

**Scheme of work**

Human geography: Population and the environment

This resource is a scheme of work for our accredited AS and A-level Geography specifications (7036, 7037). This scheme of work is not exhaustive or prescriptive, it is designed to suggest activities and resources that you might find useful in your teaching.

**3.2 Human geography**

Core topic

3.2.4 Population and the environment

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| **Specification content****Week Number** | **Subject-specific skills development** | **Learning outcomes** | **Suggested Learning activities (including ref to differentiation and extension activities)** | **Resources** |
| **Week 1*** Key elements in the physical environment
* Key population parameters and development processes
* Global and regional patterns of food production and consumption
* Impacts of global environmental change on agricultural productivity and nutritional standards (from later on in specification)
 | Use of key subject specific and technical terminology.Cartographic skills – choropleth mapsGraphical skills – line maps including compound line graphs | Students will be aware of contemporary concerns regarding population and resources, particularly food supply.Students will be able to distinguish between population density and distribution and be able to describe and explain current global patterns.Students will be able to describe and explain trends in food production and consumption by interpreting a range of different data and graphs.  | As a starter to this topic, you could cut up an apple to show the students how much of the earth can be used for growing food. Instructions can be found here:[Population Connection: Earth Apple Farmland](http://www.iupui.edu/~ghw/lessons/materials/EarthAppleFarmlandNov02.pdf) There is also a YouTube clip (aimed at much younger students) showing this: [YouTube: Earth as an Apple - Space to grow food](https://www.youtube.com/watch?v=OuvwzZs4W6Q) Look at a recent choropleth map of population density and get students to describe and explain the pattern. Encourage links to physical factors. The Food and Agricultural Organisation of the UN (FAO) has data on food production and consumption. Compare the map for global food supply with the population density map. Is there a pattern? Get students to consider why there are such huge variations in food production and consumption. What are the recent trends regarding consumption of cereals, meat etc.Research the impacts of global environmental change on agricultural productivity and nutritional standards. **Extension**: At the COP21 climate conference, Arnold Schwarzenegger suggested that if we all stopped eating as much meat, we could help save the planet. Research the environmental benefits of a meat-free diet. | Nagle, G. (2014) ‘Trends in World Food Output’, *Geofile,* 704.Nagle, G. (2007) ‘Globalisation of food production’, *Geofile,* 541.Rae, A. (2009) ‘Global food production’, *Geofile,* 586.Nash, S. (2010) ‘The Geopolitics of food’, *Geofile,* 628.Bayliss, T. and Collins, L. (2010) ‘Obesity, undernourishment and malnutrition’, *Geofile,* 610.Adams, K. and Wraight, P. (2011) ‘Feast or famine’, *Geofile,* 634.Statistical information on world food and agriculture can be found at [Food & Agriculture Organisation (FAO) of the United Nations](http://www.fao.org/) Friends of the Earth has useful resources on food and farming at [Friends of the Earth](http://www.foe.org/)  including a 2016 report entitled ‘Farming for the future.’See recent UNICEF report on alarming links between climate change and falling nutrition levels in developing parts of the world [United Nations International Children's Emergency Fund (UNICEF)](http://www.unicef.org/)  |
| **Week 2*** Agricultural systems and productivity
* Relationship with key environmental variables – climate and soils
* Characteristics of two major climate zones to exemplify relationships between climate and human activities and numbers.
