Issue 32, Spring 2018

population matters for a sustainable future

Empower to Plan Crowdfunding family planning

More Feet, More Heat? The PM conference 2018

What's wrong with talking about population?

A Green Future? UK government plans omit population

ISSN 2053-0412 (Print) ISSN 2053-0420 (Online)

1.1.1.231



The conference panel: Farah Kabir, Adrian Hayes, Robin Maynard, Judy Ling Wong, Sara Parkin and Peter Wadhams (see p10-13)

Contents

From the Director: More feet, more heat?
News
Population Matters news6-9
Climate change and us: The PM conference10-13
PM's High Level Strategic Review14-15
Books: <i>Dead Zone</i> 16
The Civic City in a Nomadic World17
Our response to the 25-year Green Future Plan18-19
What's wrong with talking about population?20-21
Project Drawdown22
PM local groups news23

Cover photograph: WINGS Guatemala

About Population Matters

Population Matters is a membership charity working towards a global population size that can provide a good standard of living for all, a healthy environment and environmental sustainability. We are funded by our members, donations and grants and receive no funding from official or commercial bodies.

Population Matters staff

Robin Maynard: Director

Julie Lewis: Membership and Finance Manager Alistair Currie: Head of Campaigns and Communications

Tessa Dickinson: Campaigns and Projects Officer **Mala Tu:** Empower to Plan Coordinator and Administrator

Magazine

Population Matters does not necessarily endorse contributions nor guarantee their accuracy. See our website for how to contribute to the magazine.

To receive the magazine by email, please contact enquiries@populationmatters.org Additional copies are available on request; a donation is appreciated. Printed using vegetable-based inks on 100% recycled paper.

Editor: Catharine Stott

We also produce the *Journal of Population and Sustainability*, a fully referenced, biannual academic publication. For more information, see our website or contact us.

Contacting us

Population Matters 135-137 Station Road, London, E4 6AG Tel: 020 8123 9116 enquiries@populationmatters.org

FIND US ONLINE

- www.populationmatters.org
- facebook.com/PopulationMatters

Contacting you

If you do not receive our monthly emailed *Update* and occasional e-alerts, but would like to, please contact julie.lewis@populationmatters.org.

135-137 Station Road, London E4 6AG.

FROM THE DIRECTOR:

More feet, more heat?

It was good to see many of you at our conference, *Climate Change and Us: More Feet, More Heat?* (see p10-13), particularly with the weather causing disruptions to transport into the capital; I was lucky to get on one of only a handful of trains leaving the usually snow-free climes of Bristol.

With two Arctic explorers speaking, excuses about 'ice on the rails' weren't going to wash. Professor Peter Wadhams, a member of our Advisory Council, explained the cause of the 'Beast from the East' via a graphic depicting the dramatic oscillations in the Arctic jet stream (which normally protects the UK from such weather) bringing Siberian conditions to UK. His most chilling statement concerned the melting of the permafrost covering the Arctic seabed, where huge quantities of methane, 23 times more damaging than carbon dioxide, are already being released. Without hyperbole, he made the Hollywood action movie, *The Day After Tomorrow*, seem understated.

As an imminent 'oldie', at times I despair that my generation (especially otherwise respected colleagues within the environment movement) have not done enough to push population up the ranking of issues challenging all life on Earth. So it was very encouraging to see the high proportion of young people in the audience. Whilst never underestimating the passion and persistence and power of the 'Grey Panthers', it is the younger generation who must contend with the consequences of past inaction and who have the opportunity to make personal and political choices for change.

Our Secretary of State for the Environment, Michael Gove, recently set out this government's 25-year vision for the UK environment (p18-19). Naturally, we put in a response, welcoming the overarching objective that, "ours can become the first generation to leave that environment in a better state than we found it."



However, we pointed out the plan's fundamental flaw in that it fails to include any detailed consideration of the over-riding factor challenging that noble ambition, namely: ongoing human population growth and its impacts. We are pleased to have received a direct response from Mr Gove requesting we meet with his officials (watch this space for any outcomes).

PM has set out its own over-arching plan, but not for 25 years' time. Our agenda working on the upstream issue affecting all environmental, economic and social challenges facing human society requires rather more urgent action. The High Level Strategic Review identified the 'big picture' challenges and opportunities facing us. It uses these to set key recommendations and essential further work for delivering on our mission, vision and values over the next 1-3 years. We are delighted that the vast majority (88%) of our Guarantor Members, who were consulted on the Strategy Review, agreed with its recommendations, as did our Patrons and Advisory Council (see p14-15).

Thank you, as ever, for all your support.

Very best, Robin



News

Running out of time?

In November, 15,000 scientists signed a letter warning that the Earth faces environmental disaster unless action is taken to prevent it. They urge people to look at their individual family size choices, saying:



"It is also time to re-examine and change our individual behaviors, including limiting our own reproduction (ideally to replacement level at most)..."



Their message comes 25 years after the Union of Concerned Scientists published a similar warning in 1992. This latest warning reports that, in almost every respect, our environmental crisis has worsened since then, and that 'time is running out'.

The scientists identify population growth as the 'primary driver' of the key problems:

"[b]y failing to adequately limit population growth, reassess the role of an economy rooted in growth, reduce greenhouse gases, incentivize renewable energy, protect habitat, restore ecosystems, curb pollution, halt defaunation, and constrain invasive alien species, humanity is not taking the urgent steps needed to safeguard our imperilled biosphere."



UK births and deaths: latest figures

In 2016, the number of UK births fell by 2,330, or 0.3%, from 777,165 in 2015 to 774,835 a year later, according to the latest figures from the Office of National Statistics (ONS).

The number of deaths fell by just under 1% to 597,206. The UK's Total Fertility Rate remains at 1.8, below the 'replacement rate' of 2.1, the level at which the number of births and deaths balance out. This rate, higher than most EU countries, has not changed significantly in 25 years.

The UK population continues to grow by about a city the size of Manchester every year. This is due to fewer deaths than births, but also because of immigration, which adds about 250,000 to the population every year.

Over the next decade, the ONS expects net migration to cause 54% of the population growth, and more births than deaths to account for the other 46%.



Fewer child marriages

UNICEF estimates that 25 million child marriages have been prevented in the past decade. Now one in five girls is married before she is 18, instead of one in four. The biggest reductions have been in South Asian countries. In India this was achieved by better education for girls and by publicising the harm child marriage causes. UNICEF says the problem is now most severe in Africa but even so, Ethiopia has cut child marriage rates by a third.

