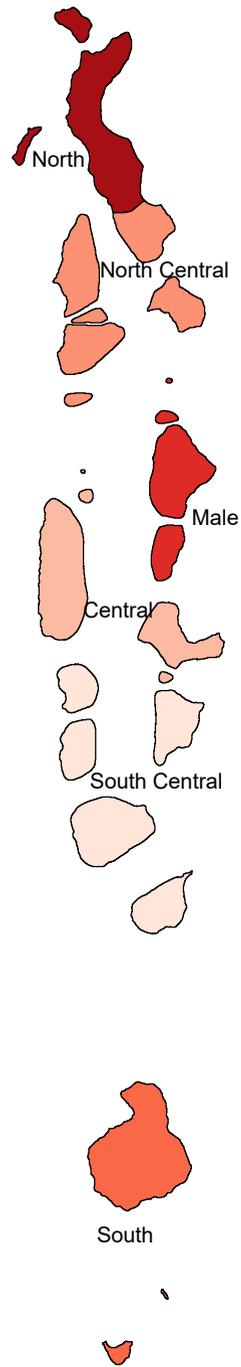


Data Source: Maldives Demographic and Health Survey (2009)

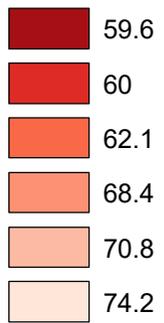
Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

Early initiation of breastfeeding in Maldives by region

Efforts should be made to ensure all newborns benefit from being breastfed within
one hour of birth



Early initiation of breastfeeding (%)

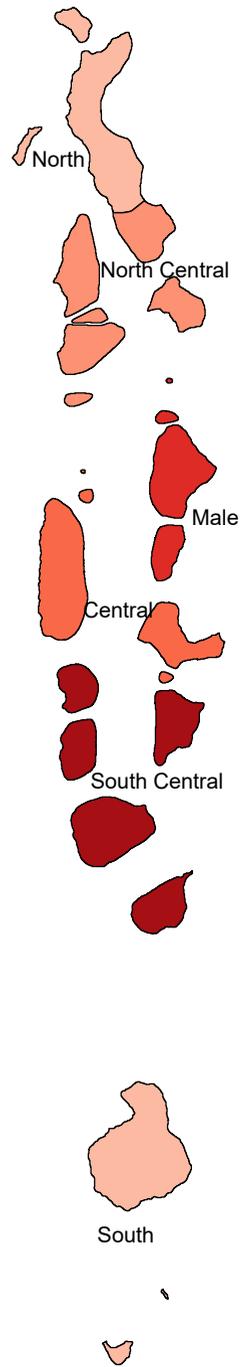


Data Source: Maldives Demographic and Health Survey (2009)

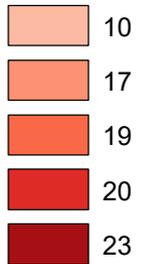
Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

Newborn mortality rate in Maldives by region

A newborn's chance of survival is twice as high in some regions of the country



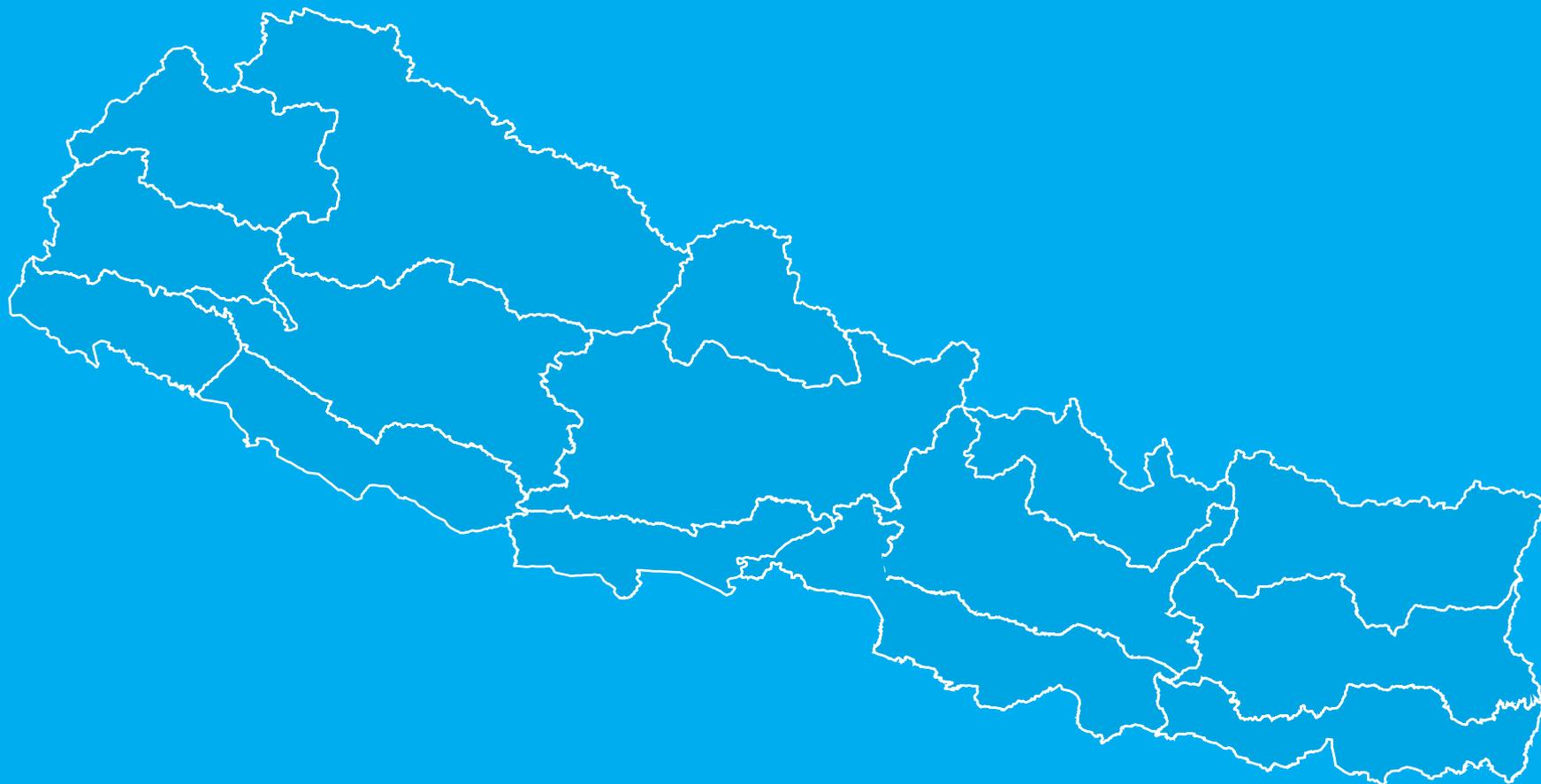
Neonatal mortality rate (per 1,000 live births)



Data Source: Maldives Demographic and Health Survey (2009)

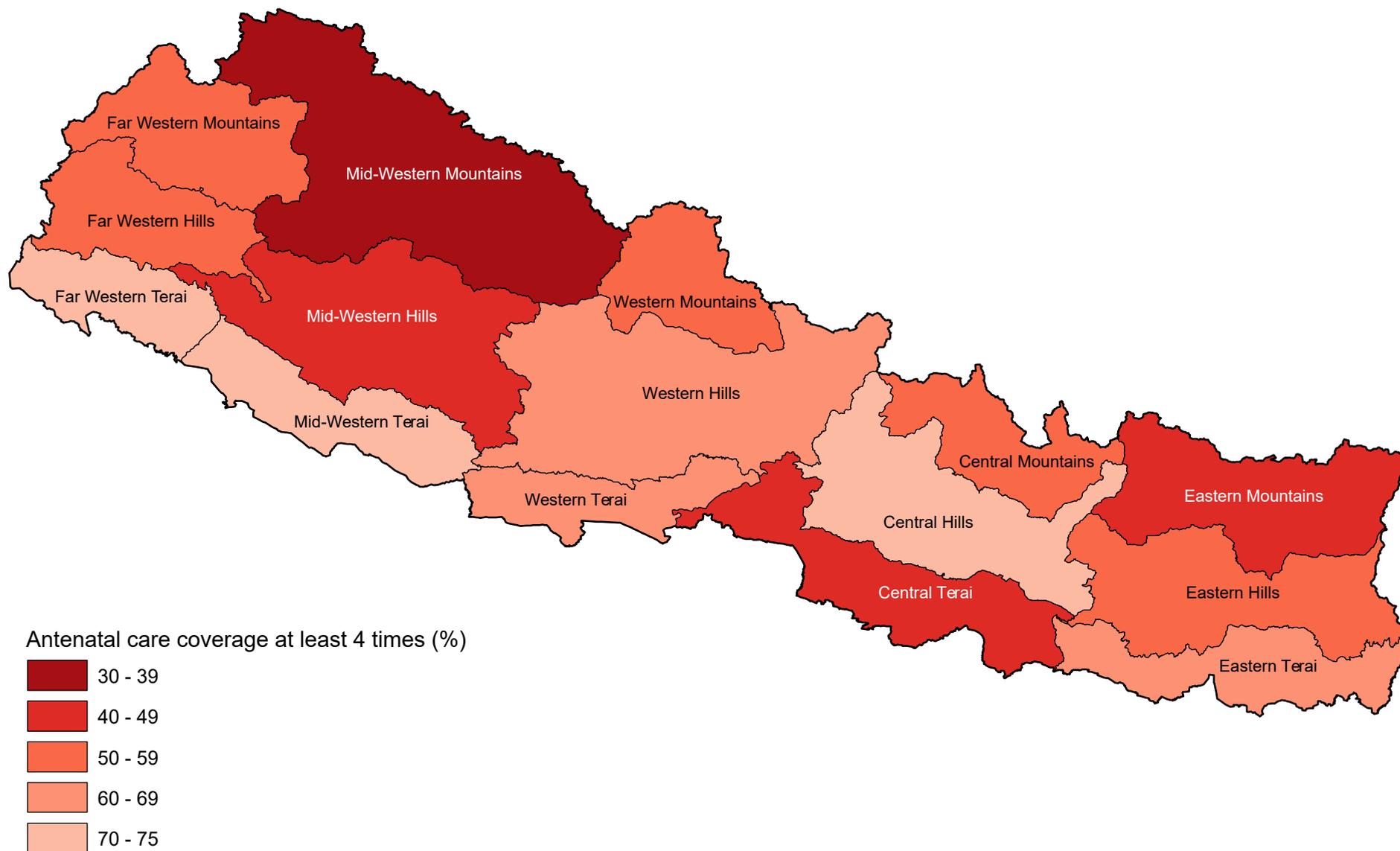
Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

