

# VicHealth Sustainable Development Goals

## Partnership Grants

### Background information

**This document provides background information on the UN Sustainable Development Goals and global megatrends for organisations interested in applying for VicHealth’s Sustainable Development Goals Partnership Grants.**

### Context

In November–December 2016, the International Network of Health Promotion Foundations (INHPF) held its annual meeting in Melbourne, Australia, hosted by VicHealth. As a part of the meeting, a forum was convened with leading public health and health promotion practitioners, policymakers and researchers. The purpose of the ‘Destination Wellbeing: Policy, Practice and Research Forum’ was to explore opportunities for local and international collaboration to address the interplay between global megatrends and the UN’s Sustainable Development Goals (SDGs).

### The Sustainable Development Goals

The SDGs were established in September 2015 by the United Nations General Assembly as part of the new agenda for sustainable development (UN General Assembly 2015). The SDGs replace and build upon the Millennium Development Goals to present a plan for universal action to transform our people, planet and prosperity across the next 15 years. The SDG framework consists of 17 SDGs and 230 specific targets that either directly relate to health or have indirect effects on health-related outcomes (e.g. the environment, nutrition, economic status, equality, sustainable living and education).

The SDGs present bold objectives that will only be achieved through international collaboration between a range of sectors, including academic researchers, policy makers and health professionals.

Following a meeting of 60 global health policy think tanks in Geneva in November 2015, three key principles were put forward as necessary catalysts for achieving the goals (Jha et al. 2016):

- **‘knowledge sharing’** – new findings related to health, treatment of diseases, alleviation of environmental issues and the successful implementation of policies and programs need to be broadcast widely and in a timely manner
- **‘capacity building’** – partnerships need to be formed between key players who have the technical capacity to implement policies and programs in response to the SDGs
- **‘innovation’** – a country can have the appropriate knowledge base and expertise, but to meet these global goals, they also need the capacity to challenge current conceptions and leverage the potential of new resources and technologies.

## Global megatrends

The Commonwealth Scientific and Industrial Research Organisation (CSIRO) has identified eight global megatrends, which represent the intersection between a range of political, economic, social, technological, legal and environmental trends observed across many sectors and countries around the world. A megatrend is a relatively slow pattern of change that has the potential for dramatic impact at some point in the future. The eight megatrends provide a useful lens through which to view the potential future challenges and opportunities for developing policies and programs aimed at achieving the SDGs.

In 2012, CSIRO published the *Our Future World* report, which outlined six global megatrends that could impact the way we live now and into the future (Hajkowicz, Cook & Littleboy 2012). By 2015, two more megatrends had been identified (Hajkowicz 2015a, Hajkowicz 2015b).

### More from less

The 'more from less' megatrend is about the opposing forces of declining supply and increasing demands for energy, water, food and minerals. The increased demands of a growing global population are straining natural resources and supply chains. For example, the amount of food produced will need to increase by 70 per cent to meet the predicted demand by 2050 (FAO 2009) and water use is growing at twice the pace of population growth (WWAP 2015). In Australia alone, total energy consumption is projected to increase by 21 per cent between 2012 and 2050, with more reliance on renewable energy sources such as wind, solar and gas (BREE 2012).

### Planetary pushback

'Planetary pushback', the second global megatrend, is about the changes in the world's biodiversity as a result of climate change and habitat destruction. Since records began in 1880, 2015 had the warmest global temperature to date, which represents more than a full degree Celsius increase over that period (NOAA 2015). Each year, the frequency and severity of natural disasters continue to increase. Coral reefs, which are home to a host of marine wildlife have been severely damaged and it is predicted that 60 per cent of the world's coral reefs will be lost by 2030 (Hughes et al. 2003). A similar picture is painted for land, where only about half of the world's temperate rainforests remain (National Conservancy 2011). This reduction is alarming given that rainforests are home to more than 50 per cent of the planet's animals and plants.

### Silk highway

The third global megatrend, the 'silk highway', reflects the rise of Asian economies, particularly China and India, at an increasingly faster rate than the previous economic powerhouses of the United States and Europe. An indicator of the rise of these economies is that the hypothetical 'global economic centre' determined by countries' gross domestic products, has shifted from halfway between the US and Europe in 1980, to a location east of Helsinki and Bucharest in 2008 and is predicted to fall midway between India and China by 2050 (Quah 2011). Rapid growth in China is further evidenced by their rate of urbanisation – China was home of 10 of the fastest growing cities in the world during the period of 1990–2014 (UN General Assembly 2015). This rise in China is indexed by a transition in its economy from a largely agricultural focus to the provision of advanced services (World Bank 2016). China and India are

also likely to provide increased competition in the knowledge economy, with predictions that 60 per cent of science, technology, engineering and mathematics (STEM) graduates from the combined G20 and OECD countries will come from these countries alone by 2020 (OECD 2015).