* Climate change as it affects agriculture
 | Use of key subject specific and technical terminology.Collect, analyse and interpret information from a range of secondary sources – including factual, numerical and spatial data.Online research Evaluating and presenting findings from research.Core and ICT skills. | Students will recognise that farming is an open system and be able to define the different types of agriculture.Students will be able to describe patterns on a world map – acknowledging that simply naming places is not a pattern.Students will be able to recognise the major climatic zones on a world map and make links with patterns of population density.Students will be able to describe characteristics of two major climate zones and explain the relationship between human numbers and activities.Students will be able to discuss impacts of climate change on agriculture. | Use a series of photographs to outline the different types of farming, Consider the physical and human impacts on agricultural productivity.Opportunity to watch documentaries/clips etc and get students to research and produce a poster/presentation detailing two major contrasting climatic zones.Recap the causes and impacts of climate change (links to carbon topic here).Produce a flow diagram to show the impacts of climate change on agriculture similar to the one at [Climate change and food security](http://www.climatechange-foodsecurity.org/science.html)  | Dove, J. (2011) ‘Case Study of a Rainforest Zone: Amazonia’, *Geofile,* 640.Sheppard, P. (2011) ‘The savanna biome’, *Geofile,* 667.Sheppard, P. (2016) ‘The tropical monsoon climate’, *Geofile,* 746.Marriott, A. (2004) ‘The Indian Monsoon – Physical and Human Geography’, *Geofile,* 476.Marriott, A. (2003) ‘Drought and desertification in India and Pakistan’, *Geofile,* 446.Hobson, R. (2010) ‘Likely impacts of climate change in vulnerable regions’, *Geofile,* 616.Warbuton, P. (2012) ‘Soil erosion: issues and strategies’, *Geoactive,* 478.Davidson, J. (2011) ‘Siberia: Challenges of living in a polar environment’, *Geoactive,* 454Rowles, N. (2015) ‘Hot deserts: opportunities for human development’, *Geoactive,* 536Burn, R. (2009) ‘Recent evidence of a warming world’, *Geoactive,* 405. (considers impact on polar region) |
| **Week 3** * Characteristics of two key zonal soil types to exemplify relationships between soils and human activities, especially agriculture
* Soil problems and their management as they relate to agriculture: soil erosion, waterlogging, salinization, structural deterioration
* Strategies to ensure food security
 | Use of key subject specific and technical terminology.Collect, analyse and interpret information from a range of secondary sources – including factual, numerical and spatial data.Online research.Evaluating and presenting findings from research.Core and ICT skills. | Students will be able to describe the characteristics of two key zonal soils and explain the relationship between human numbers and activities.Students will be able to describe the problems of soil erosion, waterlogging, salinization and structural deterioration and describe their impacts on agriculture.Students will be able to describe and evaluate a range of strategies used to ensure food security. | Get students to research and produce a poster/presentation detailing two major contrasting zonal soils. This could be part of the climatic zones research.Go through the different problems associated with soil and agriculture. Look at issues of soil erosion, waterlogging, salinization and structural deterioration in different parts of the world.Research different strategies being used to manage soil and ensure food security.**Extended writing task**: With reference to located examples, discuss how sustainable development strategies can ensure food security. | Rae, A. (2005) ‘Soils in Different Ecosystems’, *Geofile,* 484.Butler, J. (2012) ‘Soil degradation in the UK’, *Geography Review,* Feb 2012Warbuton, P. (2012) ‘Soil erosion: issues and strategies’, *Geoactive,* 478.Rutter, J. (2008) ‘Causes of Desertification’, *Geofile,* 576.Rutter, J. (2010) ‘Managing food supplies in LEDCs’, *Geofile,* AQA Special, 5.Punnett, N. (2010) ‘Case studies of hot desert environments: land use and agriculture strategies – sustainable or not? *Geofile,* 609.Davies, J. (2005) ‘Food Security in Ethiopia’, *Geofile,* 497.Ellis, P. (2012) ‘Increasing Global Food Supply’, *Geoactive,* 470. |
| **Week 4*** Global patterns of health, mortality and morbidity
* Economic and social development and the epidemiological transition
* Case study of a specified local area to illustrate and analyse the relationship between place and health (Start to develop)