Nepal



Antenatal care coverage in Nepal by region

Many women still do not receive the recommended four antenatal care visits during pregnancy

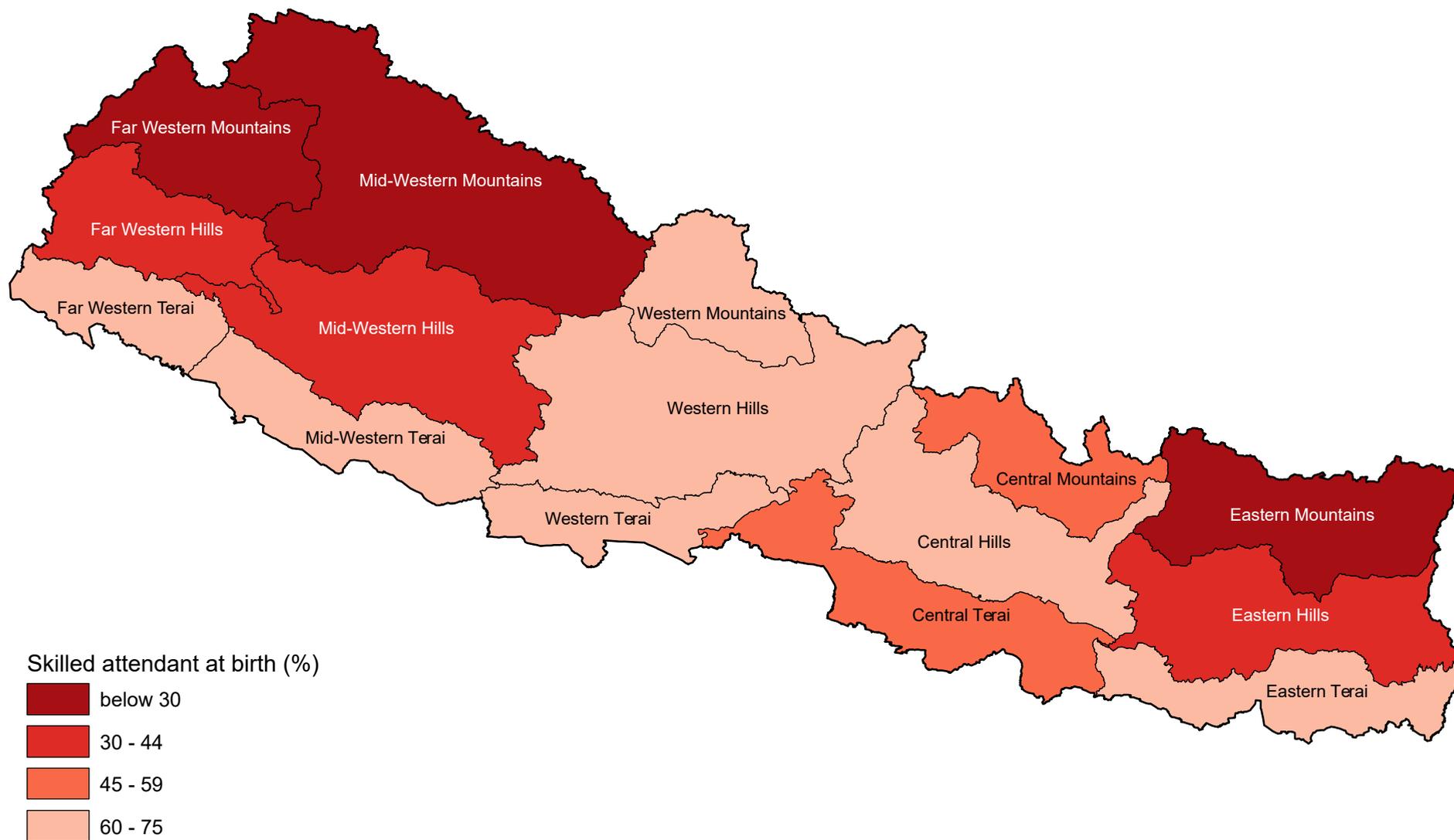


Data Source: Nepal Multiple Indicator Cluster Survey 2014

Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

Skilled birth attendance in Nepal by region

Women in the far west, mid-west and eastern regions are less likely to benefit from a skilled provider at birth