Imams hold the key to contraception

Imams are opening the door to getting contraception to married women in Senegal, where usage has doubled over the past six years.

Now about 23% of married women are are using contraception, instead of only 12%. Senegal's fertility rate is 4.8, nearly double the global average.

When local NGOS and Marie Stopes International (MSI) work in new places, they first go to the local Imam for support, citing passages in the Qaran that say women should breastfeed for two years. Breastfeeding can prevent conception.

"Any time we come to a town, the first thing we do is go to a religious leader to explain what we are doing, so that they can become our link with the population," says Michèle Diop Niang, of MSI, a family planning NGO. "It's very important because if people don't have the support of a religious leader, they won't use family planning at all."

"Family planning is just a new word for what we have always done according to Islam," says Seyni Cisse, an imam in Ziguinchor.



Photo: Ryan Lenora Brown/The Christian Science Monitor

Word Vasectomy Day

Last November, the fifth World Vasectomy Day saw more than 1,200 doctors worldwide offering free vasectomies to men in over 50 countries. There was a 24-hour vasectomy-athon at WVD's headquarters in Mexico.

Male contraception tends to get neglected because people worry about side effects, like decreased pleasure. There's also a belief that there's no market for it, partly because having lots of children is seen as a hallmark of masculinity. Hence, 60% of women in partnerships used modern contraception, compared to only 8% of men.

WVD aims to change men's attitudes by making the day a celebration, with music, talks and videos and Skype

conversations with the various countries taking part. More than 400 men turned up in Mexico to get free vasectomies. On the day 150 men received vasectomies in the mobile unit. WVD in Mexico reported:



"In the end, with the city saying that they had to turn off the generator, the last man waiting was escorted to the mobile unit for the last vasectomy of the day! This man gave us each a hug and said that we had changed his life. He was so grateful that we had done all we could to keep our mobile unit working so that he wouldn't be left out."

To find out more or donate, go to: www.worldvasectomyday.org

Global Gag one year on

African countries are the worst hit a year after US President Trump reinstated and expanded the Mexico City Policy, aka the Global Gag rule, which blocks US federal funding for NGOs providing abortions, abortion-related services, or even mentioning abortion.

The cuts have affected 1,275 NGOs and \$2.2 billion of funding. Marie Stopes International (MSI) estimates that by the end of Trump's first term, there will have been 110,000 unintended pregnancies and 32,000 unsafe abortions in **Zimbabwe** alone.

In **Nigeria**, MSI estimates they could have prevented 2 million unwanted pregnancies and 10,000 maternal deaths.

In **Kenya**, Mombasa's International Planned Parenthood Federation clinic, which used to reach 76,000 women a year, has closed.

In **Mozambique**, the IPPF's member organisation lost 60% of its funding, half of their staff, 650 peer educators and 18 youth friendly clinics.

Botswana lost 60% of its funding. Swaziland lost 50%.

Taking action

Population Matters joined hundreds of development, social justice, women's rights and family planning organisations in signing a joint statement condemning the reinstatement of the Global Gag Rule. We have also backed the SheDecides initiative, which aims to generate funds to replace those lost because of the GGR. In February, we joined other supportive groups at a SheDecides event in Parliament.



Population Matters News

Big Foot's travels

Our Welcome to the Anthropocene campaign ambassador, Big Foot, has been spreading our message. He attracted a great deal of attention at the high-profile Compassion in World Farming and WWF conference, Livestock and Extinction, where almost all the visitors to our stall expressed support for our position.

Big Foot also turned heads at Basingstoke Green Fair, the Anima environmental fair and the prestigious Ecobuild conference in London (special thanks to PM member Esther Phillips for her powers of persuasion with the organisers of that event).



Photo: Tony Juniper, Pete Myers and Robin Maynard

Big Foot will strike again

A huge thank you for all the donations to the Special Festive Appeal, to help our Big Foot sculpture reach new audiences in 2018.

More of you donated than for any previous appeal, raising over £7,000. Thanks to you, Big Foot will be at venues and events throughout 2018, helping explain humans' lasting impact on the world's resources and environment.

We are also using the funds to develop new exhibition materials to accompany Big Foot on his travels.

New Population Matters patron

PM is delighted to announce a new patron, US racing car driver and environmental activist, Leilani Munter. Leilani uses her status as a driver to advocate for environmental causes. Carbon neutral since 2008, her tagline is 'never underestimate a vegan hippie chick in a race car'. Child-free by choice, she has a deep commitment to the population cause and describes herself as honoured to become a patron of Population Matters.



New PM board

At our AGM in October, Claire Kemble (right), Terry Murphy (left) and Emma Oliff were elected to the board of trustees. Karin Kuhlemann stepped down to focus on her PhD in population



and ethics. In December, Chair Andrew Macnaughton resigned from the board to concentrate on his other voluntary and professional responsibilities and Terry was elected Chair.

A former naval officer, Terry has spent nearly 30 years founding, running and advising businesses and organisations. He contacted PM to offer his help after seeing Karin Kuhlemann on a BBC TV programme. Terry facilitated all the meetings and discussions during the High Level Strategic Review and stood for election to the board shortly afterwards.

Our deepest thanks to Karin and Andrew for their hard work, skills and commitment. More information about all our trustees is on our website.

Empower to Plan

Crowd funding family planning

Access to family planning is at the centre of what Population Matters advocates. Very soon, we are launching our new crowd-funding initiative that allows you to choose where you'd like to help people to have smaller families. Empower to Plan will feature three different projects around the world, including in the UK. We've carefully-picked our partners for their effectiveness and impact. They're all driving positive change by meeting the unmet need for family planning in the communities they serve. One of them is WINGS Guatemala.



WINGS Guatemala

Guatemala has the highest fertility rate in Latin America and the Caribbean. WINGS is a well-established family planning organisation that has prevented an estimated 249,600 unwanted pregnancies since it began offering contraception and advice to poor rural families in Guatemala in 2001. WINGS delivers its services through a network of local youth leaders and contraception promoters, as well as mobile medical units and stationary clinics. Despite its success, WINGS recently lost its access to cheap contraceptives from Denmark when the minister who facilitated this resigned. Now WINGS has to buy local, more expensive, contraceptives to give to people.

Donate:

£2,400 is all that WINGS needs to pay for the short-acting contraceptives needed by five of WINGS' Volunteer Health Promoters to supply rural communities for a year.