 | Use of key subject specific and technical terminology.Collect, analyse and interpret information from a range of secondary sources – including factual, numerical and spatial data.Online research .Evaluating and presenting findings from research.Core and ICT skills.Use of geospatial technologies such as digital cartography and G.I.S. | Students will be able to define the terms health, morbidity and mortality.Students will be able to describe and explain global patterns of health.Students will be able to describe and explain the idea of epidemiological transition. | As an introduction to this part of the topic, you could get students to suggest the top 5 causes of death in HICs, LICS, the UK, USA etc This up-to-date data can be downloaded from the WHO website (global data) and from the ONS website for the UK. The Guardian has also produced an infographic showing the main causes of death in the UK in 2012. Students often have misconceptions about causes of death which can be challenged here.Use the interactive wealth and health of nations graphs at [Gapminder: a fact-based worldview](http://www.gapminder.org/) to look at the links between the two variables around the world.Go through Abdel Omran’s idea of epidemiological transition (1971) and get students to annotate a line graph showing the change from infectious diseases to chronic and degenerative diseases over time. You can also draw links here with the DTM.Use the PRB population booklet and other health data to provide evidence to support the epidemiological transition (ET). You could divide students up to plot the ET for a range of contrasting countries and display these.Students need to develop a case study of a specified local area to illustrate and analyse the relationship between place and health. This could be one of place studies used for the Changing Places topic. Example of area associated with good health and longevity: Okinawa, Japan [World Life Expectancy: Longevity Hot Spots](http://www.worldlifeexpectancy.com/longevity-hot-spots) Example of area associated with poor health: (East inner) Glasgow [BBC News: Why is Glasgow the UK’s sickest city?](http://www.bbc.co.uk/news/magazine-27309446)  | The World Health Organisation is a good starting point for access to health-related resources: [WHO: Health Topics](http://who.int/topics/en/) Population and health data for the UK can be found at [Office for National Statistics](http://www.ons.gov.uk/) The Worldmapper website has maps showing a wide range of different diseases at: [World mapper](http://www.worldmapper.org/)Search the health datablog at [The Guardian](http://www.theguardian.com/) and [The BBC](http://www.bbc.co.uk/) Cowling, D. and Digby, B. (2010) *Top Spec Geography: Health issues in Geography*, Geographical Association.Gatrell, A.C. and Elliot, S.J. (2009) *Geographies of health*Adams, K. (2011) ‘Healthcare issues in the UK, EU and the poorer world in 2010’, *Geofile,* 651.Garrington, S. (2013) ‘Poverty and health – the impact of inequality’, *Geofile,* 689.Melbourne, B (2008) ‘Global patterns of death, disease and health’, *Geofile,* 578.The brilliant gapminder website has data on population and health and suggestions for teaching activities at [Gapminder for teachers](https://www.gapminder.org/for-teachers/) . There are also links here to useful TED talks by Hans Rosling.Canada’s Global Education Project website has a library of excellent world maps showing indicators of health and development at: [Global Education Project](http://www.globaleducationproject.org/) For case study material including census data and social and economic characteristics of places in the UK, go to: [Office of National Statistics: Neighbourhood Statistics](http://www.neighbourhood.statistics.gov.uk/) [Datashine Census](http://www.datashine.org.uk/) and [Customer Data Research Centre Maps](http://maps.cdrc.ac.uk/) provide interactive visualization of census data. For specific health-related data, go to [Public Health Outcomes Framework: Overarching Indicators](http://www.phoutcomes.info/) and [Public Health England](https://www.gov.uk/government/organisations/public-health-england) |
| **Week 5*** The relationship between environmental variables and incidence of disease
* The global prevalence, distribution, seasonal incidence of one specified biologically transmitted disease eg malaria; its links to physical and socio-economic environments including impacts of environmental variables on transmission vectors
* Impact on health and well-being
* Management and mitigation strategies
 | Use of key subject specific and technical terminology.Collect, analyse and interpret information from a range of secondary sources – including factual, numerical and spatial data.Online research.Evaluating and presenting findings from research.Core and ICT skills.Use of geospatial technologies such as digital cartography and G.I.S. | Students will be able to describe and explain links between environmental variables such as climate, topography, air quality, water quality and health.Students will be able to describe and explain the global prevalence, distribution and impacts of one specified biologically transmitted disease such as malaria.Students will be able to describe and evaluate strategies adopted to tackle the chosen disease. | Brainstorm known links between different environmental factors and health. You could start by discussing diseases students may experience themselves like hayfever and asthma. You can also make links here with the Contemporary urban environments topic looking at air and water pollution and their impacts on health in cities. Discuss the “airpocalypse” being experienced in cities in China and India.Malaria: study recent maps showing global incidence of malaria or other biologically transmitted diseases and get students to discuss the patterns and trends that