## **Forever young**

The ‘forever young’ megatrend is about the patterns of change associated with the demographic shift of the aging population and increased incidence of physical and mental health issues around the globe. In Australia alone, 13 per cent of the population were aged 65 years or over, and this is predicted to rise between 23–25 per cent by 2056 and up to 28 per cent by 2101 (ABS 2008). Advances in medicine and healthcare services mean we are living longer, with the average life expectancy in Australia of 84.4 years for women and 80.3 years for men in 2014, much higher than what it was 50 years prior (73.9 and 67.5 years, respectively) (OECD 2016). There has also been an increase in various lifestyle-related illnesses, driven by common risk factors such as tobacco and alcohol use, poor diet and physical inactivity, and their social determinants. For instance, in 2014, WHO estimated that 1.9 billion adults worldwide are overweight, 600 million of which would fall into the obese category (WHO 2016). Of potentially even greater concern, 41 million children under the age of 5 are overweight or obese. The combined effects of the aging population and lifestyle-related diseases is projected to have a major impact on the healthcare sector, with health expenditure per person in Australia set to more than double over the next 40 years (Australian Government 2015).

## **Digital immersion**

The fifth global megatrend, ‘digital immersion’ is the rise of the digital economy and the unprecedented number of new and emerging technologies that have the potential to change how we access, interact and transact with each other. Computing power is increasing at a rapid pace, in line with Moore’s Law, almost doubling every two years with no increase in cost. At present, 3 billion people around the world own a smartphone, a device which alone outweighs the computing power of a room-sized supercomputer from the 1980s (The Economist 2016). IBM estimates that 2.5 quintillion bytes of data are created every day, which means that the data generated today equates to 90 per cent of that created over the last two years (IBM undated). With these and associated improvements in computerisation, robotics and artificial intelligence, it is predicted that nearly half of the jobs in the US are at a high risk of being automated in the future (Frey & Osborne 2013). Our increasing consumption and reliance on new digital capabilities also changes the landscape of workforce skills, with STEM qualifications predicted to be a necessary prerequisite for 75 per cent of most rapidly emerging occupations (PWC 2015).

## **Porous boundaries**

‘Porous boundaries’, the dissolution of traditional boundaries between companies, governments and communities is facilitating more direct and agile peer-to-peer economies. Companies taking advantage of this include Airbnb, Uber and TaskRabbit, which allow consumers to directly connect with service providers. In the US alone, Uber has rapidly generated a base of 160,000 active drivers by the end of 2014 since its launch in mid-2012 (Hall & Krueger 2015). With improvements in technology, we can now connect on a much larger global scale. Freelancers, or portfolio workers, are the new employee model compared to the more traditional 9-to-5 job. One in three Americans identify as independent workers and they earned an estimated US\$1 trillion in 2015 (Freelancers Union & Upwork 2016). Workplaces are

evolving too, with the number of co-working or shared offices, which are shared by multiple independent workers, having almost doubled each year since 2006 (Innovation is Everywhere 2015). These trends in the peer-to-peer economy, advances in technology and increased global connectedness provide opportunities for new entrants to enter the marketplace and challenge the existing ways of operating.

### **Great expectations**

The seventh global megatrend, ‘great expectations’, concerns the increased social and cultural demands for personalised experiences and services over material products. Broadly, individuals gain greater levels of satisfaction and happiness when they consider buying an experiential product over a tangible object, and this discrepancy increases with income and level of education (Van Boven, Gilovich 2003). We are also spending more money on art, culture and entertainment in Australia. The average household spent AU\$45 per week on cultural goods and services in the period of 2009–2010, which reflects a 25 per cent increase from 2003–2004, compared to a 19 per cent for goods and services related to transportation, food and medical care across the same period (ABS 2011). There has also been increased demand for socially and ethically responsible products (e.g. those with a ‘fair trade’ label), with such products generating AU\$300 million of retail sales in Australia and New Zealand in 2014–2015 (Fairtrade Australia & New Zealand 2015). Increases in wealth and education can also have a negative impact, as individuals with higher income have been associated with an increased propensity to engage in undesirable social behaviours (Piff et al. 2012).