Fact check: Guatemala

Population: 17 million, 40% are under 15 Projected rise: to 21.3 million in 2030 Health: nearly half of children under 5 are malnourished (80% of indigenous children) Poverty: 75% of indigenous people live in poverty Fertility rate: 3.1 (3.7 for indigenous women). Women say they want 2 children.





"I hear a lot about it... But not

Our new video is getting young people thinking

Even though, as we report on p20 (What's the problem with population stabilisation?), there is still a lot of resistance to the population message, the good news is that the kind of scepticism or hostility Diana Coole identifies is increasingly confined to older generations. At Population Matters, we are making a point of reaching out to young people because they literally have the power to determine future population growth. At events, and in our conference this year, we've found that young people quickly and easily understand our positive vision of a healthy planet and decent lives.

You can see this in the new video we launched in October. *Small families, small planet* targets younger people and focuses on the positive impact of smaller family size.

"It's made me aware of the extremity of the situation." Matilda.

Research shows that younger audiences are sceptical of authority figures lecturing them, and tend to respond best to authentic communications from people of their own generation. Most of all, they respond to being treated with respect. They want to understand the facts and draw their own conclusions. So, we decided to let the facts and young people speak for themselves – and we weren't disappointed.

Small families, small planet uses animations to reveal the truth about our numbers, our consumption and the importance of bringing down family size in both the developing and the developed world. The video records the authentic reactions of randomly selected young people as they watch the information on a screen. It elicits some reactions of amazement and horror, and sees participants thinking again about the impacts of their own choices.

The film focuses on five key issues. The first is our unsustainable and growing demand on the Earth's resources, highlighting the Global Footprint Network's conclusion that we are using the renewable resources of 1.7 Earths and will need three Earths by 2050 unless we change our ways. As one of our participants says, "That's, like, my lifetime."

"Everyone is powerful, everyone can make a difference." Emma



The young people tended to react most strongly to the news that wild animals now make up only 1% of the weight of animals on land, whereas 10,000 years ago, humans were that 1%.

Our animation showing how vastly disproportionate the emissions of people in the developed world are, compared to those of people in the Global South, also really got them thinking. One participant concluded that one fewer person in the developed world is better for the planet than fewer people from the poorer parts of the world.

"It's obvious we can't go on the way we're going" Matilda

Perhaps the most telling moment comes at the news that, while the UN foresees a population of 11.2 billion by 2100, just one fewer child in every second family would actually reduce global population numbers to less than it is today (see the last issue of PM magazine, 2017 UN projections). This striking fact shows that the power to achieve sustainable population levels is in our hands. As one participant says, "It's crazy that just half-a-child can make that much difference."

One participant, Ruwa, said afterwards, "It makes me want to make other people aware as well. Not saying, 'Don't have children', but, saying, 'You need to be aware of the impact that you starting a family and the amount of children you have has on everyone else.'"

like this."



The video also features the voices of people in their 20s and 30s who have already thought about the issues and family size and decided to have smaller or no families, including new PM trustee Emma Olliff (see panel).

As one of them, Anna, says, "Educating and raising awareness of the impact a large family has is a much better way to [change people's views] because then people will make the choice in a positive manner."

The video, and the shorter versions of it used on our social media pages, have now been viewed more than 20,000 times. You can see it yourself at www.populationmatters/families-film, or on our YouTube channel, www.youtube.com/PopulationMatters. Please share with friends and family too.

WELCOME TO EMMA OLLIFF

It's always interesting to find out what motivates people to get involved with Population Matters. For Emma Olliff, our newest trustee, it was the yachts of the super-rich, farming and Albert Bartlett's video on YouTube explaining exponential growth.

A trained marine biologist and ecologist, Emma had left university just after the 2008 crash. With no jobs for recent graduates in environmental work, Emma spent several years working as a chef on yachts, where, she said, she found the profligacy and waste disgusting. She came back to the UK to work in farming. Emma went to the Real Farming Conference in Oxford last year; a panel was discussing how farming would be able to feed 9 billion people.





"I asked if we should be doing something to reduce the population numbers, and the panel closed the conversation down. But Robin Maynard was there and came and found me afterwards."

Emma, 29, now spends a lot of time researching and writing on population, putting her Masters degree to good use in understanding the data. "It's important to understand where the biases lie and how the data is manipulated. We have to be able to really understand it if we are not going to be closed down as I was at the farming conference."





Alistair Currie reports on Climate Change and Us, PM's conference in London.

Climate change was very much in evidence for Population Matters' 2018 conference in March, *Climate change and us: more feet, more heat?*. Despite Arctic snow all over the UK, hundreds of people made it London, including many new young faces, for a fascinating afternoon of discussions. Our international panel covered topics including the effects of climate change, its impacts on food supply, the challenges of empowering women and the future paths of population and emissions.

Thin ice

British record-breaking adventurer, author, and sustainability campaigner, Adrian Hayes' (below) talked of his experiences as an adventurer in Greenland and the Arctic, where the ice melting beneath his feet was a daily challenge and danger. Drawing a clear link between population growth and climate change, he proposed a more comprehensive and holistic definition of sustainability, describing it as 'the most over-used and misunderstood word in the English language today'.



Adrian stressed the need to put sustainability at the heart of the relationship between society, economics and the environment, rather than focusing on 'economic growth, economic growth, economic growth'. He concluded that there are positive signs of changing attitudes and offered a more rational model for evaluating the functioning of society and the effectiveness of policies – Bhutan's Gross National Happiness Index, which prioritises happiness over economic indicators.

The view from the South

Farah Kabir (right) is the Bangladesh country director of Action Aid, an NGO working across 40 countries to end poverty and empower people in the Global



South, especially women and girls. Farah's presentation, Population and climate change: a South perspective, addressed the challenges of population growth and food supply but concentrated on the structural and economic factors also at play. She warned of the dangers of focusing solely on population and family size when people in the poorest countries are responsible for a fraction of the emissions of those in developed countries, memorably describing Bangladesh as a 'nano-emitter'.

Low-lying Bangladesh is at great risk from climate change. Farah noted how resilient the country is and how it has improved its warning systems, but that the disasters arising from climate change have 'increased beyond imagination'.

Farah noted that poverty, lack of education, culture and patriarchy are several key reasons for population growth and that development models that fail to address inequality and favour industrialisation and consumption are bad for both people in the Global South and for the global environment. In her view, population is not a critical issue in Bangladesh. However, in a theme recurring throughout the conference, she stressed the importance of education for women and girls, and that addressing and investing in managing population 'must be an informed choice for women, not as control over her body'.