can be seen in different regions of the world.Students then to research the global prevalence, distribution, impacts of and strategies to tackle malaria using information from a variety of sources. The World Health Organisation (WHO) has a range of resources on different diseases such as malaria at: [WHO: Health topics](http://who.int/topics/en/) 2016 WHO report on eliminating malaria: [WHO: Eliminating malaria](http://www.who.int/malaria/publications/atoz/eliminating-malaria/en/) The Bill and Melinda Gates Foundation has numerous resources on malaria at:[Gates Foundation: Malaria](http://www.gatesfoundation.org/What-We-Do/Global-Health/Malaria) Melbourne, B. (2007) ‘Tropical diseases’, *Geofile,* 553.Information about malaria: [Malaria No More](http://www.malarianomore.org.uk/malaria) | See section on malaria in Cowling, D. and Digby, B. (2010) *Top Spec Geography: Health issues in Geography*, Geographical Association.Gatrell, A.C. and Elliot, S.J. (2009) *Geographies of health*Garrington, S. (2013) ‘Poverty and health – the impact of inequality’, *Geofile,* 689.Melbourne, B (2008) ‘Global patterns of death, disease and health’, *Geofile,* 578.Parsons, G. (2012) ‘Air Quality Issues’, *Geofile,* 656.Resources on urban air pollution including a new database can be found at [World Health Organisation (WHO): Global Urban Ambient Air Pollution Database](http://www.who.int/phe/health_topics/outdoorair/databases/cities/en/)   |
| **Week 6*** The global prevalence and distribution, impacts and management of one specified non-communicable disease, eg a specific type of cancer, CHD, asthma; its links to physical and socio-economic environment including impacts of lifestyles
* Impact on health and well-being
* Management and mitigation strategies
* The role of international agencies and NGOs in promoting health and combating disease at the global scale
* Complete case study of a specified local area to illustrate and analyse the relationship between place and health
 | Use of key subject specific and technical terminology.Collect, analyse and interpret information from a range of secondary sources – including factual, numerical and spatial data.Online research.Evaluating and presenting findings from research.Core and ICT skills.Use of geospatial technologies such as digital cartography and G.I.S. | Students will be able to describe and explain the global prevalence, distribution and impacts of one specified non-communicable disease such as CHD or cancer.Students will be able to describe and evaluate strategies adopted to tackle the chosen disease.Students will be aware of the role of different international agencies and NGOs in promoting health and combating disease at the global scale.Students will have built up a case study on a specific local area in which they have illustrated and analysed the relationship between place and health. | Use worldmapper, gapminder and other map resources to look at the global patterns for non-communicable diseases. How do these compare to the patterns for communicable diseases? Students to research the global prevalence, distribution, impacts of and strategies to tackle a specific non-communicable disease from a variety of sources. They could present this in a number of formats such as, a poster, presentation, film.Coronary Heart Disease (CHD)[WHO: Cardiovascular diseases](http://www.who.int/cardiovascular_diseases/en/) [British Heart Foundation](http://www.bhf.org.uk) US website [Centers for Disease Control & Prevention (CDC): Heart Disease Facts](http://www.cdc.gov/heartdisease/facts.htm)Get students to research different NGOs and then evaluate the advantages and disadvantages of each of their strategies. Potential NGOs include: Red Cross, Action Aid, Oxfam, Care, MSF.  | Adams, K. (2014) ‘Cardiovascular disease’, *Geofile,* 714.Melbourne, B. (2009) ‘Diseases of affluence’, *Geofile,* AQA2.Milton, D. (2013) ‘International agencies: how poverty is addressed on a global scale’, *Geofile,* 681.Davies, J. (2004) ‘ActionAid Kenya: a Case Study of an NGO’, *Geofile,* 471.Guinness, P. (2004) ‘NGOS: their role in promoting development’, *Geoactive,* 305.Bennett, P. (2009) ‘Regional Health and Morbidity Variations in the United Kingdom’, *Geofile,* 603.Garrington, S. (2016) ‘Liverpool – a comparison of demographics between an inner city area and a suburb’, *Geofile,* 748. |
| **Week 7*** Key factors in natural population change
* Models of natural population change and their application in contrasting settings
* Concept of the Demographic Dividend