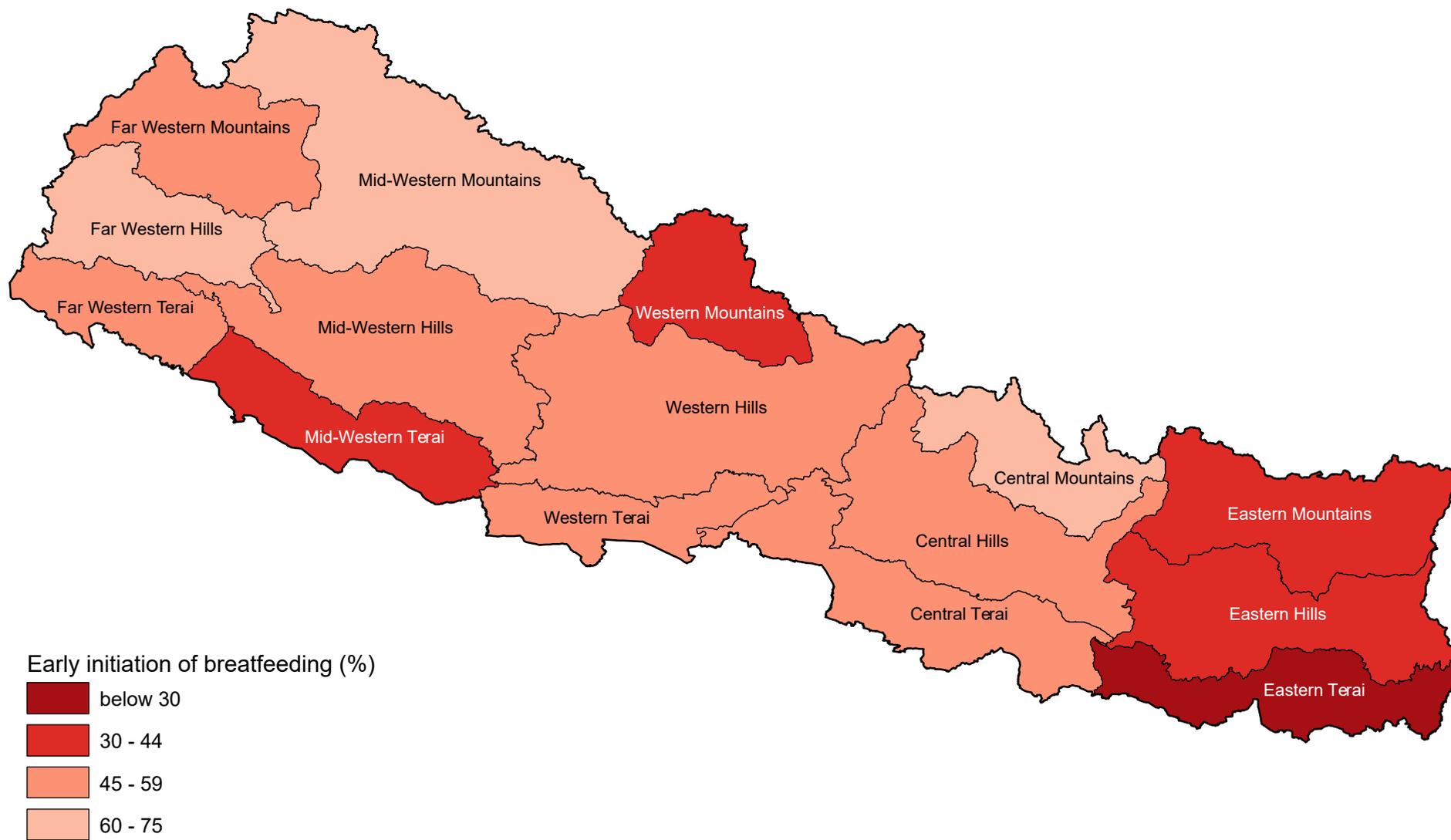


Data Source: Nepal Multiple Indicator Cluster Survey 2014

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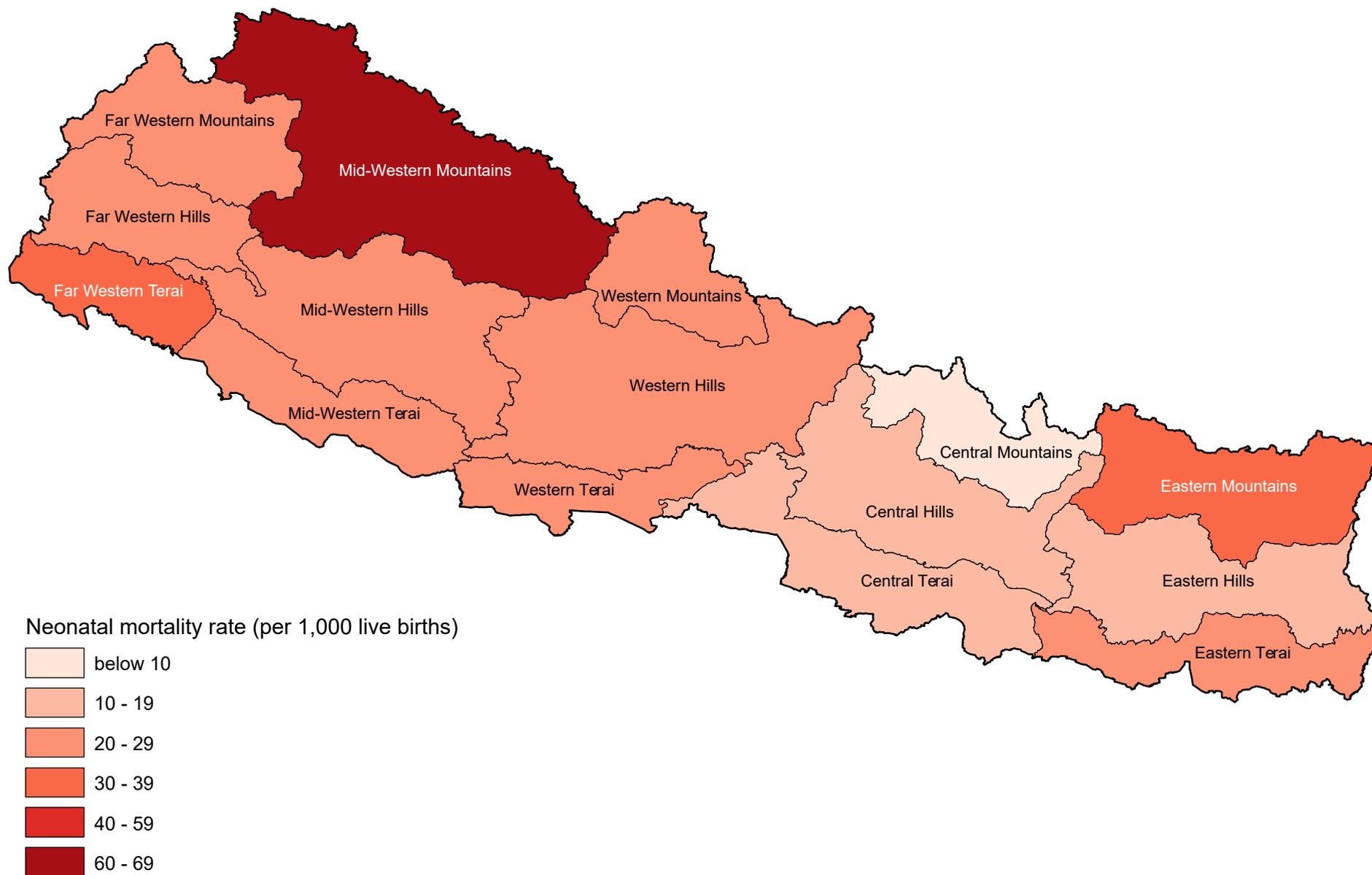


Data Source: Nepal Multiple Indicator Cluster Survey 2014

Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

Newborn mortality rate in Nepal by region

There is wide variation in a newborn's chance of survival across the country

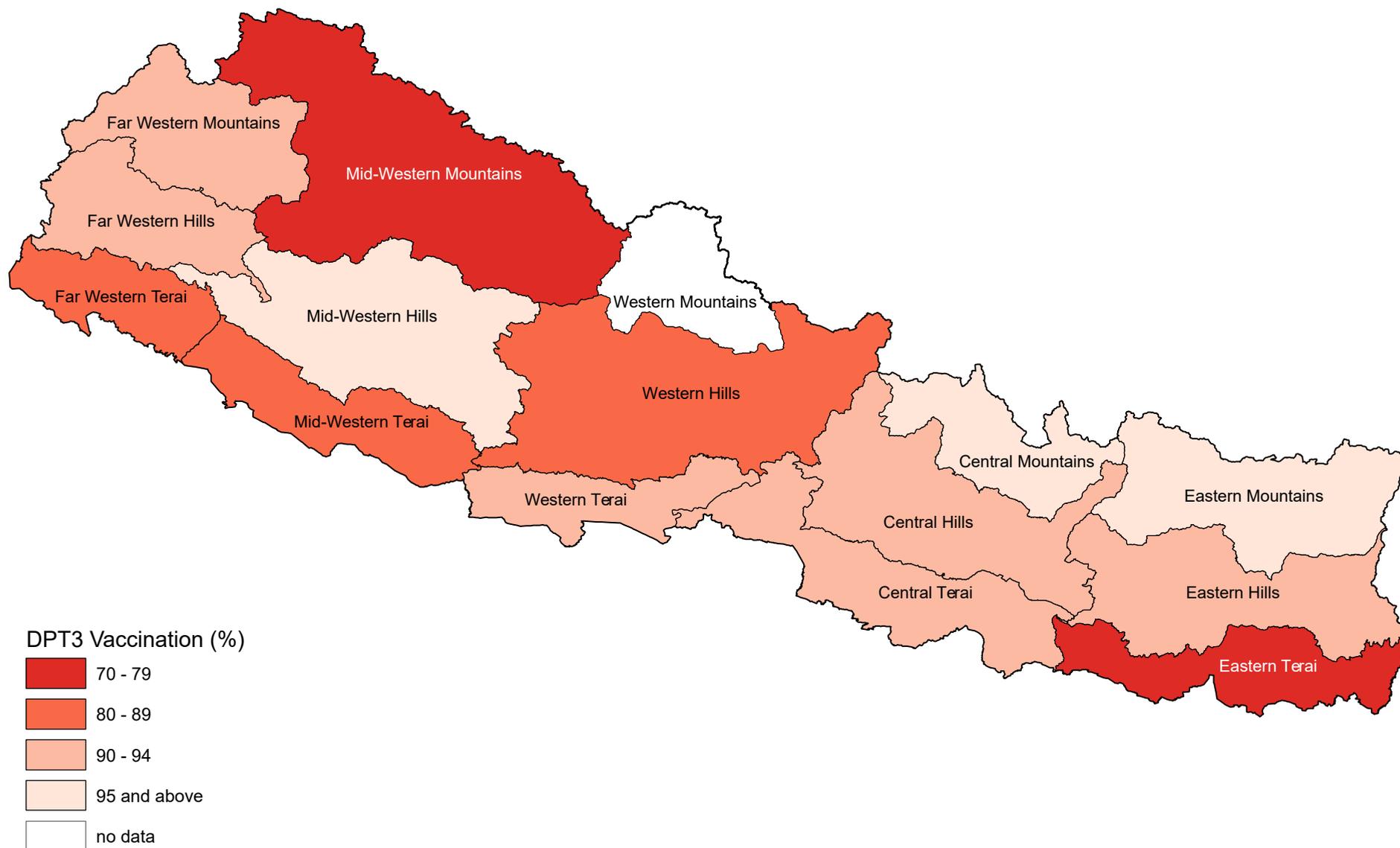


Data Source: Nepal Multiple Indicator Cluster Survey 2014

Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

DPT3 vaccination coverage in Nepal by region

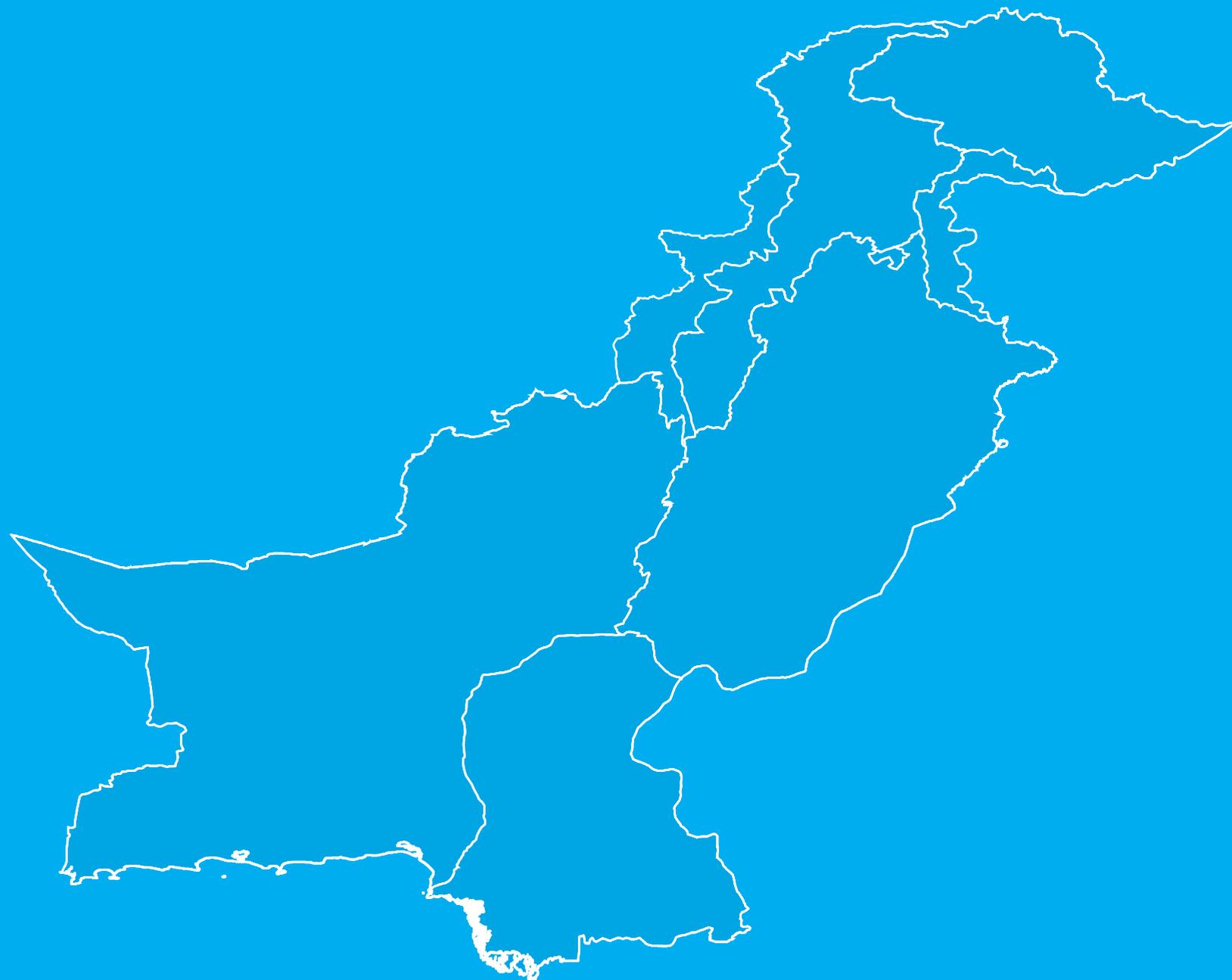
Efforts to improve immunisation coverage should target the most deprived children