*An interview with Adrian Hayes appeared in the Spring 2017 Population Matters magazine

The population picture

Following Peter Wadhams's presentation, Robin Maynard gave the final presentation before the panel discussion, tying together the population and climate change picture. Robin amplified Farah's point about the hugely disproportionate impact of people in the developed world on climate change. He noted the conclusions of the 2017 University of Lund study (see PM magazine, autumn 2017) that, in the developed world, having one fewer child is by far the single most effective measure an individual can take to reduce emissions.

Robin stressed the impact of population, noting that there is little evidence that people in the developed world (or globally) are consuming less, and that 'contraction and convergence' (ie. less overall consumption and emissions matched with greater equality between nations across the world) will require lower numbers of people across the board.

He examined how even countries with low average per capita emissions but high populations, such as India, can still be major contributors to climate change. With population set to grow most dramatically in the developing world, Robin emphasised the vital role of family planning and women's education, highlighting 2017's Project Drawdown (see p23) analysis that family planning and girls' education are among the top 10 practical solutions available today.

Conference discussions

The speakers were joined for the panel discussion by Judy Ling Wong, President of the Black Environment Network and Ambassador of the Women's Environmental Network. (Former *Guardian* environment editor John Vidal, also invited to join the panel, was defeated by climate change itself when his train from Wales was cancelled because of snow!)

Expertly chaired by Sara Parkin and guided by written questions from the audience, the panel's wide-ranging discussions covered many aspects of the issue, with a great deal of emphasis put on the value of genuinely empowering women.

Anastasia, 25, came all the way from Glossop, Derbys. She said,

"I saw the movie Downsizing and was overwhelmed. Then I researched what charities there are in the UK that do work in this area and found PM. I never wanted to be a part of any charity but I think this is worth my while. Everyone seems to be getting pregnant and giving birth like crazy and it's scary. I think the only way you can do something about this is by educating women."



Photo: Adrian Hayes, Farah Kabir, Judy Ling Wong and Sara Parkin.

While recognising the challenge of religious fundamentalism, Farah Kabir gave positive examples from Afghanistan and Bangladesh of religious leaders supporting family planning initiatives. Peter Wadhams spoke of being at a meeting at the Vatican in which there was a productive discussion of population that, unfortunately, did not translate into public statements. Panellists also addressed the failings in the political response to climate change in the UK and elsewhere, with Peter Wadhams stating his belief that UK climate change policy is 'not based on rational thought'. In response to a question about what message should be sent to the British Royal family regarding family size, Sara Parkin claimed the right as chair to answer and firmly declared, 'Stop at two!'.

Concluding thoughts

Robin Maynard wound up the conference, affirming the sense of positivity and constructive engagement that had emerged from it. He briefly touched upon next steps, including the work Population Matters intends to take up with international partners. He concluded with a call to make the population agenda a 'successful and positive vision for the future of people and planet'.



Grace Newcombe and Max Burlier. Max Burlier, 26, and ecology student Grace Newcombe, 23, saw the conference advertised in *What's On In London*.

You can watch the conference on YouTube: www.youtube.com/populationmatters Conference photos by Roxene Anderson Photography





A Farewell to Ice



A world authority on Arctic sea ice, Cambridge professor and PM advisory council member, Peter Wadhams has been measuring the thickness of Arctic sea ice since the 1970s. He held the conference in thrall as his presentation, A Farewell to Ice, Arctic Climate Feedbacks and Food Production, explained what's going on in the Arctic.

Global warming started about 150 years ago, with the greenhouse gases released from steam engines. In the last 50 years, the Artic has warmed faster, by about 2-3°C, than any other part of the world, which has warmed by about 0.7°C on average.



Peter said: "The sea ice started melting in 1950. You always used to think of the North Pole as being solid ice on which you could travel from Russia to America and vice versa. By 2005 we had a complete slot of open water right round the edge.

"Then things proceeded in downward jumps. In 2007, a huge slice came out of the ice and we had an open ocean for the first time. In 2012, we had an ocean where you could happily sail across the northwest passage in summer.

We could see how this ice was shrinking using satellites, but also we needed to measure how thick the ice was."

"The rate of climate change is a function of our increasing numbers and that's a fundamental problem."

Peter measures sea ice thickness from Royal Navy submarines every couple of years. Since he began in the 1970s, the thickness has gone down by about 50%, and the area has gone down as well.

"If you multiply the two together, ice volume in the summer is now less than a quarter of what it was in 1979. Three quarters of the ice has gone.

"You don't see the really dense multi-year ice anymore. It used to be 3m or more thick. Now nearly all the ice is first-year ice, which is only about 1.5m thick.

"I can't work on the ice safely anymore, using ice camps. We now have to freeze a ship into the ice and build a few huts around the ship and if the ice breaks up you can retreat to your ship."

The loss of ice is important, Peter said, but more important are the feedbacks from it.

IMPACTS OF ARCTIC MELT



• Ice reflects 90% of radiation (the sun's heat) back into space. Open water only reflects 10%. The extra radiation absorption is equivalent to releasing 25% more greenhouse gases into the atmosphere. • The land has lost 6 million square km of snowline, doubling the amount of feedback, and adding another 50% to the amount of warming from greenhouse gases.

• Warm air from the open Arctic waters is melting the entire Greenland ice cap. This loss is expected to cause at least a metre of sea level rise this century and possibly a lot more.

• The permafrost on the shallow seabed is melting. In the summer, you can see huge plumes of methane (a greenhouse gas over 20 times more potent than carbon dioxide) bubbles coming out of the seabed.

•Because the temperature difference between the Arctic and the lower latitudes is reducing, the jet stream, which separates the Arctic air mass from the sub-tropical air mass has slowed down. It used to flow fast and more or less straight, but now it flows more slowly in big loops that seem to drift very slowly. Loops of extreme cold come south and extreme warm goes north. This is why since 2005 there have been extreme weather events, especially in N America. This is what caused the 'Beast from the East' in early March, when Europe froze while the Arctic was 20°C warmer than it should have been.

Disruption to food production

Peter explained how the hikes in average food prices in 2008 and 2012 correspond with the massive losses in sea ice at those times. Food price rises are also associated with civil unrest in cities in the developing world.



"The Arab Spring started with the high price of food in Tunis. Young people living in huge numbers unable to grow food, therefore having to buy food and when food prices go up, they don't just starve, they start revolting. So, whenever there is a spike in the food price index you get unrest in developing world cities in the Middle East. We have not had another crisis since 2011, but we will."

