

Press release: World first as UK aid brings together experts to predict where cholera will strike next

Aid experts at the Department for International Development (DFID) have teamed up with the Met Office, NASA and US scientists to use for the first time a world-leading approach to accurately predict where and when cholera will spread.

Cholera Prevention in Yemen

US scientists, working with NASA satellite data, have developed a model to predict where cholera is most at risk of spreading with an impressive 92 per cent accuracy in Yemen. UK aid is turning this from theory to reality, using these predictions and Met Office forecasting to give aid workers on the ground in Yemen the information they need to respond to cholera outbreaks quicker than ever before.

DFID is helping to prevent the deadly disease spreading any further by working with UNICEF to target the delivery of vital support to areas predicted to be at greatest risk. This includes:

- promoting good hygiene to prevent people falling ill in the first place;
- stock-piling hygiene kits, jerry cans and chlorine to clean water in advance of an outbreak;
- providing cholera treatment kits, rehydration salts, zinc supplements and intravenous fluid packs to treat people that have fallen ill; and
- providing medical equipment for hospitals and clinics, such as cholera beds.

DFID Chief Scientist Professor Charlotte Watts said:

The conflict in Yemen is the worst humanitarian crisis in the world, with millions of people at risk of deadly but preventable diseases such as cholera.

By connecting science and international expertise with the humanitarian response on the ground, we have for the very first time used sophisticated predictions of where the risk of cholera is highest to help aid workers save lives and prevent needless suffering for thousands of Yemenis before it's too late.

This breakthrough means that we no longer need to wait for cases of cholera to be detected before medical staff can start taking life-saving actions.

Met Office Head of International Development Helen Bye said:

Through our collaboration with DFID we are able to be part of this ground breaking approach to take early action against cholera, a waterborne disease, contracted through consuming contaminated water.

Met Office meteorologists are able to translate our global modelling and scientific expertise to show where rain has fallen and where it will fall. We then provide weekly tailored guidance to DFID and humanitarian agencies including UNICEF to inform their life saving actions.

Aid experts at DFID began using this data to work with UNICEF to prevent the spread of the disease in March 2018, ahead of the rainy season. Last year, Yemen suffered the worst cholera outbreak in living memory with more than 1 million suspected cases.

There has not been a significant outbreak in cholera so far this year, with the number of suspected cholera cases significantly lower than last year. For example, during the last week of June this year there were 2,597 suspected cases and 3 deaths, down from 50,825 suspected cases and 179 deaths at the same time last year.

Despite the predicted risk of cholera in Ibb – a governorate on the frontline of the conflict – being just as high this year as last year, there were only 672 suspected cases of cholera in July 2018 compared to 13,659 in July 2017.

There are a number of other factors that could have contributed to a lower number of suspected cholera cases this year, including a later rainy season, greater immunity against cholera and a change in national guidance for the recording of suspected cholera cases. However, the new actions taken as a result of the predictions are helping to save lives and reduce suffering.

This new approach is all the more important as the new guidance for recording suspected cholera cases in Yemen may make it more difficult to detect early outbreaks of cholera. Acting early and being able to target high-risk areas is critical.

UNICEF Yemen Representative Meritxell Relaño said:

The information on rainfall assessments supports the early warning on high risk areas for cholera outbreak. This enables UNICEF and partners to refine and focus our efforts on preparedness and timely response to cholera which has affected the lives of many children in Yemen.

These rainfall predictions have helped ensure that crucial preventive and response measures are in place where they will be most needed, including agreements with implementing partners on the ground, prepositioning of essential supplies, disinfection of water sources and deployment of community volunteers to engage households and communities on preventive hygiene behaviours including, safe

water storage. As a result of this support and our other preparedness and response work, we have been able to avoid a resurgence of cholera on the scale seen in 2017.

The Met Office's supercomputer in Exeter makes 14 thousand trillion calculations per second allowing it to take in 215 billion weather observations from across the world every day, which are used as a starting point for UK and global weather forecasts. In Yemen, high-resolution models are used to forecast out to six days, providing UNICEF accurate and critical intelligence as they identify areas most at risk.

These forecasts have been used to improve a predictive model that was developed by scientists at two universities in the United States – West Virginia University and the University of Maryland.

The forecast produced by the Met Office and the predictions produced by the US scientists are then shared with UNICEF and other aid so they can see which neighbourhoods, schools and hospitals will be at greatest risk, helping them to target their response to where support is needed most.

This breakthrough of accurately predicting where and when the disease will spread has meant that aid workers can take action before an outbreak occurs.