Data Source: Nepal Multiple Indicator Cluster Survey 2014

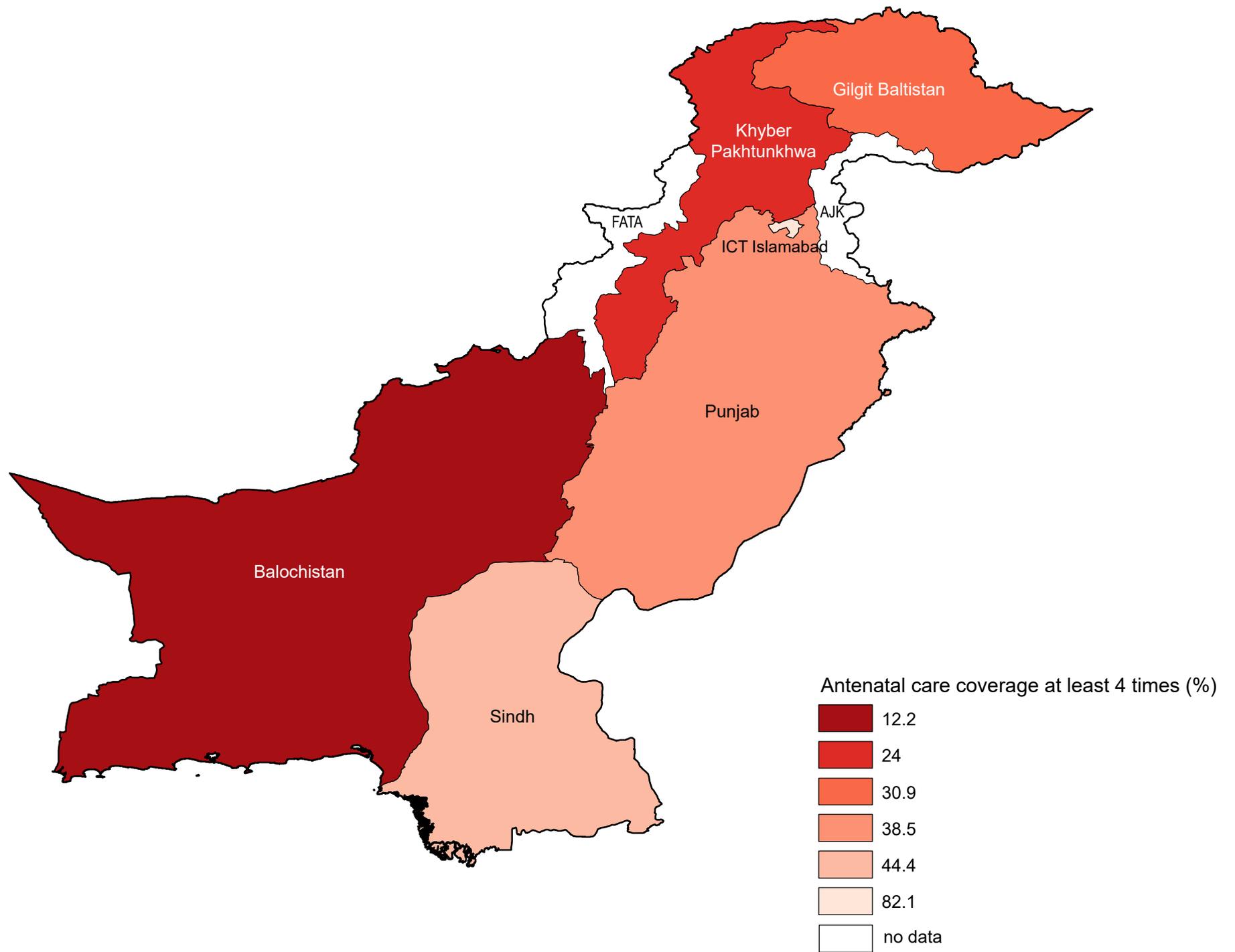
Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

Pakistan



Antenatal care coverage in Pakistan by region

There are large geographic disparities across the country with respect to antenatal care utilisation

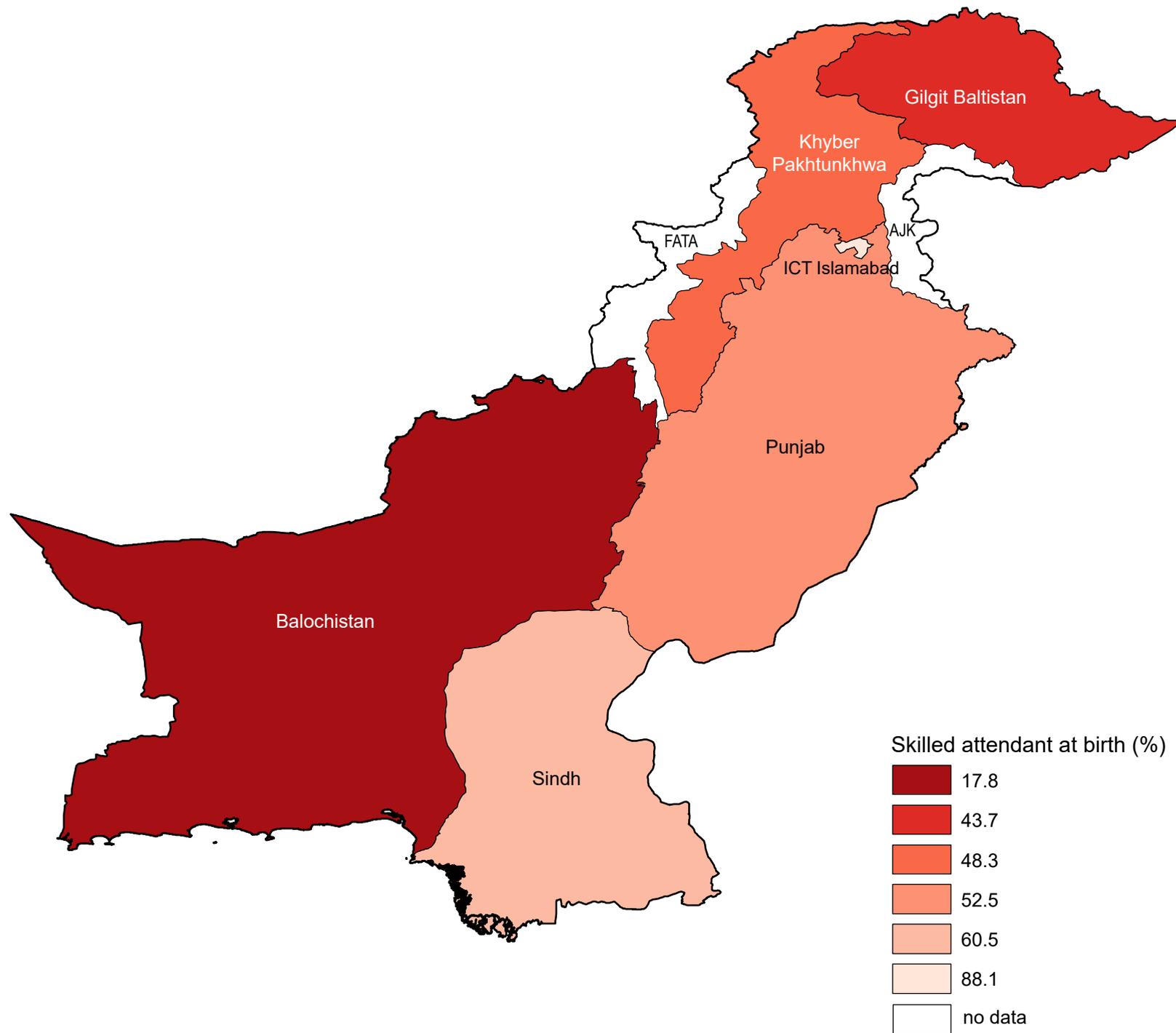


Data Source: Pakistan Demographic and Health Survey (2012-13)

Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

Skilled birth attendance in Pakistan by region

Too many women living outside of Islamabad do not benefit from having a skilled provider at birth