Food production is disrupted not only by extreme weather events, but also by warming. Since warming began, all the basic standard crops are suffering loses of 20-40%. The UN is trying to hold warming to less than



Prof Peter Wadhams in the Arctic.

 2° C because otherwise we will suffer huge losses in everything but Asian rice. The fear is that we will have about 4° C warming by the end of the century.

Peter said that one thing to do to reduce emissions is to do our very best to restrict population growth, but that alone won't be fast enough to stop the warming. "We have got to go with some kind of techno fix taking carbon dioxide out of the atmosphere directly by chemical means."

Peter's full presentation is available at www.YouTube.com/PopulationMatters



Peter Wadhams book, A Farewell to Ice: A Report from the Arctic, 2017, Penguin, £9.99.



High-level strategic review

Background



In early 2017, the Board decided it was time for a High Level Strategic Review (HLSR), revisiting the fundamentals of who we are as an organisation and what we do, writes Tessa Dickinson.

By ensuring that PM is structured and operates in a way that makes best sense of its strategic objectives and

the most effective use of resources available, we will be better able to deliver our vision for 'a future with decent living standards for all, a healthy and biodiverse environment and a stable and sustainable population size'.

We undertook this review whilst bearing in mind the ongoing challenges and opportunities facing Population Matters. We identified four key 'existential' questions (ie. the key questions defining and affecting the organisation's existence and purpose) that we needed to address.

Q1 Identity - how PM understands and presents itself

- What kinds of arguments do we want to make?
- What should be our organisational identity?

Q2 Geographical focus

- Where should PM focus its efforts if we want to make a difference?

Q3 What is the most effective form of organisation to achieve our goals?

- A membership model as currently, an amended version or another form entirely?

- Is our current governance appropriate for best delivering our goals?

- Should we, and can we, move to a different model?

Q4 Reputational Risk Tolerance

- How defensive or bold should we be in our positions and messaging?

- How much risk are we willing to tolerate in how (and by whom) PM's messages are communicated?

Process

We gathered together four sub-groups, made-up of trustees, staff and external participants with relevant areas of expertise, to take a good look at each question and provided participants with relevant background briefings ahead of each of the meetings.

The objective in the sessions was to arrive at recommendations for each question, identify necessary further work to deliver on those recommendations, and collectively set the forward strategic direction for Population Matters.

After the sessions, we wrote up summaries of the group discussions, including those outline recommendations and further work identified, and gave them to the Board for discussion and decision at a specially convened meeting in September 2017. The Board's task was to agree the key recommendations emerging from the process and approve further work identified to deliver them.

In addition to the sub-groups' work , we consulted our 130 Guarantor Members (GMs) via an online survey. A pleasingly high percentage (by typical survey standards), 57% or 74 GMs, got back to us and we are very grateful for their interest and willingness to contribute their views to this exercise. Overwhelmingly, respondees came back positively, affirming our indicated focus and direction of travel for the organisation. We also consulted PM's patrons and advisory council, who further reinforced the findings and recommendations of the sub-groups, as well as adding some particularly pertinent and relevant observations and suggestions Again, as for our Guarantor Members, the detail and depth of response provided demonstrates the commitment of our patrons and advisors, who by definition are busy people, actively engaged in relevant and associated disciplines and areas of expertise.

Guarantor member survey

To what extent do you agree with the further work identified to implement the Recommendations?



a hawk-like intensity

Guarantor member survey

To what extent do you agree that the Strategy Review process, as led by the Board, was a valuable exercise to undertake?



Recommendations

We agreed on five core recommendations to help Population Matters consolidate its position as a significant, key player in public and policy debate around population issues and achieve its Mission by:

1. Understanding and presenting itself

confidently, clearly and primarily as a population concern charity - communicating that focus as being central to achieving sustainability. This requires undertaking a thorough review and refresh of PM's outreach and communications to characterise PM and challenging those who doubt, deny or ignore the 'P' factor.

2. Working always from within a global perspective with the ambition to be active and represented internationally and build specialist, sectorial expertise.

3. Updating current governance structures to optimise effectiveness. This involves diversifying and extending supporter base and create appropriate levels of governance to ensure the most effective, focused, appropriate input from Patrons, Advisory Council, Board, Guarantor Members, subscribing supporters, donors, partner organisations, funding trusts, and wider supporter base.

4. Revitalising and utilising the Advisory Council (and Patrons) to provide expert oversight and enhance our credibility.

5. 'Picking our battles' when it comes to reputational risk - without compromising honesty (we choose the risk level to take, through consistent, coherent and managed messaging and communications).

Next steps

The next steps involve the Board and Director developing the HLSR in more detail as an Organisational Strategy (3-5 year). Cascading from that, the Director and staff team will draw up 1-3 year operational strategies per area and from those, more specific ongoing work plans.

This valuable process has given us a clear sense of the challenges we face as a population charity, but also the discernibly growing opportunities and gathering momentum for our agenda. We are determined to seize on those and the HLSR, whilst being an internal, organisational exercise, is key to enabling us to act most effectively externally and publicly.

We are very grateful to all those who freely gave their time and expertise to this essential exercise. Far from 'navel gazing', it has sharpened our vision and focus to a hawk-like intensity!



Dead Zone: Where the Wild Things Were



Robin Maynard reviews the follow-up to the exposé of the intensive livestock industry, *Farmageddon* by Philip Lymbery, author and chief executive of the farm animal welfare campaigning organisation, Compassion In World Farming.

"To me the link is obvious. An extra billion people come with 10 billion extra farm animals, together with all that means for land, water and soil", so writes Philip Lymbery author and chief executive of the farm animal welfare campaigning organisation, Compassion In World Farming (CIWF), in *Dead Zone*, the follow-up to his expose of the intensive livestock industry, *Farmageddon*.

Scientists such as Vaclav Smil have calculated the sheer weight of intensive livestock on Earth today -67% of all land mammals, with us humans making up most of the remaining 33%; leaving just over 1% made up of wild animals.

Philip Lymbery went to see what those percentages mean in practice. He dived in the original Dead Zone of the Gulf of Mexico, an area the size of Wales. Each year from February to October, plumes of fertiliser and pesticide run-off from the Mississippi delta, the accumulated spew from the industrial farmland and fertiliser factories of some 30 states, drive away all the marine life.

Phil flew over Brazil's Matto Grosso. Formerly tropical rainforest, it is cropland for nearly 1/10 of the world's soya production. Much of it goes to fatten Europe's incarcerated pigs and poultry, to produce so-called 'cheap meat'.