It is DFID's ambition to combine the NASA data and Met Office forecasts in order to predict outbreaks eight weeks in advance – twice the current capability. This would help aid agencies plan major vaccinations campaigns ahead of outbreaks, protecting hundreds of thousands of individuals.

[Press release: World first as UK aid brings together experts to predict where cholera will strike next](#)

Aid experts at the Department for International Development (DFID) have teamed up with the Met Office, NASA and US scientists to use for the first time a world-leading approach to accurately predict where and when cholera will spread.

[Cholera Prevention in Yemen](#)

US scientists, working with NASA satellite data, have developed a model to predict where cholera is most at risk of spreading with an impressive 92 per cent accuracy in Yemen. UK aid is turning this from theory to reality, using these predictions and Met Office forecasting to give aid workers on the ground in Yemen the information they need to respond to cholera outbreaks

quicker than ever before.

DFID is helping to prevent the deadly disease spreading any further by working with UNICEF to target the delivery of vital support to areas predicted to be at greatest risk. This includes:

- promoting good hygiene to prevent people falling ill in the first place;
- stock-piling hygiene kits, jerry cans and chlorine to clean water in advance of an outbreak;
- providing cholera treatment kits, rehydration salts, zinc supplements and intravenous fluid packs to treat people that have fallen ill; and
- providing medical equipment for hospitals and clinics, such as cholera beds.

DFID Chief Scientist Professor Charlotte Watts said:

The conflict in Yemen is the worst humanitarian crisis in the world, with millions of people at risk of deadly but preventable diseases such as cholera.

By connecting science and international expertise with the humanitarian response on the ground, we have for the very first time used sophisticated predictions of where the risk of cholera is highest to help aid workers save lives and prevent needless suffering for thousands of Yemenis before it's too late.

This breakthrough means that we no longer need to wait for cases of cholera to be detected before medical staff can start taking life-saving actions.

Met Office Head of International Development Helen Bye said:

Through our collaboration with DFID we are able to be part of this ground breaking approach to take early action against cholera, a waterborne disease, contracted through consuming contaminated water.

Met Office meteorologists are able to translate our global modelling and scientific expertise to show where rain has fallen and where it will fall. We then provide weekly tailored guidance to DFID and humanitarian agencies including UNICEF to inform their life saving actions.

Aid experts at DFID began using this data to work with UNICEF to prevent the spread of the disease in March 2018, ahead of the rainy season. Last year, Yemen suffered the worst cholera outbreak in living memory with more than 1 million suspected cases.

There has not been a significant outbreak in cholera so far this year, with

the number of suspected cholera cases significantly lower than last year. For example, during the last week of June this year there were 2,597 suspected cases and 3 deaths, down from 50,825 suspected cases and 179 deaths at the same time last year.

Despite the predicted risk of cholera in Ibb – a governorate on the frontline of the conflict – being just as high this year as last year, there were only 672 suspected cases of cholera in July 2018 compared to 13,659 in July 2017.

There are a number of other factors that could have contributed to a lower number of suspected cholera cases this year, including a later rainy season, greater immunity against cholera and a change in national guidance for the recording of suspected cholera cases. However, the new actions taken as a result of the predictions are helping to save lives and reduce suffering.

This new approach is all the more important as the new guidance for recording suspected cholera cases in Yemen may make it more difficult to detect early outbreaks of cholera. Acting early and being able to target high-risk areas is critical.

UNICEF Yemen Representative Meritxell Relaño said:

The information on rainfall assessments supports the early warning on high risk areas for cholera outbreak. This enables UNICEF and partners to refine and focus our efforts on preparedness and timely response to cholera which has affected the lives of many children in Yemen.

These rainfall predictions have helped ensure that crucial preventive and response measures are in place where they will be most needed, including agreements with implementing partners on the ground, repositioning of essential supplies, disinfection of water sources and deployment of community volunteers to engage households and communities on preventive hygiene behaviours including, safe water storage. As a result of this support and our other preparedness and response work, we have been able to avoid a resurgence of cholera on the scale seen in 2017.

The Met Office's supercomputer in Exeter makes 14 thousand trillion calculations per second allowing it to take in 215 billion weather observations from across the world every day, which are used as a starting point for UK and global weather forecasts. In Yemen, high-resolution models are used to forecast out to six days, providing UNICEF accurate and critical intelligence as they identify areas most at risk.

These forecasts have been used to improve a predictive model that was developed by scientists at two universities in the United States – West Virginia University and the University of Maryland.

The forecast produced by the Met Office and the predictions produced by the US scientists are then shared with UNICEF and other aid so they can see which

neighbourhoods, schools and hospitals will be at greatest risk, helping them to target their response to where support is needed most.