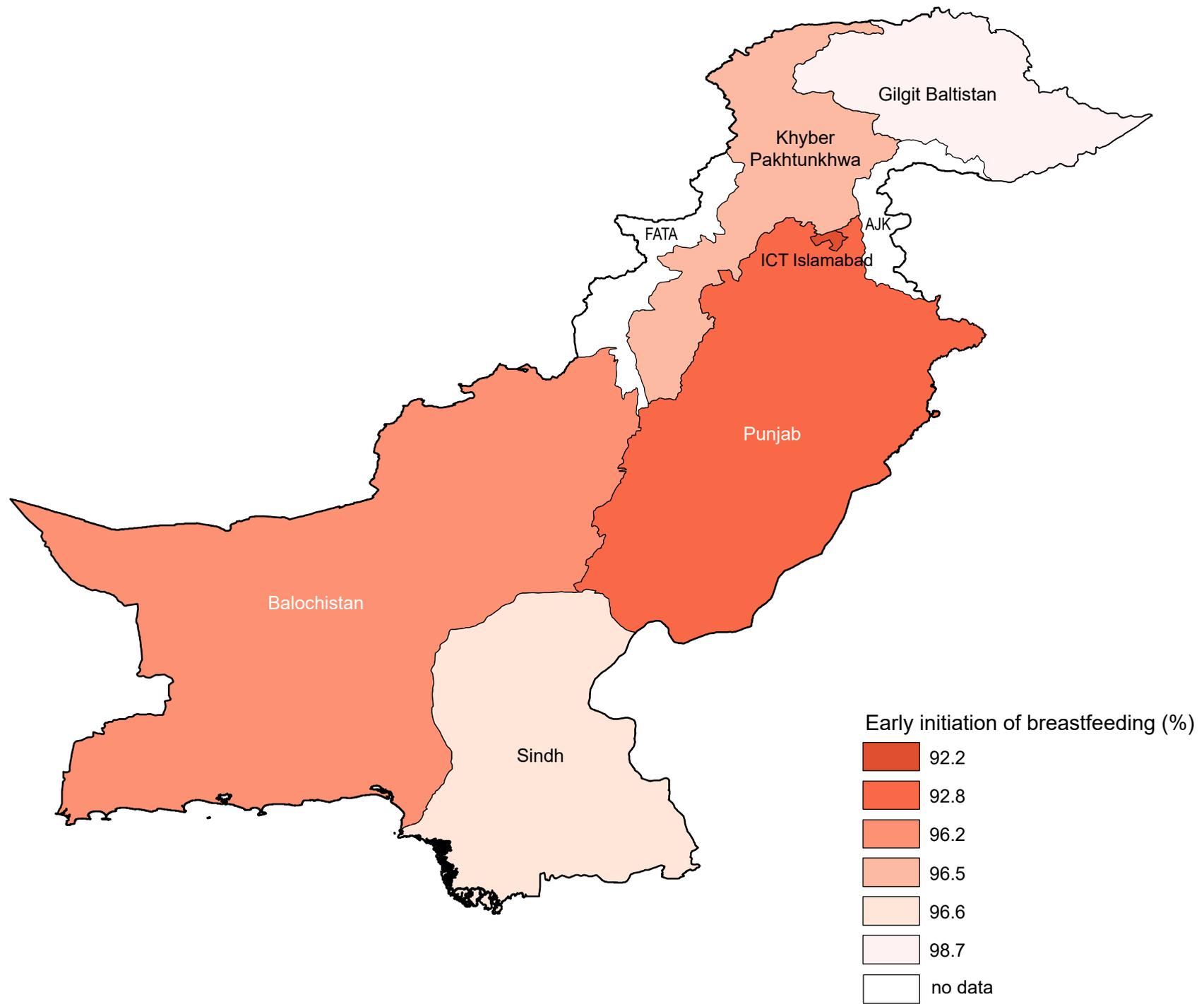


Data Source: Pakistan Demographic and Health Survey (2012-13)

Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

Early initiation of breastfeeding in Pakistan by region

The vast majority of women initiate breastfeeding within one hour of birth

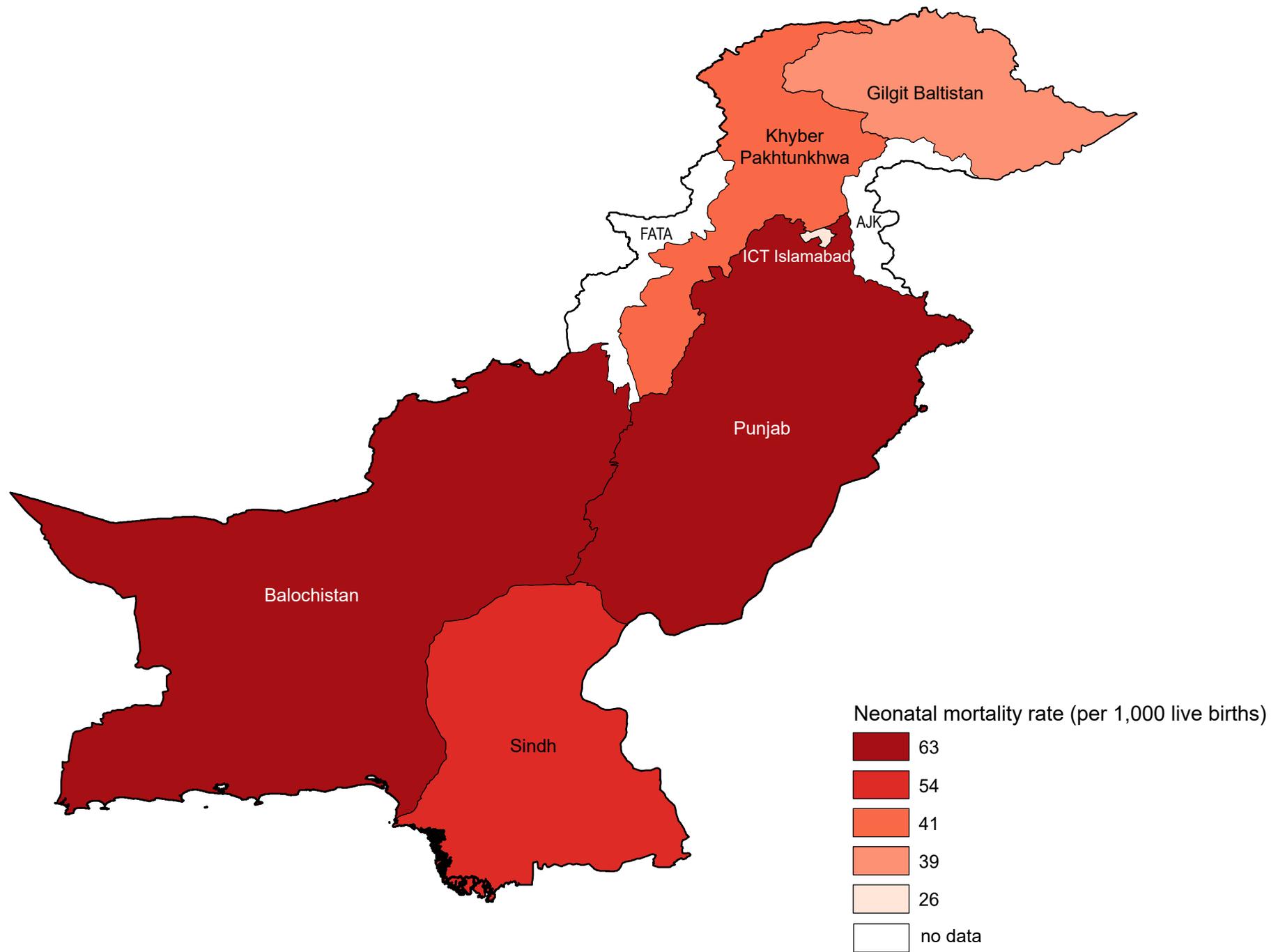


Data Source: Pakistan Demographic and Health Survey (2012-13)

Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

Newborn mortality rate in Pakistan by region

Babies born in the southern part of the country are less likely to survive their first 28 days of life