### **Innovation imperative**

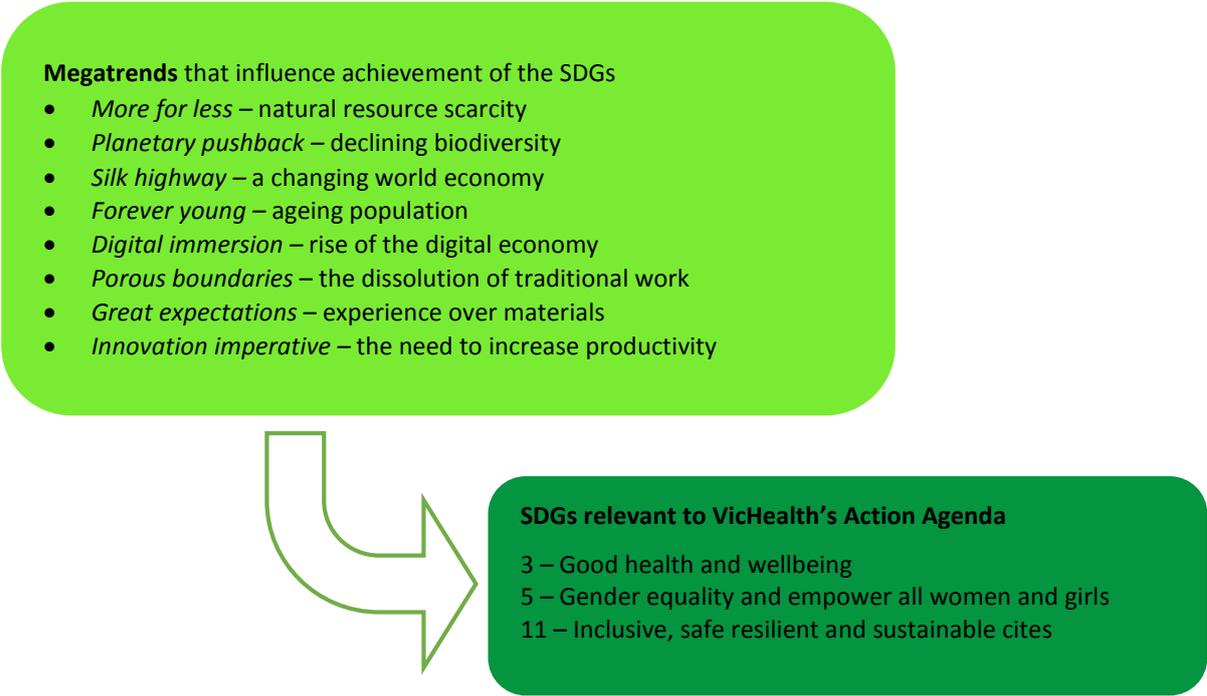
The eighth megatrend identified by CSIRO is the ‘innovation imperative’. This megatrend is the result of declining productivity over the latter part of last century and the beginning of this century. This decline is in turn the result of a failure of new ideas to compensate for an exhaustion in the historic ways in which wealth has been created: the exploitation of easily accessible mineral ore deposits and the opening of new land. The decline in productivity can only be reversed by deeper innovation that pushes the boundaries of knowledge. There is great opportunity to transform economies into those which are based on ‘advanced services’. By taking advantage of the other megatrends, particularly the revolution of digital technologies and growing Asian economies, there is potential for a boom in knowledge and creative industries to contribute to a reversal in the decline in productivity (Hajkowicz 2015b).

## **The ‘Destination Wellbeing: Policy, Practice and Research Forum’**

To excite forum discussion and deliberation, VicHealth commissioned CSIRO to prepare a presentation that explored the implications of global megatrends for achievement of the SDGs. The presentation focused on those SDGs particularly relevant to VicHealth’s Action Agenda for Health Promotion 2013–2023 (VicHealth 2016) as well as areas of interest to INHPF members:

- **Sustainable Development Goal 3:** ‘Ensure healthy lives and promote well-being for all at all ages’
- **Sustainable Development Goal 5:** ‘Achieve gender equality and empower all women and girls’
- **Sustainable Development Goal 11:** ‘Make cities inclusive, safe, resilient and sustainable’

**Figure 1:** Global megatrends present both opportunities and risks to the achievement of the SDGs.



CSIRO found that there is a need to build collective action on the ‘upstream’ factors (Zola 1970) if we are to respond to the social, economic, political, environmental and technological changes impacting global population health. We must ‘future-proof’ health. This means building partnerships outside the healthcare sector and continuing to reorient our organisations and services towards primary prevention at a community and population level to address the social determinants of health where we live, learn, work and play. In so doing, we will build our individual and collective ability to adapt to change and enable better health for all.