This breakthrough of accurately predicting where and when the disease will spread has meant that aid workers can take action before an outbreak occurs.

It is DFID's ambition to combine the NASA data and Met Office forecasts in order to predict outbreaks eight weeks in advance – twice the current capability. This would help aid agencies plan major vaccinations campaigns ahead of outbreaks, protecting hundreds of thousands of individuals.

General media queries

Email

mediateam@dfid.gov.uk

Telephone

020 7023 0600

Follow the DFID Media office on Twitter – @DFID_Press

[News story: Jenrick toasts success of Scottish industry](#)

- Treasury Minister meets with local Moray leaders to discuss how government can support vision for growth
- 205,000 more people in employment and 61,200 more businesses in Scotland than in 2010
- Scotch whisky continues to be a national success story, with nearly £2 billion exported this year alone
- government continues to engage with the Oil and Gas sector on competition and innovation

Scotland's innovators are helping to drive forward the UK's economy, with the number of businesses growing and more people in employment than in 2010.

Treasury Minister Robert Jenrick will today (28 August 2018) visit Moray, as part of his tour of the UK, to meet local leaders and entrepreneurs to lift the lid on innovations that are powering the 'new economy'.

During his visit he will meet with businesses and local politicians to discuss how the Treasury can best support their ideas for a potential Moray growth deal.

The Exchequer Secretary to the Treasury, Robert Jenrick, said:

From booming traditional industries like Scotch whisky, to new innovations in the aircraft industry, it's clear that the Scotland's entrepreneurs are getting it right and exporting their goods all over the world.

I want to champion these contributions, which too often go unnoticed, by highlighting the work being done to drive up productivity and ensure our economy is fit for the future.

It is also great to meet with local leaders to discuss their vision for the Moray economy, and how we can support this vision going forward. I look forward to being able to make progress on the Moray growth deal.

During a the visit to Strathisla distillery, Mr Jenrick singled out the whisky industry as a particular success story, which has exported nearly £2 billion worth of Scotch whisky in 2018 alone. He will also meet with Copernicus Technology, which is providing state-of-the-art technology for use in RAF aircraft. And the minister will hold a roundtable to further engage with leaders from the oil and gas sector.

Further information

Scottish economy facts:

- since early 2010, 205,000 (+8%) more people are in employment in Scotland. Unemployment has fallen by 104,000 (-48%) over the same period
- the employment rate is up 5.4 percentage points since early 2010
- the unemployment rate is down 4.1 percentage points since early 2010
- Scotland has the third highest productivity of all UK regions and nations and the second highest productivity growth since 2010 (14.1%)

The Chancellor Philip Hammond highlighted the role of innovators in the new economy in his Autumn Budget and set out the government's plans to support those who deliver growth, create higher paying jobs and make sure everyone has the skills they need.

[News story: Jenrick toasts success of Scottish industry](#)

- Treasury Minister meets with local Moray leaders to discuss how government can support vision for growth
- 205,000 more people in employment and 61,200 more businesses in Scotland

than in 2010

- Scotch whisky continues to be a national success story, with nearly £2 billion exported this year alone
- government continues to engage with the Oil and Gas sector on competition and innovation

Scotland's innovators are helping to drive forward the UK's economy, with the number of businesses growing and more people in employment than in 2010.

Treasury Minister Robert Jenrick will today (28 August 2018) visit Moray, as part of his tour of the UK, to meet local leaders and entrepreneurs to lift the lid on innovations that are powering the 'new economy'.

During his visit he will meet with businesses and local politicians to discuss how the Treasury can best support their ideas for a potential Moray growth deal.

The Exchequer Secretary to the Treasury, Robert Jenrick, said:

From booming traditional industries like Scotch whisky, to new innovations in the aircraft industry, it's clear that the Scotland's entrepreneurs are getting it right and exporting their goods all over the world.

I want to champion these contributions, which too often go unnoticed, by highlighting the work being done to drive up productivity and ensure our economy is fit for the future.

It is also great to meet with local leaders to discuss their vision for the Moray economy, and how we can support this vision going forward. I look forward to being able to make progress on the Moray growth deal.

During a the visit to Strathisla distillery, Mr Jenrick singled out the whisky industry as a particular success story, which has exported nearly £2 billion worth of Scotch whisky in 2018 alone. He will also meet with Copernicus Technology, which is providing state-of-the-art technology for use in RAF aircraft. And the minister will hold a roundtable to further engage with leaders from the oil and gas sector.