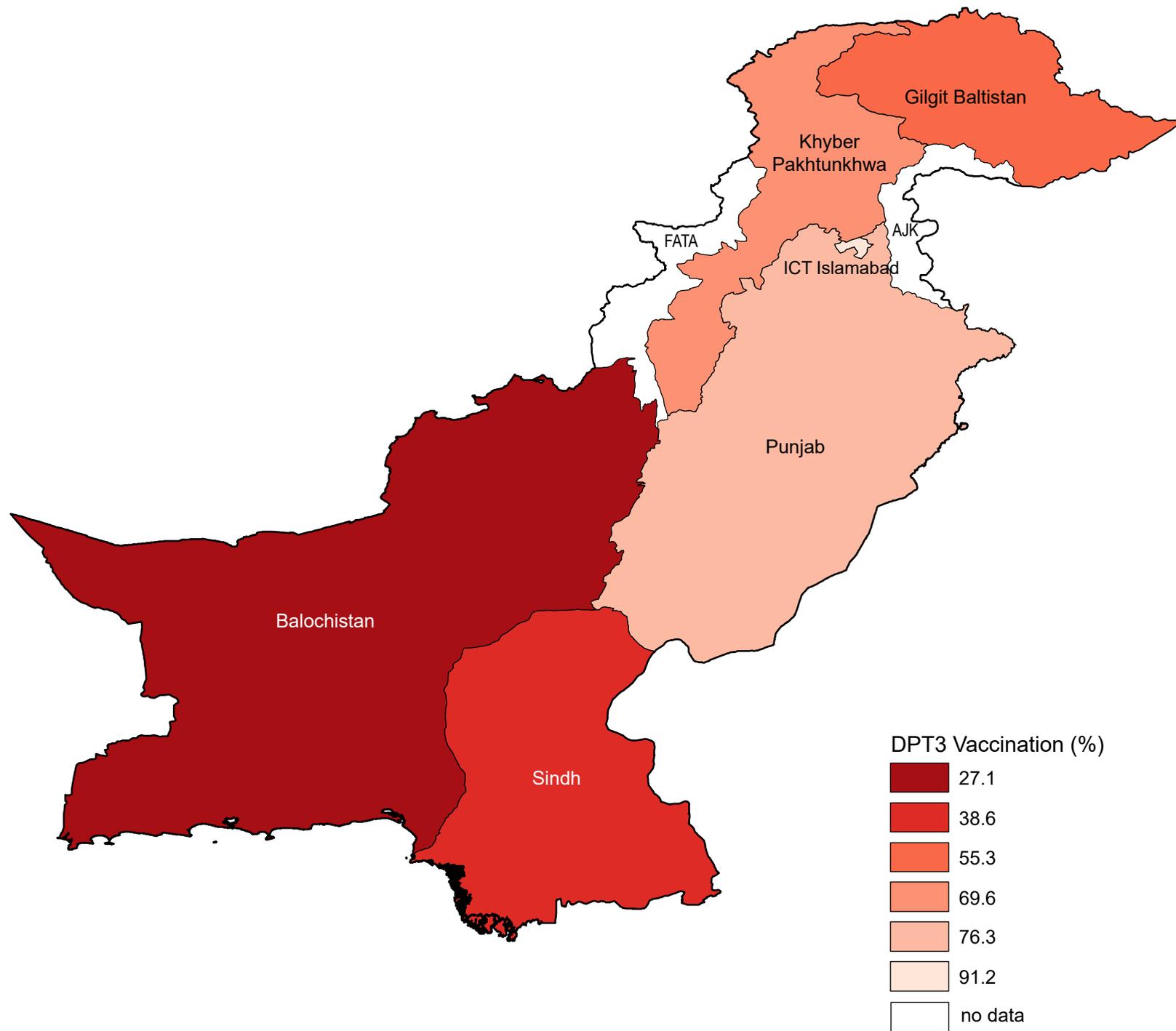


Data Source: Pakistan Demographic and Health Survey (2012-13)

Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

DPT3 vaccination coverage in Pakistan by region

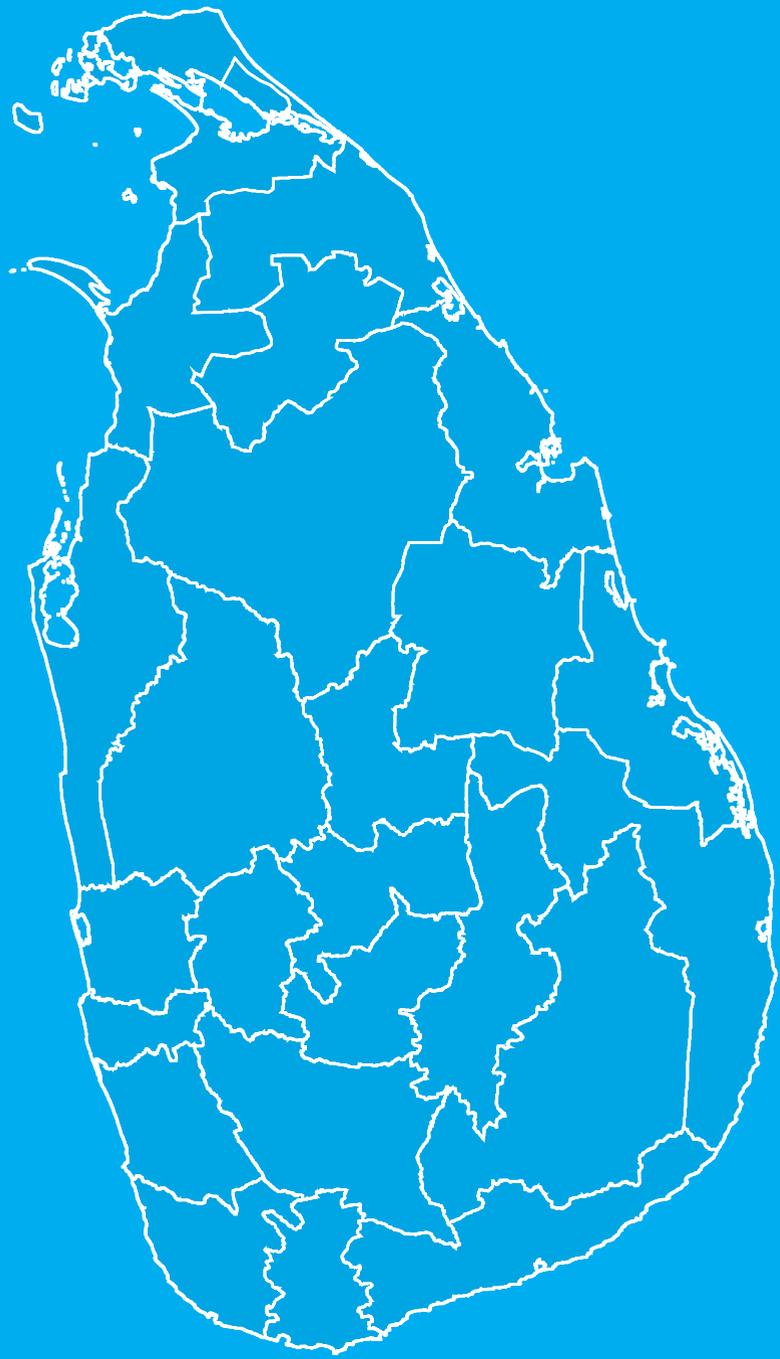
Immunisation coverage among children ages 12-23 months varies widely across the country



Data Source: Pakistan Demographic and Health Survey (2012-13)

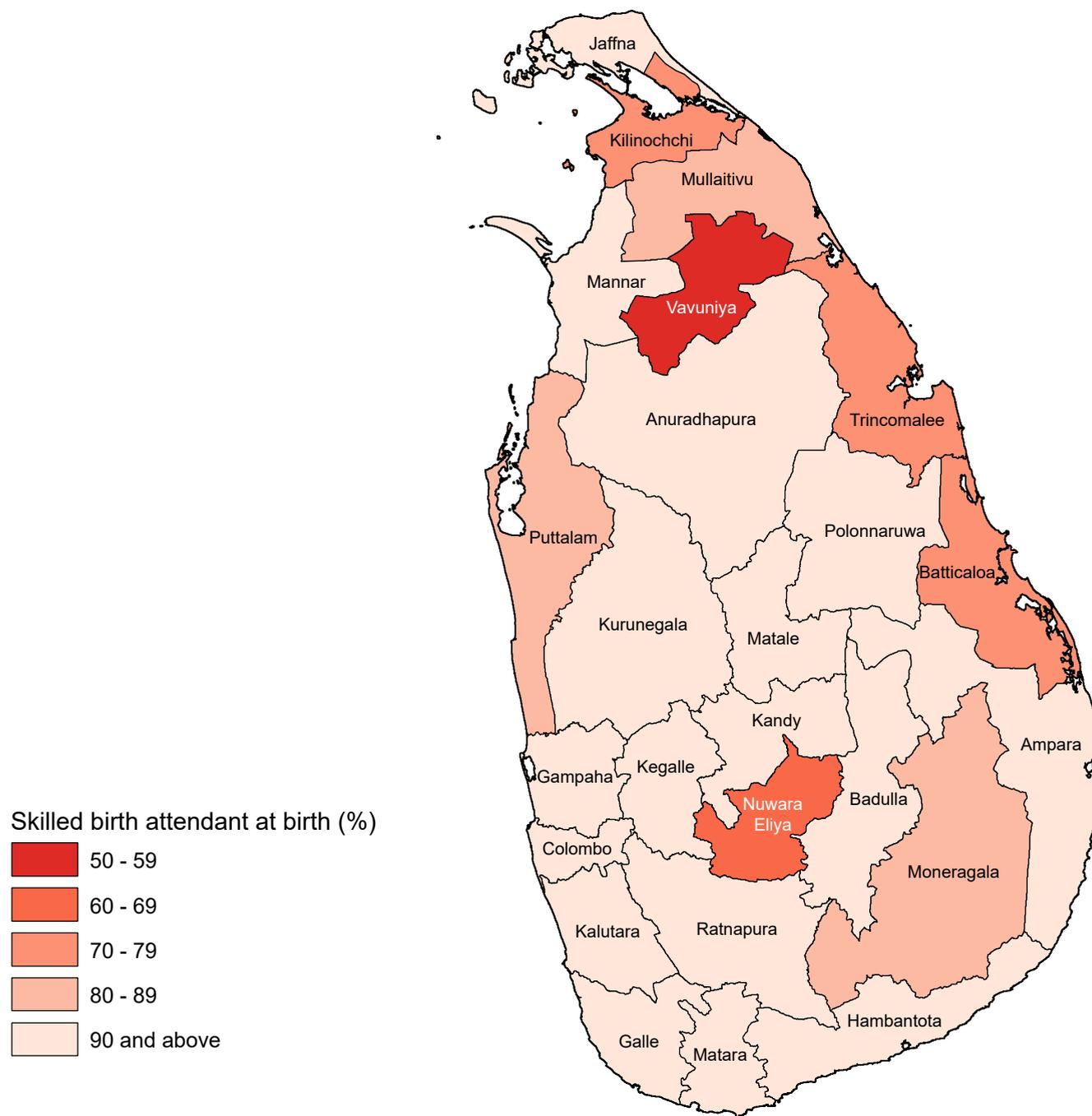
Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