 | Collect, analyse and interpret information from a range of secondary sources – including factual, numerical and spatial data.Online research.Evaluating and presenting findings from research.Core and ICT skills. | Students will be able to describe, explain and evaluate the demographic transition model.Students will be able to describe and explain key vital rates such as birth rate, death rate, total fertility rate, infant mortality rate and dependency ratio.Students will be able to describe age-sex variations using population pyramids.Students will understand the concept of the Demographic Dividend. | Go through the different stages of the DTM and get students to draw an annotated version. Discuss the advantages and disadvantages of such a model and use the latest birth rate and death rate data to assign countries to different stages.Could do thinking exercise on the DTM from David Leat’s (2001) *Thinking through Geography.*Using the latest [PRB booklet](http://www.prb.org/) - normally published in September, get students to pick out highest and lowest 3 countries for population statistics such as birth rate, death rate, fertility rate, IMR and dependency ratio. Match different shaped age-sex/population pyramids to the different stages of the DTM or to different geographical locations. Ask students to explain why different shaped pyramids can be linked to particular places.Define and discuss the concept of a demographic dividend.**Extension**: Some have discussed the notion of a second demographic dividend. What is this? | Key websites for up-to-date population data include: [Population Reference Bureau (PRB)](http://www.prb.org/) and [The World Bank: Data](http://data.worldbank.org/)Other useful websites include:[Population Matters](http://www.populationmatters.org/) The CIA Factbook website [Socio-economic Indicators for every country in the world](https://www.cia.gov/library/publications/resources/the-world-factbook/index.html) [United Nations Population Fund](http://www.unfpa.org/world-population-trends)  [ONS: Population and health data for the UK](http://www.ons.gov.uk/)  The brilliant [Gapminder](http://www.gapminder.org) website has data on population and health. There are also links here to useful TED talks by Hans Rosling.Rae, A. (2008) ‘Population characteristics of countries at different levels of development’, *Geofile,* 580.Jenkinson, C (2013) ‘Demographic transition in Thailand’ in *Geography Review,* 26: 3.Oakes, S. (2012) ‘The demographic dividend’ in *Geography Review,* 24: 4.Policy project report on [‘Understanding the demographic dividend’](http://www.policyproject.com) [Gates Institute for Population & Reproductive Health](http://www.gatesinstitute.org/)g – creating and capitalising on the demographic dividend for Africa. |
| **Week 8*** International migration: types, causes and implications
 | Use of key subject specific and technical terminology.Collect, analyse and interpret information from a range of secondary sources – including factual, numerical and spatial data.Online research.Evaluating and presenting findings from research.Core and ICT skills.Use of geospatial technologies such as digital cartography and G.I.S. | Students will be able to distinguish between refugees, asylum seekers and economic migrants.Students will be able to discuss the reasons why people move and the impacts this has on both the origin and destination country.Students will be able to discuss the causes and consequences of recent international migratory movements.Students will be able to describe the health implications of migration. | Match terms and definitions and discuss the reasons why people migrate. Produce an infographic using the latest facts and figures on international migration. (This could challenge a few misconceptions. For example, show the UNHCR infographic on refugees which shows that most refugees are being looked after outside of Europe [The UN Refugee Agency (UNHCR): figures at a glance](http://www.unhcr.org/uk/figures-at-a-glance.html)) Get students to produce a film/prepare a presentation on a particular international migration stream outlining specific causes and consequences of the movement.There are a lot of geographical resources/documentaries/BBC clips about the migration of Poles to the UK, the movement of Mexicans to the USA and the exodus of refugees from Syria. These would be good examples of international migration streams.**Extension**: discuss the notion of “insiders” and “outsiders” from the Changing Places topic with reference to migrants or research the Calais Jungle. What is it, who lives there and how are French authorities managing it? | [The Migration Observatory at the University of Oxford](http://www.migrationobservatory.ox.ac.uk/)  [Migration policy](http://www.migrationpolicy.org/) [Migration Watch UK](http://www.migrationwatchuk.org/)  (monitoring migration flows in and out of the UK) The UN publishes an annual report on international migration which can be found at [The United Nations (UN)](http://www.un.org/) The UN Refugee Agency has a wealth of up-to-date resources on refugees at: [UNHCR: figures at a glance](http://www.unhcr.org/uk/) Watch the 5 minute clip showing global refugee trends for 2015 at [The UNHCR: Global trends 2015](http://www.unhcr.org/global-trends-2015.html) Townsend, J. (2013) ‘Remittances: an economic lifeline’ in *Geography Review,* 26: 4.Punnett, N. (2007) ‘Migration case study: Poland to the UK’, *Geofile,* 550.Light, G. (2013) ‘Polish migrants to the UK’ in *Geography Review,* 26: 3.Morrish, M. (2014) ‘The Effect of Globalisation on Population Movements’, *Geofile,* 716. |
| **Week 9*** Population growth dynamics: over-population, under-population and optimum population
* Implications of population size and structure for the balance between population and resource; the concepts of ‘carrying capacity’ and ‘ecological footprint’ and their implications
* Population, resources and pollution model: positive and negative feedback