When UK farm ministers claim we are nearly 70% self-sufficient, they fail to account for the millions of hectares across South America deforested and devoted to soya.

Although the book notes there are now over 400 coastal dead zones across the world, *Dead Zone* is not a relentless catalogue of all that's wrong with our food system. Phil Lymbery has been inspired by nature, particularly birds, all his life and the book is rich withanecdotes of his personal birding highs. He finds cause for optimism, and respite from cataloguing the misery endured by factory-farmed animals, when relishing the free flight of the peregrines breeding on Lundy Island ('my favourite place in Britain') – the Plantagenet kings prized these particular falcons for their speed and strength. As Phil tells us, a peregrine's eyesight is 'eight times more acute than our own'.

He has something of a hawk-eye himself, capable of seeing both upstream cause and downstream effect. Phil is one of the few chief executives – or indeed any senior staff within the environmental and sustainable farming movement – to publicly make the link between human population growth, the increase in industrial agribusiness (in particular the factory-farming of pigs, poultry and cattle), and the consequences for aquatic, atmospheric and terrestrial ecosystems.



Philip Lymbery in the now-dead rainforests of Sumatra



Dead Zone: Where the Wild Things Were by Philip Lymbery, Bloomsbury Press, 2017, £10.99

The Civic City in a Nomadic World

Where do we belong when everything is on the move? Who and what do we identify with? Everything in this emerging world is about mobility and movement, virtually and physically. People move, both rich and poor; ideas, philosophies and ideologies move, the good and the bad; goods move, the shoddy and the sublime; and the displaced move in ever greater numbers, writes Charles Landry, author of The Civic City in a Nomadic World.

More people for more reasons criss-cross the globe, from one city to the next, in search of better work or life, the excitement of another place, fleeing violence, visiting friends and relatives, or simply being tourists. Precise overall figures are notoriously difficult to come by. Some say one billion people are moving around.



Refugee in a gold blanket, Berlin

Is it too much? Is it sustainable? Consider the resources used and their carbon footprint. Is where we live not good enough? Can we make our cities better places in which to feel anchored, have possibilities and options, to connect, make more out of ourselves and be inspired? Yet, as our world continues to shrink and our cities become more mixed, nomadic and diverse, our social and our tribal nature, our in-group and out-group instincts are in tension.



View from an escalator in Medellin, Colombia

There is often a desire to connect with the different, the strange, the outsider or the other. This feeds our exploratory instinct – a necessary mechanism for survival. We hanker, too, after the familiar, the known, the predictable and the settled. We look for, and choose, the like-minded. Where these things fall depends on how at ease we feel with ourselves and our surroundings. Uncertainty makes people and places cradle themselves back into their tribal instincts and prejudices. The politicians then feverishly feed on these, creating dangerously sharp distinctions between a 'them' and an 'us', between 'patriots' – good and reliable – and 'globalists' – bad, confusing and untrustworthy – as if you could not be both at the same time.

This gives our times a feeling of rising anxiety. To live together in our differences is the central challenge of the age. This is perhaps the Civic City, where togetherness and difference meet and mix well. It tries to find a pathway through the major faultlines, dilemmas and potentials of our time – shared lives, inequality, environmental distress, urban vitality, the desire for involvement and engagement



Hip hop community in Bogota.

and most importantly, at a personal level, the longing for meaning and a sense of wholeness. In the Civic City, we reinvent anchorage, an urban commons, and a shared view of what we can do

together. Today's restlessness and craving for mindfulness are merely symptoms of a larger wave. When everything moves we hanker after stillness.

All pictures by Charles Landry, and top left also by Herlinde Koelbl.

The Civic City in a Nomadic World by Charles Landry, nai010.com, €34.95



A truly green future

In January, the UK government launched its much-heralded 25-year plan for the environment in *England, A Green Future.* Despite its commendable and ambitious goals, the plan failed to identify any policies to reduce population pressures on the environment. In response to a letter and submission from Population Matters, however, the government has agreed to a meeting to discuss the issue, writes Alistair Currie.

Announced by Prime Minister Theresa May herself, A *Green Future* aims to tackle critical problems such as air pollution, soil degradation, waste, loss of biodiversity, plastic pollution and climate change. Its stated goal is that,

"ours can become the first generation to leave that environment in a better state than we found it and pass on to the next generation a natural environment protected and enhanced for the future".

The plan establishes a number of principles and mechanisms to make progress towards the goal. One of its most eye-catching targets is achieving 'zero avoidable plastic waste' by the end of 2042. It also outlines goals for the UK to play a significant role in addressing global environmental problems.

The plan fleetingly acknowledges population growth as a contributor to environmental problems, but simply includes no action to address population. Indeed, overall it has more references to populations of wildlife than populations of people.

In response to the government's initiative, Population Matters produced a submission, which we sent to Secretary of State for the Environment Michael Gove and other political figures. In the accompanying letter, Robin Maynard welcomed the government's overarching objective but continued,

"We consider the plan to be flawed, however, by its failure to address one of the key drivers of the UK's environmental problems: unsustainable population levels and continued population growth. We hope that as the government puts flesh on the bones of this plan, it will also integrate effective and appropriate policy measures accordingly. We also urge the government to introduce an overarching strategy across all relevant departments to address population in the UK." MM Government

A Green Future: Our 25 Year Plan to Improve the Environment









Making the case

The submission examines several key issues related to the plan and population (the full paper is on our website):

• Projected UK population growth is significant but not a predetermined fact. The Office for National Statistics anticipates a population of nearly 73m by 2041, a year before the plan's end date. The projected growth is 16% over 2015-40. This is well above the EU average; Germany's growth is just 4%. However, there are ethical, non-coercive and effective ways to achieve sustainable population levels. These include education, family planning provision, migration policy and incentives to have smaller families.

• The UK's environmental footprint is already too heavy. If the world's entire population lived as UK citizens do, they would consume nearly three planets' worth of resources.

• Addressing population size and achieving a sustainable population is the most effective available action for curbing climate change. The submission details the abundant evidence presented at our conference on this subject.

• Sustainable population is vital to meet global environmental challenges. Supporting family planning through overseas aid is an essential mechanism for the UK to employ in addressing those challenges.

The submission concludes:

"The failure to address population in the government" flagship blueprint for the environment is further evidence of the systematic failure to address population across government. There is clearly a need for the UK (indeed all countries) to have a Sustainable Population Policy.