CSIRO also determined that Australia is in a strong position to influence achievement of the SDGs. For example, in the *Global Burden of Diseases, Injuries and Risk Factors* study, Australia ranked tenth in the world with a health-related index of 81 out of 100, alongside Canada, Norway, Luxembourg and Ireland (GBD SDG Collaborators 2015). This high ranking indicates that Australia’s achievements in areas such as income, education, and fertility can be used to lead and inspire progress towards the SDGs in other countries in the region and beyond.

Informed by this presentation, forum participants were challenged to explore gaps in knowledge and practice that must be addressed if the SDGs are to be achieved.

Three parallel workshops were conducted to identify the priority issues related to each of SDG 3, 5 and 11. An iterative process building from individual reflections to group discussion, and finally electronic voting, was used to narrow down a suite of potential research questions exemplifying the priority issues.

After the forum, VicHealth used these examples to identify specific SDG targets to be the focus of the VicHealth Sustainable Development Goal Grant scheme:

Under Sustainable Development Goal 3: ‘Ensure healthy lives and promote well-being for all at all ages’:

- SDG target 3.4: *By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being.*

Under Sustainable Development Goal 5: ‘Achieve gender equality and empower all women and girls’:

- SDG target 5.C: *Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels.*

Under Sustainable Development Goal 11: ‘Make cities inclusive, safe, resilient and sustainable’:

- SDG target 11.3: *By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries.*

## **A call to action**

“Megatrends are deep-set trajectories of change that will reshape the landscape for government, business and society over the coming 20 years” (Hajkowicz 2015b). In particular, the megatrends herald both challenge and opportunity for achievement of the SDGs which in themselves constitute an ambitious and transformational vision for human development. Only through innovative collaboration and regional leadership will we be able to identify and harness opportunities that will enable us to achieve a sustainable, healthy and equitable future.

## **For more information**

- *VicHealth Action Agenda for Health Promotion: 2016 update*  
<https://www.vichealth.vic.gov.au/media-and-resources/publications/2016-action-agenda>
- Sustainable Development Goals  
<https://sustainabledevelopment.un.org/sdgs>
- Video – *Global Megatrends: Powerful forces impacting industry, government and society over coming decades*  
<https://youtu.be/F8iezEOtR5c>
- *Global Megatrends – Seven Patterns of Change Shaping Our Future*  
<http://www.publish.csiro.au/book/7265/>
- ‘Why Australia must embrace innovation’. *The Conversation*.  
<https://theconversation.com/the-seventh-megatrend-why-australia-must-embrace-innovation-41232>