* Contrasting perspectives on population growth and its implications; Malthusian, neo-Malthusian and alternatives such as associated with Boserup and Simon
 | Use of key subject specific and technical terminology.Collect, analyse and interpret information from a range of secondary sources – including factual, numerical and spatial data.Core and ICT skills.  | Students will be able to define the terms over-population, under-population, optimum population, carrying capacity and ecological footprint.Students will be able to describe the population , resources and pollution model and discuss the positive and negative feedback mechanisms associated with this.Students will be able to discuss the merits and drawbacks of the theories of Malthus, The Club of Rome, Boserup and Simon. | Define the terms over-population, under-population and optimum population and use the PRB booklet to decide which countries could fit the definitions above.Get students to work out their own ecological footprint at [myfootprint.org](http://www.myfootprint.org/) and then discuss the causes and consequences of continued development and population growth. Discuss the ways in which countries with larger ecological footprints might reduce them.Draw a copy of the population, resources and pollution model (after D.D. Chiras) and add positive and negative feedback annotations.Research the viewpoints and arguments of population theorists such as Thomas Malthus, The Club of Rome, Ester Boserup and Julian Simon. In light of recent population trends, which theory of population growth appears most applicable in the 21st century?Watch the Hans Rosling documentary ‘Don’t Panic – the facts about population’ available free at [gapminder.org/videos/dont-panic-the-facts-about-population/](https://www.gapminder.org/videos/dont-panic-the-facts-about-population/) **Extension**: Research the views of the Danish academic Bjorn Lomborg. Why have some of his ideas attracted criticism? | The Guardian has excellent data-based articles relating to current population trends. See for example [The Guardian: Over-populated or under-developed? The real story of population growth](https://www.theguardian.com/global-development/datablog/2016/jun/28/over-populated-or-under-developed-real-story-population-growth)[The Global Footprint Network](http://www.footprintnetwork.org/) is an international think tank with a focus on reducing ecological footprints and increasing sustainability. Have a look at the annual Living Planet Reports at: [World Wildlife Fund (WWF) Footprint](http://footprint.wwf.org.uk/) Hobson, R. (2012) ‘Population and resources in Australia: a decision-making exercise’, *Geofile,* 666.Chiras, D.D. (2014) *Envrionmental Science* (Population, resources and pollution model). |
| **Week 10*** Health impacts of global environmental change: ozone depletion – skin cancer, cataracts; climate change – thermal stress, emergent and changing distribution of vector borne diseases
* Prospects for the global population, projected distributions and critical appraisal of future population-environment relationships
* Case study of a country/society experiencing specific patterns of overall population change
 | Presentation, interpretation, analysis and communication of data.Use of geospatial technologies such as digital cartography and G.I.S.The use of different types of data allows the development of critical perspectives on the data categories and approaches.Core and ICT skills. | Students will be able to outline the main health risks associated with global environmental change such as ozone depletion and climate change.Students will be aware of the main drivers of global population change and be able to discuss predicted changes.Students will be aware of the drawbacks of population predictions and will be able to debate whether population or consumption is a more significant threat to the environmental limits set by planet Earth.Students will have built up a case study of a country/society experiencing specific patterns of overall population change. | Get students into different groups to research the health impacts of global environmental change including skin cancer, cataracts, heatwaves, cold spells, dengue fever, lyme disease, west Nile virus and zika virus. (consider the impacts of the latter on the Rio Olympics 2016).Look at projected population distributions. How much variation exists between different projections? Why is there variation?Students to use all their knowledge and learning from this topic to build up a case study of a country/society experiencing specific patterns of overall population change.**Extension**: Discuss what governments can do to manage population growth more sustainably. | Roser, M. (2015) ‘Future world population growth’ published at [Our World in Data](http://www.ourworldindata.org/population-growth)  There was a WHO conference on health and climate in July 2016. Resources relating to this can be found at [WHO: Public health, environmental and social determinants of health](http://www.who.int/phe/en/)  [Latest UN World Population Prospects](http://www.un.org/en/development/desa/news/population/2015-report.html)  ‘A world with 11 billion people? New population projections shatter earlier estimates’ by Robert Kunzig, published in *National Geographic*, September 2014 |