Sri Lanka



Skilled birth attendance in Sri Lanka by district

There is variation in access to a skilled provider at birth across the country

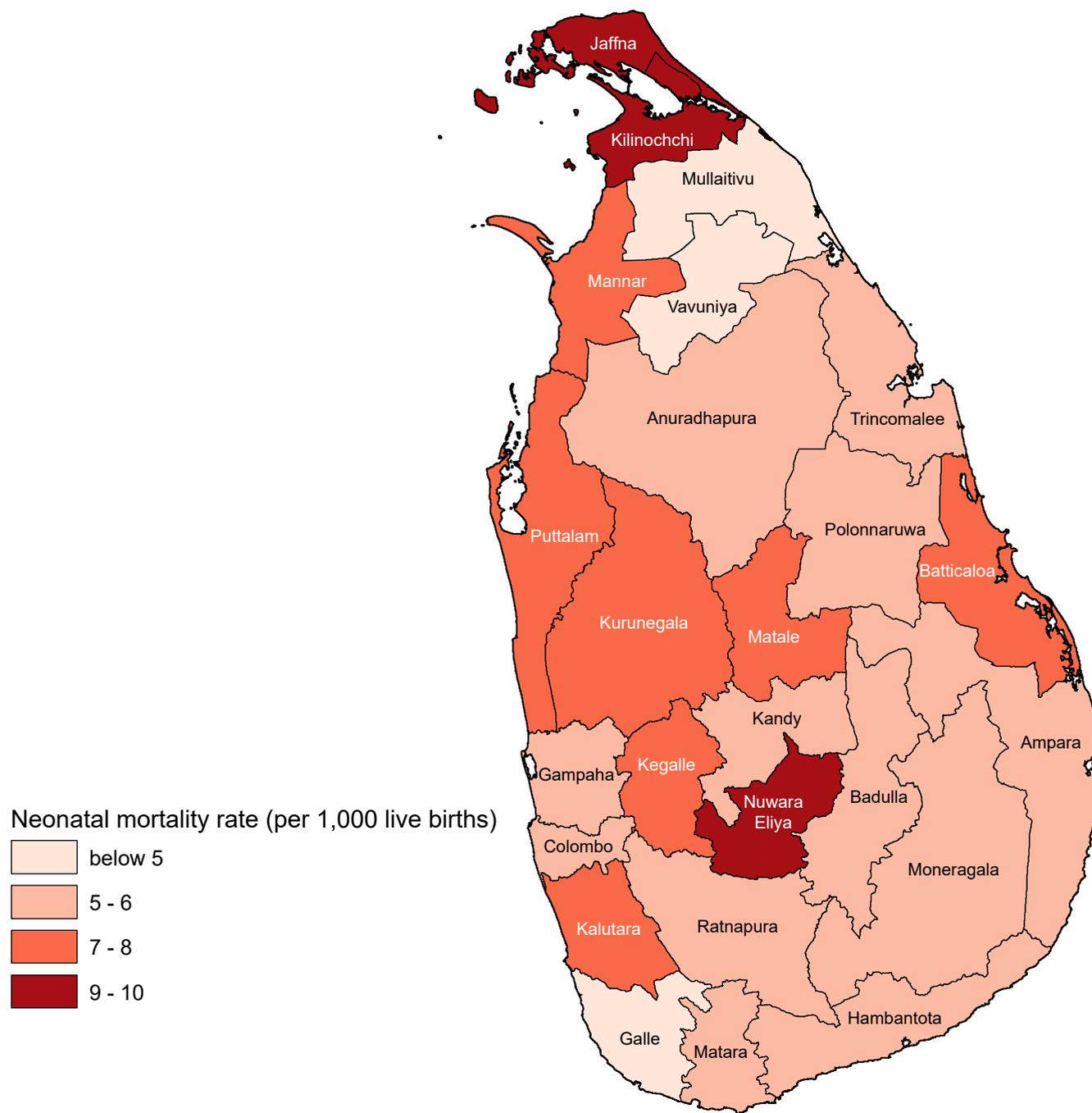


Data Source: Sri Lanka Annual Health Bulletin (2014)

Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

Newborn mortality rate in Sri Lanka by district

In a few districts, the newborn mortality rate is twice as high as it is in some others

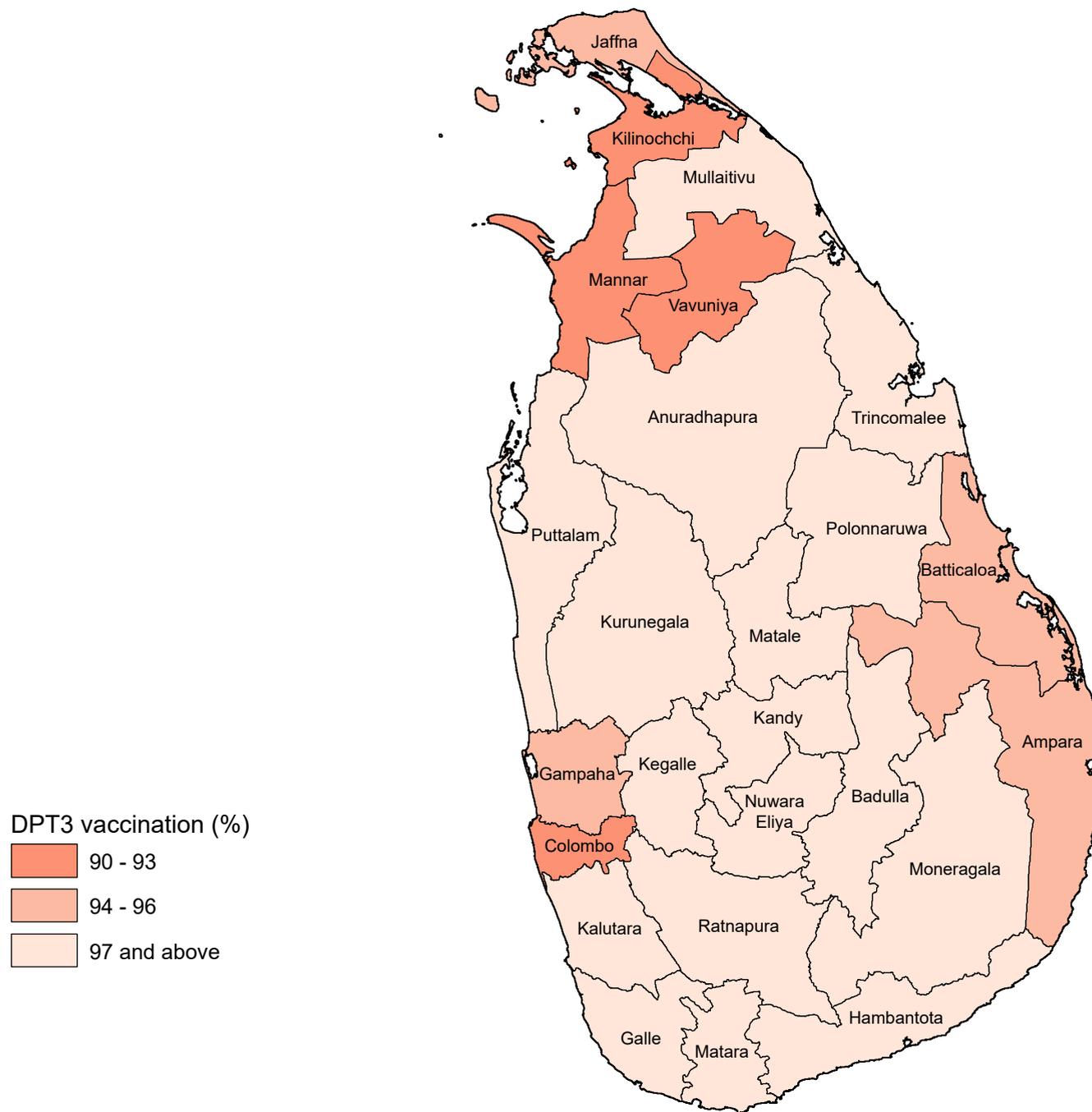


Data Source: Sri Lanka Annual Report on Family Health (2013)

Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

DPT3 vaccination coverage in Sri Lanka by district

Across the country, immunisation has been a huge success



Data Source: Sri Lanka Annual Health Bulletin (2014)

Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

Methodology

The 2016 *South Asia Health Atlas* includes data from both national and sub-national areas, as well as measures of intervention coverage, social determinants of health and health financing. Explanations of how data were categorised, and definitions and data sources used are included below.

Categorisation of indicators on regional maps

To facilitate interpretation of regional maps that show multiple indicators relating to immunisation and newborn mortality, we have used “traffic light” categories. These categories represent good progress (green), moderate progress (yellow) and limited progress (red) towards universal coverage, improved social determinants or towards meeting global standards for health financing.

Progress towards universal coverage of key health interventions and female literacy was considered good if national coverage was at least 90 percent, moderate if between 50-89 percent, and limited if less than 50 percent.

Progress on social determinants such as adolescent births and child marriage was considered good if the status was less than 10 percent, moderate if between 10 and 39, and limited if 40 and above. Mortality among children under 5 years of age (U5MR) was categorised only slightly differently, with good representing 10 or below because U5MR in Sri Lanka (10) and Maldives (9) is so much lower than the other countries.

As per the World Health Organisation’s recommendations, the standard used for health workers (i.e., physicians, nurses and midwives) was 23 per 10,000 population, and the standard used for out-of-pocket expenditure was less than 20 percent of total health expenditures.^{1,2} Similarly, the standard used for government expenditure on health as a percent of gross domestic product (GDP) was at least 3 percent.³ Countries were categorised as either having met (green) or not met (red) these financing standards.