Further information

Scottish economy facts:

- since early 2010, 205,000 (+8%) more people are in employment in Scotland. Unemployment has fallen by 104,000 (-48%) over the same period
- the employment rate is up 5.4 percentage points since early 2010
- the unemployment rate is down 4.1 percentage points since early 2010
- Scotland has the third highest productivity of all UK regions and nations and the second highest productivity growth since 2010 (14.1%)

The Chancellor Philip Hammond highlighted the role of innovators in the new economy in his Autumn Budget and set out the government's plans to support those who deliver growth, create higher paying jobs and make sure everyone has the skills they need.

[Press release: July 2018 Price Paid Data](#)

This month's Price Paid Data includes details of more than 95,500 sales of land and property in England and Wales that HM Land Registry received for registration in July 2018.

In the dataset you can find the date of sale for each property, its full address and sale price, its category (residential or commercial) and type (detached, semi-detached, terraced, flat or maisonette and other), whether it is new build or not and whether it is freehold or leasehold.

The number of sales received for registration by property type and month

Property type	July 2018	June 2018	May 2018
Detached	21,568	18,518	18,060
Semi-detached	24,964	22,251	20,897
Terraced	25,554	23,243	22,363
Flat/maisonette	17,368	15,678	15,846
Other	6,267	5,803	6,263
Total	95,721	85,493	83,429

Of the 95,721 sales received for registration in July 2018:

- 72,275 were freehold, a 3.7% increase on July 2017
- 11,819 were newly built, a 43% fall on July 2017

There is a time difference between the sale of a property and its registration at HM Land Registry.

Of the 95,721 sales received for registration, 24,719 took place in July 2018 of which:

- 526 were of residential properties in England and Wales for £1 million

and over

- 300 were of residential properties in Greater London for £1 million and over
- 4 were of residential properties in West Midlands for more than £1 million
- 2 were of residential properties in Greater Manchester for more than £1 million

The most expensive residential sale taking place in July 2018 was of a terraced property in the Royal Borough of Kensington and Chelsea, London for £18,500,000. The cheapest residential sale in July 2018 was a terraced property in Henllys, Cwmbran for £6,120.

The most expensive commercial sale taking place in July 2018 was in the City of Westminster for £117,450,000. The cheapest commercial sales in July 2018 were in Haringey, Greater London and Stanford-Le-Hope, Thurrock for £100.

[Access the full dataset](#)

Notes to editors

1. Price Paid Data is published at 11am on the 20th working day of each month. The next dataset will be published on Friday 28 September 2018.
2. [Price Paid Data](#) is property price data for all residential and commercial property sales in England and Wales that are lodged with HM Land Registry for registration in that month, [subject to exclusions](#).
3. The amount of time between the sale of a property and the registration of this information with HM Land Registry varies. It typically ranges between two weeks and two months. Data for the two most recent months is therefore incomplete and does not give an indication of final monthly volumes. Occasionally the interval between sale and registration is longer than two months. The small number of sales affected cannot be updated for publication until the sales are lodged for registration.
4. Price Paid Data categories are either Category A (Standard entries), which includes single residential properties sold for full market value, or Category B (Additional entries), such as sales to a company, buy-to-lets where they can be identified by a mortgage and repossessions.
5. HM Land Registry has been collecting information on Category A sales

from January 1995 and on Category B sales from October 2013.

6. Price Paid Data can be downloaded in text, CSV format and in a machine readable format as [linked data](#) and is released under [Open Government Licence \(OGL\)](#). Under the OGL, HM Land Registry permits the use of Price Paid Data for commercial or non-commercial purposes. However, the OGL does not cover the use of [third party rights](#), which HM Land Registry is not authorised to license.
7. The [Price Paid Data report builder](#) allows users to build bespoke reports using the data. Reports can be based on location, estate type, price paid or property type over a defined period of time.
8. HM Land Registry's mission is to guarantee and protect property rights in England and Wales.
9. HM Land Registry is a government department created in 1862. It operates as an executive agency and a trading fund and its running costs are covered by the fees paid by the users of its services. Its ambition is to become the world's leading land registry for speed, simplicity and an open approach to data.
10. HM Land Registry safeguards land and property ownership worth in excess of £4 trillion, including around £1 trillion of mortgages. The Land Register contains more than 25 million titles showing evidence of ownership for some 85% of the land mass of England and Wales.
11. For further information about HM Land Registry visit www.gov.uk/land-registry.
12. Follow us on Twitter [@HMLandRegistry](#) our [blog](#) and [LinkedIn](#) and [Facebook](#).

Contact