## References

- ABS; Australian Bureau of Statistics 2008, *Population Projections Australia 2006 to 2101*, Australian Government, Canberra.
- ABS; Australian Bureau of Statistics 2011, *Arts and Culture in Australia: A Statistical Overview*, Australian Bureau of Statistics, Canberra.
- Australian Government 2015, *Intergenerational Report: Australia 2055*, Australian Government, Canberra.
- BREE; Bureau of Resources and Energy Economics 2012, *Australian energy predictions to 2049–50*, Australian Government, Canberra.
- The Economist 2016, *After Moore's law; The future of computing*, viewed 30 March 2017, <<http://www.economist.com/news/leaders/21694528-era-predictable-improvement-computer-hardware-ending-what-comes-next-future>>.
- Fairtrade Australia and New Zealand 2015, *Growing Sustainable Futures: Fairtrade Australia & New Zealand 2014/2015 Annual Report*, Fairtrade Australia and New Zealand, Melbourne.
- FAO; Food and Agricultural Organization of the United Nations 2009, *How to feed the world in 2050*, FAO, Rome.
- Freelancers Union and Upwork 2016, *Freelancing in America*, viewed 30 March 2017, <<https://www.upwork.com/i/freelancing-in-america/2016/>>.
- Frey CB, Osborne MA 2013, 'The future of employment: How susceptible are jobs to computerisation', *Technological Forecasting and Social Change*, 114, 254-280.
- GBD SDG Collaborators 2015, 'Measuring the health-related Sustainable Development Goals in 188 countries: A baseline analysis from the Global Burden of Disease Study 2015', *The Lancet*, 2016;388(10053):1813-50.
- Hajkowicz S, Cook H, Littleboy A 2012, *Our future world. Global megatrends that will change the way we live*, CSIRO, Clayton.
- Hajkowicz S. 2015a, *Global megatrends: Seven patterns of change shaping our future*, CSIRO, Clayton.
- Hajkowicz, S 2015b, 'The seventh megatrend: why Australia must embrace innovation', *The Conversation*, viewed 30 March 2017, <<https://theconversation.com/the-seventh-megatrend-why-australia-must-embrace-innovation-41232>>.
- Hall JV, Krueger AB 2015, 'An analysis of the labor market for Uber's driver-partners in the United States' No. w22843, *National Bureau of Economic Research*, viewed 30 March 2017, <<https://assets.documentcloud.org/documents/1507970/uberstudy.pdf>>.
- Hughes TP, Baird AH, Bellwood DR, Card M, Connolly SR, Folke C, et al. 2003, 'Climate Change, Human Impacts, and the Resilience of Coral Reefs', *Science*, 301(5635):929-33.
- IBM (undated), *Bringing big data to the enterprise*, viewed 30 March 2017, <<https://www-01.ibm.com/software/data/bigdata/what-is-big-data.html>>.

Innovation is Everywhere 2015, *The Future of Coworking: Coworking visas, corporate partnerships and real-estate specialists*, viewed 30 March 2017, <from <http://www.innovationiseverywhere.com/future-coworking-coworking-visas-corporate-partnerships-real-estate-specialists/>>.

Jha A, Kickbusch I, Taylor P, Abbasi K 2016, 'Accelerating achievement of the sustainable development goals', *BMJ* 352(i409).

National Conservancy 2011, *Facts about Rainforests 2011*, viewed 30 March 2017, <<http://www.nature.org/ourinitiatives/habitats/rainforests/rainforests-facts.xml>>.

NOAA National Climatic Data Center 2015, *2015 is Earth's warmest year by widest margin on record 20 January 2016*, viewed 30 March 2017, <<http://www.noaa.gov/news/its-official-2015-was-earths-warmest-year-by-widest-margin-on-record>>.

OECD; Organisation for Economic Co-operation and Development 2015, *Education Indicators in Focus*, OECD, Paris.

OECD; Organisation for Economic Co-operation and Development 2016, *Life Expectancy at Birth*, viewed 30 March 2017, <<https://data.oecd.org/healthstat/life-expectancy-at-birth.htm>>.

Piff PK, Stancato DM, Côté S, Mendoza-Denton R, Keltner D 2012, 'Higher social class predicts increased unethical behavior', *Proceedings of the National Academy of Sciences USA*, 109(11):4086-91.

PWC; Price Waterhouse Coopers 2015, *A Smart Move*, PWC, Sydney.

Quah D 2011, 'The Global Economy's Shifting Centre of Gravity', *Global Policy*, 2(1):3-9.

UN General Assembly 2015, *Transforming our world: the 2030 Agenda for Sustainable Development*, viewed 30 March 2017, <<https://sustainabledevelopment.un.org/post2015/transformingourworld>>.

Van Boven L, Gilovich T 2003, 'To do or to have? That is the question', *Journal of Personality and Social Psychology*, 85(6):1193-202.

VicHealth 2016, *VicHealth Action Agenda on Health Promotion: 2016 update*, VicHealth, Melbourne.

World Bank 2016, *World Bank Open Data*, viewed 30 March 2017, <<http://data.worldbank.org/>>.

WHO; World Health Organization 2016, *Obesity and Overweight*, viewed 30 March 2017, <<http://www.who.int/mediacentre/factsheets/fs311/en/>>.

WWAP; World Water Assessment Programme 2015, *The United Nations World Water Development Report 2015: Water for a Sustainable World*, WWAP, Paris.

Zola, IK 1970, *Helping: Does It Matter? The Problems and Prospects of Mutual Aid Groups. Address to the United Ostomy Association*, Brandeis University Department of Sociology, Waltham, Massachusetts.