¹ World Health Organisation (2013) *A universal truth: No health without a workforce*. Geneva.

² Jowett M, Cylus J, Flores G, Cylus J (2016) *Health financing working paper No 1. Spending targets for health: no magic number*. World Health Organisation: Geneva.

³ Jamieson DT, Summers LH, Alleyne G, et al (2013) *Global health 2035: a world converging within a generation*. *Lancet* 382:1898–195; WHO and the World Bank (2015) *Tracking universal health coverage first global monitoring report*. 2015.

Indicator	Traffic light category		
Adolescent births per 1000 women ages 15-19 years	9 and below	10 to 39	40 and above
Antenatal care (%)	90 and above	50 to 89	49 and below
Child marriage (%)	9 and below	10 to 39	40 and above
Early initiation of breastfeeding (%)	90 and above	50 to 89	49 and below
Female literacy (%)	90 and above	50 to 89	49 and below
Government expenditure on health as a percent of GDP (%)	3 or more	Not applicable	Below 3
Health workers per 10,000 population	23 and above	Not applicable	22 and below
Out of pocket expenditure (% of total health expenditures)	19 and below	Not applicable	20 and above
Skilled attendant at birth (%)	90 and above	50 to 89	49 and below
Under-5 mortality per 1,000 live births	10 and below	11 to 39	40 and above

The table above provides a summary of the categories used for each indicator on the regional ring maps.

Colour categorisation on country maps

Country maps are based on availability of data and include measures of antenatal care coverage, early initiation of breastfeeding, skilled attendant at birth, newborn mortality and immunisation coverage. Due to large variations among South Asia countries, the data for each specific map have been categorised based on the national range of data obtained for each indicator. This was done in order to highlight sub-national progress and challenges.

Indicators for which there was limited sub-national variation are shown with much less colour variation and fewer categories in the *Atlas*. For example, in cases where the estimates were quite good across all sub-national areas (such as for immunisation coverage in Bangladesh), we felt that the map should illustrate the strong progress that has already been made.

Indicator definitions

Adolescent birth rate: Number of births per 1,000 adolescent girls aged 15–19

Antenatal care: Percentage of women (aged 15–49) attended by any provider at least four times

Child marriage: Percentage of women 20–24 years old who were first married or in a union before they were 18 years old

DPT3: Percentage of children ages 12–23 months who received three doses of diphtheria, pertussis and tetanus vaccine by the age of 12 months

Early initiation of breastfeeding: Percentage of infants who are put to the breast within one hour of birth

Female literacy: Percentage of female population aged 15 years and over who can both read and write with understanding a short simple statement on his/her everyday life. Generally, 'literacy' also encompasses 'numeracy', the ability to make simple arithmetic calculations

Government expenditure on health as a percent of GDP: Public expenditures on health services as a percent of the gross domestic product (GDP) which is the sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation of output. Gross domestic product per capita is GDP divided by midyear population

Health workers per 10,000 population: The total number of physicians, midwives and nurses per 10,000 population

Neonatal mortality rate: Probability of dying during the first 28 completed days of life, expressed per 1,000 live births

Out of pocket expenditure: Share of total current expenditure on health paid by households out-of-pocket, expressed as a percentage of total current expenditure on health

Skilled attendant at birth: Percentage of births attended by skilled health personnel (doctor, nurse or midwife)

Under-5 mortality rate: Probability of dying between birth and exactly 5 years of age, expressed per 1,000 live births

Data sources and notes

National data presented in regional maps

Adolescent birth rate: United Nations Population Fund (2016) The state of world population 2016. New York.

http://www.unfpa.org/sites/default/files/sowp/downloads/The_State_of_World_Population_2016_-_English.pdf

Antenatal care: UNICEF (2016) State of the World's Children. New York. <http://www.unicef.org/sowc/>

Child marriage: UNICEF (2016) State of the World's Children. New York. <http://www.unicef.org/sowc/>

DPT3: World Health Organisation and UNICEF (2015) Estimates of immunisation coverage. Geneva.

http://apps.who.int/immunisation_monitoring/globalsummary/timeseries/tswucoveredtp3.html

Early initiation of breastfeeding: UNICEF (2016) State of the World's Children. New York. <http://www.unicef.org/sowc/>

Female literacy: UNESCO (2016) Institute of Statistics Data Centre. Accessed 20 October 2016 at <http://data.uis.unesco.org>

Government expenditure on health as a percent of GDP: UNICEF (2016) State of the World's Children. New York.

<http://www.unicef.org/sowc/>

Health workers per 10,000 population: World Health Statistics (2014) Global health atlas database. Accessed 20 October 2016 at

<http://apps.who.int/globalatlas/>

Neonatal mortality rate: UNICEF (2016) State of the World's Children. New York. <http://www.unicef.org/sowc/>

Out of pocket expenditure: World Health Organisation (2016) Global health expenditure database. Accessed 20 October 2016 at

<http://apps.who.int/nha/database>

Skilled attendant at birth: UNICEF (2016) State of the World's Children. New York. <http://www.unicef.org/sowc/>

Under-5 mortality rate: UNICEF (2016) State of the World's Children. New York. <http://www.unicef.org/sowc/>

Sub-national data presented in country maps

Sub-national data included in the *Atlas* are those identified as the most recent and valid by UNICEF regional office staff in collaboration with country office colleagues. Most of these data are based on population-based household surveys (such as Demographic and Health Surveys or Multiple Indicator Cluster Surveys). Data representing coverage in Sri Lanka and Maldives (DPT3 only) are based on administrative records.

It should be noted that data in some settings within the region, particularly those obtained in insecure geographic areas, are difficult to collect and verify.

Afghanistan

Antenatal care and skilled attendant at birth: Central Statistics Organization, Ministry of Public Health, and ICF International (2016) Afghanistan Demographic and Health Survey 2015: Key Indicators. Kabul, Afghanistan, and Rockville, Maryland USA: Central Statistics Organization, Ministry of Public Health, and ICF International.

Provincial-level estimates for Zabul have not been reported due to small sample size.

DPT3: General Directorate of Preventive Medicine & National EPI Office, Ministry of Public Health, Central Statistics Office, UNICEF, Health Protection and Research Organisation (2013) National Immunisation Coverage Survey Afghanistan, 2013. Kabul.

DPT3 coverage is based on crude coverage (history and card) among children ages 12 to 23 months.

Bangladesh

Skilled attendant at birth, early initiation of breastfeeding, neonatal mortality: National Institute of Population Research and Training, Mitra and Associates, and ICF International (2016) Bangladesh Demographic and Health Survey 2014. Dhaka, Bangladesh, and Rockville, Maryland, USA: NIPORT, Mitra and Associates, and ICF International.

DPT3: Bangladesh Directorate General of Health Services (July 2015) Bangladesh EPI Coverage Evaluation Survey, 2014. Dhaka.

DPT3 coverage is based on crude coverage among children ages 12 to 23 months.

Bhutan

Antenatal care, skilled attendant at birth and early initiation of breastfeeding: Bhutan National Statistics Bureau (May 2011) Bhutan Multiple Indicator Survey, 2010. Thimphu.

Data on antenatal care, skilled attendant at birth and early initiation of breastfeeding for Gasa Dzongkhag are based on only 25-49 unweighted cases.

India

Antenatal care, skilled attendant at birth and early initiation of breastfeeding: Ministry of Women and Child Development, Government of India (2014) India Rapid Survey on Children National Report, 2013-2014. <http://wcd.nic.in/sites/default/files/RSOC%20National%20Report%202013-14%20Final.pdf>

Neonatal mortality: Ministry of Home Affairs, Government of India (2014) India SRS Statistical Report, 2014. http://www.censusindia.gov.in/vital_statistics/SRS_Reports_2014.html

DPT3: Ministry of Women and Child Development, Government of India (2014) Rapid Survey on Children, 2013-2014 India Factsheet. <http://wcd.nic.in/sites/default/files/State%20RSOC.pdf>

DPT3 coverage is based on vaccination card or mother's report among children ages 12 to 23 months.

Maldives

Skilled attendant at birth, early initiation of breastfeeding and neonatal mortality: Ministry of Health and Family Maldives and ICF Macro (2010) Maldives Demographic and Health Survey 2009. Calverton, Maryland.

DPT3: WHO/UNICEF Joint reporting form 2015 (unpublished data). Routine immunisation coverage by province.

Nepal

Antenatal care, skilled attendant at birth, early initiation of breastfeeding, neonatal mortality and DTP3: Central Bureau of Statistics (2015) Nepal Multiple Indicator Cluster Survey 2014, Final Report. Kathmandu, Nepal: Central Bureau of Statistics and UNICEF Nepal. Estimates based on 25–49 unweighted cases include: antenatal care, skilled attendant at birth, early initiation of breastfeeding in Western Mountain, and DTP3 in Central Mountain. The DTP3 estimate for Western Mountain is based on fewer than 25 unweighted cases. DTP3 coverage is based on vaccination card or mother's report among children ages 12 to 23 months.

Pakistan

Antenatal care coverage, skilled attendant at birth, early initiation of breastfeeding, neonatal mortality and DTP3: National Institute of Population Studies Pakistan and ICF International (2013) Pakistan Demographic and Health Survey 2012-13. Islamabad, Pakistan, and Calverton, Maryland, USA: NIPS and ICF International.

DTP3 coverage is based on vaccination card or mother's report among children ages 12 to 23 months.

Sri Lanka

Skilled attendant at birth and DTP3: Ministry of Health, Nutrition and Indigenous Medicine (2016) Annual Health Bulletin 2014. Colombo. www.health.gov.lk

Neonatal mortality: Family Health Bureau, Ministry of Health Sri Lanka (2014) Annual Report on Family Health 2013. Colombo. www.health.gov.lk

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