

## ECONOMY

💰 **2X** GDP of China double the US

The economic centre of the world is shifting dramatically towards Asia. The GDP of China is projected to double that of the US in 2050. The GDP of India is projected to be at least equal to the US in 2050.<sup>1</sup>

🏙️ **2X** people in cities double

The world is rapidly urbanising. Today, 54% of the world lives in cities. By 2050, this number will be 66%. The total number of people living in cities will double due to population growth.<sup>2</sup>

## POPULATION

👤 **1114** current pincode → 👤 **1125** pincode in 2050

The world population is about 7 billion in total. Remember this as the world's population pincode in billions: America's (1), Europe and Middle East (1), Africa (1) and Asia (4).

In 2050 the pincode will have changed to 1+1+2+5=9 billion in total. Population growth takes place almost exclusively in Africa and Asia.<sup>3</sup>

## FOOD

🌾 **3X** irrigated land has tripled

Between 1950 and 2000, 70% of the world water use was for irrigation. Countries have increasingly come to rely on pumping water from aquifers, ancient water wells buried deep underground. Today some 18 countries, containing half the world's people, are overpumping their aquifers.<sup>10</sup>

👤 **11%** less people undernourished

In 1992, 1,015 billion people were undernourished, 18.7% of the world population. In 2014 an estimated 805 million people are undernourished, about 11% of the world population.<sup>11</sup>

🐟 **30%** currently overfished

Around 30% of the wild fish stocks regularly monitored by FAO are overfished.<sup>12</sup> Global fish production peaked in 1995 at 95 million tonnes, then remained steady and started dropping. Today's production is around 80 million tonnes.<sup>8</sup>



## CLIMATE

🌡️ **400** ppm CO<sub>2</sub> surpassed

Current CO<sub>2</sub> levels have surpassed 400 parts per million (ppm) for the first time in 2013, compared to the long-term average of 280 ppm. This extra CO<sub>2</sub> traps extra heat and this rate of heating is increasing.<sup>4</sup>

☁️ 🌊 **severe weather**

A hotter atmosphere means there's more space in the atmosphere for water, which can be picked up in one place, causing droughts, and dropped in another place causing floods.<sup>6</sup>

🌡️ **6°** global warming this century

Since the industrial revolution world temperatures have risen 0.8° celcius. In a 'business as usual' scenario, global warming will be 6 degrees at the end of this century. This change is the greatest change of any over the past 65 million years.<sup>5</sup>

🏠 **2m** sea level rise this century

This century, the level of sea rise is projected to be around 2 metres.<sup>6</sup>

## ECOLOGY

🌳 **50%** of forests vanished

Since the beginning of human civilisation we have halved the total amount of forest in the world. This rate has been accelerating.<sup>7</sup> Tropical forests declined by 60% since 1950.<sup>8</sup>

🐦 **10<sup>3</sup>X** extinction rate

Current extinction rates of species are 1,000 - 10,000 times their natural levels. Biodiversity decline is at its highest level since the last mass extinction 65 million years ago.<sup>9</sup>

## masterclass BIG SOLUTIONS

This factsheet shows the BIG challenges of our time. It is part of the masterclass BIG Solutions by **Pepijn Vloemans** in which he shows many inspiring solutions to these challenges. Mail us any facts you would like to add to this factsheet. Get in touch at [www.degroenegrachten.nl](http://www.degroenegrachten.nl)

(1) Price Waterhouse Coopers, The world in 2050, 2013

(2) UN World Urbanization Prospects, 2014

(3) [twitter.com/hansrosling](https://twitter.com/hansrosling)

(4) James Hansen, climate scientist

(5) American Association for the Advancement of Science, What we know, The reality, risks, and responses to climate change

(6) Earth Policy Institute, Climate Change fact sheet, 2014

(7) FAO Global Forest Resources Assessment, 2010

(8) The Infinite Resource, Ramez Naam, 2013

(9) Elizabeth Kolbert, The Sixth Extinction, 2014

(10) Earth Policy Institute, water factsheet, 2014

(11) FAO Hunger Map, 2014

(12) FAO The State of Worlds Fisheries and Aquaculture, 2014

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