"The government is to be commended for taking the long view and recognising that goals set for 25 years ahead need action starting now. Population growth (and, ultimately, stabilisation at sustainable levels) is a long-term project too. Children born today and tomorrow will be at reproductive age in 25 years. Protecting the environment for their generation and subsequent generations needs action to address population now."

The government responds

Mr Gove replied to our submission on 12 February. He affirmed the government's commitment to supporting family planning internationally, stating, "These actions, with wider investment in girls' education and empowerment and strong economic growth will reduce unwanted fertility and help slow population growth."

While the letter does not explicitly acknowledge the role of population in domestic environmental problems, it concludes with an invitation to meet senior civil servants responsible for the strategy to discuss the matter further.

The meeting will take place shortly after we go to press. We will report on it in the next edition. While disappointed by *A Green Future's* failure to address population, we are heartened that a Cabinet minister is willing to think population an issue worth discussing – once we prompted him to do so. If the government's commitment is real and ambitions are to be met, a sustainable population policy will be essential. As we implement our plans to win political support for the policy in the UK, we believe that case will find increasing support.

A detailed report on our proposed Sustainable Population Policy can be found in the Autumn 2017 Population Matters magazine.



Shutting us up: how the population dis

Try to have a conversation about there being too many people for the Earth to sustain and it's common to come across the same concerns and objections repeatedly. Professor Diana Coole of Birkbeck, the University of London, has analysed the way society receives the population message and identified six recurring themes. Her fascinating and useful work is critical knowledge for those seeking to persuade others that population must be addressed, writes Alistair Currie.

Sometimes those concerns manifest as deep hostility, such as when, in January, Population Matters found itself on the receiving end of a deeply critical article by Dominic Lawson in *The Sunday Times*. Mr Lawson's criticisms precisely matched one of Prof Coole's 'six silencing discourses' – arguments and perceptions that have the effect of shutting down debate on population.

The six silencers

Population shaming

Worrying about population growth or advocating for the stabilisation or reduction of population is evidence of or motivated by morally reprehensible characteristics.

Population scepticism

We don't have to worry about population anymore. Birth rates are levelling off and the global population will stabilise during this century.

Population declinism

Fertility rates are below 'replacement level' in many countries and we must have higher birth rates to support pensions and health service for the old people.

Population growing

Economies thrive with more people, increasing productivity and consumption, so we need more people, not fewer.

Population decomposing

Technology will resolve environmental problems created by billions more people.

Population fatalism

Population may be a problem but there's nothing we can do to fix it.

Far from being simple insults or errors, most of these arguments are rooted in legitimate concerns or well-accepted beliefs about the world, politics and economics. We will be looking at the 'six silencers' in a series of articles in *PM magazine*, examining where they come from and how to respond to them. We begin with the most potent, harmful and important of all: 'population shaming'.

Prof Coole identifies population shaming as the perception that worrying about population growth or advocating for the stabilisation or reduction of population to sustainable levels, is evidence of or motivated by morally reprehensible characteristics. These could include racism, 'fear of the other', and support for coercion and the abuse of people's human rights. Dominic Lawson's article unhesitatingly played that card, concluding with an insinuation that population advocacy might be 'eugenics dressed up as environmentalism'.

Although *The Sunday Times* printed our short letter refuting his arguments, population shaming demands far more comprehensive analysis and rebuttal.

Coercion

Dominic Lawson identified one notorious example of the dark history of population control – forcible sterilisation in India in the 1970s. Others include China's one child policy and eugenics programmes in Nazi Germany and the US in the 1960s. These shameful injustices deserve our condemnation. Like the vast majority of people concerned about our unsustainable population, Population Matters is wholly opposed to punitive population control, forced sterilisation or abortions, discrimination against any group or individual and any other activity that violates human rights. The right to have children, or to have none, is a human right.

Coercive policies have cast a long shadow over population concern and those people most concerned with human rights and wellbeing are often most troubled by them. Our condemnations are needed to address those concerns. We must also repeatedly point out that one can believe that people should do something without believing they should be coerced into doing it. Population concern advocates no more hold that people should be forced to have fewer children than democratic politicians believe people should be forced to vote for their parties.



20

cussion is closed down

Solving the problem

Population shaming also rests on the assumption that reducing birth rates can only be achieved by coercion, therefore population advocates must support coercion. This is flat wrong. Countries like Bangladesh and Thailand have achieved remarkable results without coercion (we report on just some successful voluntary family planning projects on p5 and p7). We can reduce, and eventually reverse, population growth through actions that help people in multiple other ways – female empowerment and education, lifting people out of poverty, and providing access to and education about family planning. Combined with incentivising and promoting the positive case for smaller families, population can, and should, be brought to sustainable levels through the free choices people make.

Double standards and punching down

Dominic Lawson's article also delivers the classic population shaming argument: population concern is about rich (usually white) people telling poor (usually not white) people to have fewer children while they have as many as they want. A parallel accusation is that high-consuming people from the developed world are responsible for the environmental problems we face, but seek to blame poor people for having large families, and to control how many children they have. Some critics refer to it as 'punching down' – attacking those more vulnerable than yourself.

This position, of course, fundamentally mistakes our perspective. Population Matters – along with the vast majority of people concerned with population – is absolutely clear that the world needs fewer high-impact Western consumers being born, and campaigns actively for it (a message reiterated at our conference this year). Economic development is the right of those living in poverty, and the only way a finite planet can cope with the strain is for the rich to consume less of its resources – by moderating their behaviour and reducing their own numbers.

However, the negative impacts of our numbers are not confined to the rich world. Population advocates must brave the population shaming that arises from recognising that population growth is greatest in the poor countries of the Global South and maintaining that reducing and eventually reversing population growth there too helps us all.

Population challenges everywhere

Smaller families help people escape poverty – a fact not lost on the hundreds of millions of people in the developing world who embrace family planning, or many of their political leaders, who promote family planning for that reason. It's a fact that the 200 million women in some of the world's poorest countries who have an unmet need for contraception are acutely aware of.

While the urgency (especially with regard to climate change) is for fewer new rich people, ignoring those who are poor is short-sighted and dangerous.

First, where demand for resources is high and supply limited, local environmental destruction can be the result, as forests are cleared for firewood, fishing stocks decimated for food and soils eroded by livestock. Those impacts eventually make things worse for people who can no longer rely on the land that used to sustain them. Second, where developing countries do improve their overall economic situations, their citizens consume more and live longer. That means a greater environmental impact over a longer period for each person. Smaller families and slower population growth in developing countries – where birth rates can be double or triple those in the rich world – is therefore also vital to prevent environmental crisis in the decades ahead.

No shame

Population advocates want – and work towards – the same thing as every decent, rational person: a global community in which everyone can live better lives, on a healthy planet that can sustain all the life upon it for all the generations to follow. We are guided by compassion, reason and deep concern for human beings, other species and our future.

Population shaming rests on a belief that population advocates are motivated by fear, ignorance, prejudice or a desire for power. Ironically, people who express that belief are usually motivated by the compassionate values we hold. That makes it all the more important that we clearly, respectfully and proudly show that population shaming is wrong.

We have many friends to win if we do.

A detailed version of Prof Coole's analysis can be found at Diana Coole, 'Too many bodies? The return and disavowal of the population question', *Environmental Politics*, vol 22.2 (2013), pp.195-215.



PROJECT DRAWDOWN



Katharine Wilkinsor

Drawdown's senior writer, Katharine Wilkinson, talks in more detail about the importance of family planning and girls' education for the climate.

In 2017, Project Drawdown* published *Drawdown: The Most Comprehensive Plan Ever Proposed to Reverse Global Warming.* The *New York Times* best-seller brings together a 'shopping list' of solutions, in order of potential, to remove or avoid greenhouse gases by tapping into commonly available technologies and practices.

At #6 and #7 are educating girls and family planning. Inextricably linked as they are, they could reduce CO2 emissions by an incredible 119.2 gigatons by 2050.

Drawdown senior writer, Katharine Wilkinson (above), says, "Solutions #6 and #7 often surprise people. If you add them together, empowering women and girls is the number one solution to reverse global warming.

"Too often we still hear the term 'population control,' which has a very problematic history. But this isn't about control; it's about choice and addressing fundamental rights to high-quality, voluntary family planning and education."



Drawdown: The Most Comprehensive Plan Ever Proposed to Reverse Global Warming, edited by Paul Hawken, Penguin, £16.99, April 2017.

Girls' education

130 million girls are not in school. More years of education lead to better health, more upward mobility, more productive farms, lower likelihood of being forced into marriage at a young age, etc.

According to the UN Educational, Scientific, and Cultural Organization, \$39 billion is needed to achieve universal primary and secondary education inlow- and lowermiddle-income countries. It could result in 59.6 gigatons of reduced CO2 emissions by 2050.



Family planning

More than 200 million women in lower-income countries seek to avoid pregnancy but aren't currently using modern contraception. Even in the US, 45% of pregnancies are unintended. The world faces a \$5.3 billion funding shortfall for providing the access to reproductive healthcare that women say they want.

Family planning focussing on healthcare provision and meeting women's expressed needs results in empowerment, equality, and well-being, and it can reduce emissions by 59.6 gigatons of CO2 by 2050.

How *Drawdown* got its figures

More reproductive healthcare and family planning is an essential part of achieving the UN's 2015 medium global population projection of 9.7 billion people by 2050. Without investment in family planning, the world's population could add another 1 billion people to the planet. *Project Drawdown* modelled that, without this investment, the added energy, building space, food, waste, and transportation would result in 119.2 gigatons of CO2. Because educating girls greatly increases the use of family planning, *Drawdown* divided this equally between both solutions – 59.6 gigatons a piece.

"Because of existing inequalities, women and girls are more vulnerable to the impacts of a changing climate," Wilkinson explains. "They can also be powerful agents of change. It's time to realise that gender equality, women's empowerment, and reversing global warming can and must go hand in hand in hand."

LOCAL GROUP NEWS

London Group

The amount of plastic in the seas has finally hit home and more and more people are trying to find ways to help clean it up. PM's London Group is helping too, and using the opportunity to raise awareness about the correlation between plastic rubbish in the seas and how many people there are on the planet. If you fancy getting involved with PM and doing your bit for the environment at the same time, come along to the beach clean-ups organised by The Marine Conservation Society's Beachwatch programme:

Sunday 15 April: Littlehampton, West Sussex, 9-11am Friday 20 April: Birling Gap, East Sussex 10am-12pm Sunday 22 April: Southend-on-sea, Essex 10am-12pm Friday 15 June: Birling Gap, East Sussex 10am-12pm Sunday 17 June: Southend-on-sea, Essex 10am-12pm. All equipment will be provided by Beachwatch.

Contact: londongroup@populationmatters.org

Herts group writes to MP

Members of our group in Hertfordshire have written to Anne Main, MP for St Albans, voicing their concern at how cuts to family planning in England and Wales have caused 53 councils out of 152 to close family planning services since 2016/2017. The group points out how this is a false economy, as for every £1 of public money cut from family planning, a further £11 needs to be spent further down the line. The group has asked Ms Anne Main MP to contact Secretary of State Jeremy Hunt to urge him to ensure that there is sufficient funding for these key preventive services to reverse the closure of family planning centres.

Contact: hertsgroup@populationmatters.org

You can learn more about and support the national campaign against family planning cuts on the Population Matters website www.populationmatters.org.

Please help make a Sustainable Population Policy in the UK a reality

As a UK-registered charity we feel it is essential that Britain leads the way on population issues, by adopting a fair and compassionate Sustainable Population Policy.

The benefits to the country would be extensive: every government department would be better able to plan and manage resources, and it would help deliver a better quality of life for future generations.

With your support, we will lead a campaign to persuade at least one political party to include a Sustainable Population Policy in its next published manifesto.

But we can't do it without you.

It will cost us £15,000 to publish a White Paper and lobby all major political parties on the issue, and we are asking you to show your support by making a donation.

We will continue to work internationally, striving towards a UN Global Framework Convention on Population, and will share our UK approach globally for other countries to replicate.

With the backing of our members and donors – and by building on strong relationships with politicians and the media – we are confident that we can make a Sustainable Population Policy in the UK a reality.

To find out more about our approach, and to support this project, please visit:

www.populationmatters.org./ukpolicy

You can also donate by sending a cheque payable to 'Population Matters' with your name and address on the back to: Sustainable Population Policy, Population Matters, 135-137 Station Road, London, E4 6AG. Thank you for your support.

Registered Charity no.1114109 Registered Company no.3019081







99% Wild Animals* 1% humans





1% Wild Animals* 99% humans and livestock

*

32% humans 67% livestock 1% wild animals

Let's not hit zero!

*weight of vertebrate animals on land



welcome to the anthropocene populationmatters.org/anthropocene

population matters for a sustainable future

Produced by Population Matters, 135-137 Station Road, London E4 6AG, UK Registered charity 1114109

