

Global Problems

Here is 15 lists of urgent global problems – call them challenges or dilemmas, as identified by various groups.

What Millennials say:

1. Climate change / destruction of nature (48.8%)
2. Large scale conflict / wars (38.9%)
3. Inequality (income, discrimination) (30.8%)
4. Poverty (29.2%)
5. Religious conflicts (23.9%)
6. Government accountability and transparency / corruption (22.7%)
7. Food and water security (18.2%)
8. Lack of education (15.9%)
9. Safety / security / wellbeing (14.1%)
10. Lack of economic opportunity and employment (12.1%)

Global Problems (cont.)

[80,000 Hours Club](#)

1. Risks from AI
2. Promoting effective altruism
3. Global priorities research
4. Improved institutional decision making
5. Factory farming
6. Biosecurity
7. Nuclear security
8. Developing world health
9. Climate change
10. Land use reform
11. Smoking in the developing world

<https://80000hours.org/problem-profiles/>

<https://80000hours.org/articles/cause-selection/>

Global Problems (cont.)

Singularity University, GGC (Global Grand Challenges)

Three goals

- Ensuring basic needs are met for all people
- Sustaining and improving quality of life
- Mitigating future risks

Resource Needs

- Food
- Water
- Environment
- Shelter
- Energy
- Space

Societal Needs

- Prosperity
- Governance
- Health
- Security
- Disaster relief
- Learning

Global Problems (cont.)

World Economic Forum

10 biggest challenges

- Food security
- Economic growth and social inclusion
- Employment
- Climate change
- Environmental and natural resource security
- Financial system
- Internet
- Gender equality
- International trade and investment
- Long-term infrastructure investment

<https://www.weforum.org/agenda/2016/01/what-are-the-10-biggest-global-challenges/>

Global Problems (cont.)

Maker Faire – Make Community

50+ Global Issues Makers Can Solve

1. Global health
2. Food security and agricultural development
3. Education
4. Human rights
5. Gender equity
6. Water
7. Access to electricity
8. Digital inclusion
9. Resilience against climate change and environmental damage

Global Problems (cont.)

Maker Faire – Make Community II

- 1. Energy-efficient desalination**
2. Vaccine for HIV/AIDS.
3. Vaccine for Malaria.
4. Vaccine for TB.
- 5. Smart electronic textbooks**
- 6. Biometric ID systems**
- 7. Affordable smartphones**
- 8. New generation of homes for the poor**
9. New fertilizer production systems
- 10. Utility-in-a-box for solar mini-grids**
11. Short-course TB treatment
12. Microbicides for HIV / HPV
13. Long-lasting antiretroviral for HIV
14. PrEP antiretrovirals for HIV prevention
15. Complete cure for malaria
16. Long-lasting chemical mosquito repellent
17. Non-chemical spatial mosquito repellent/attractant
- 18. Clinic-in-a-box**
- 19. Oxygen concentrator**
20. Automated multiplex immunoassays
21. Point-of-care nucleic acid diagnostics
- 22. Fully integrated diagnostic panels**
- 23. Off-grid vaccine refrigerator**

Global Problems (cont.)

Maker Faire – Make Community II

24. Thermo-stabilizing mechanism for vaccines
25. Nutrient-dense infant weaning foods
- 26. Off-grid refrigerator for households and farmers**
- 27. Low-cost refrigerated vehicle**
28. Precision agriculture systems for irrigation and fertilizer
- 29. Low-cost shallow water drilling system**
- 30. Solar-powered irrigation pumps**
31. Herbicides for weeds
- 32. Low-cost tilling machine**
33. Alternative to liquid nitrogen for preserving animal semen
34. High-nutrient animal fodder
35. Portable toolkit of extension workers and veterinarians
36. Spatial on-farm pest repellent
37. New seed varieties tolerant to drought and heat
- 38. Wearable cameras**
- 39. Low-cost aerial vehicles for imagery**
40. DNA-based rape kit
- 41. Wireless broadband technologies**
- 42. IoT for low-income populations**
43. Sustainable aquaculture systems
- 44. Affordable homes resilient to extreme climate events**
- 45. Retrofit filter for vehicle exhaust**
- 46. Distributed sensors for environmental toxins**
- 47. Low-cost PV mini-grid installation**
- 48. New generation of low-cost, energy efficient appliances**
- 49. New bulk storage technologies**
- 50. Mini-grid management solutions**
- 51. Low-cost family transport**

Global Problems (cont.)

Grand Challenges by 2050, BBC

- Genetic modification of humans
- Aged populations
- Lost cities (Miami)
- Social media
- Geopolitical tensions
- Safe car travel
- Dwindling resources
- Settling other worlds
- Boosted brain power
- AI dominating

Global Problems (cont.)

Millennium - 15 Global Challenges

1. How can sustainable development be achieved for all while addressing global climate change?
2. How can everyone have enough clean water without conflict?
3. How can population growth and resources be brought into balance?
4. How can genuine democracy emerge from authoritarian regimes?
5. How can decision-making be enhanced by integrating improved global foresight during unprecedented accelerating change?
6. How can the global convergence of information and communications technologies work for everyone?
7. How can ethical market economies be encouraged to help reduce the gap between rich and poor?
8. How can the threat of new and reemerging diseases and immune micro-organisms be reduced?
9. How can education make humanity more intelligent, knowledgeable, and wise enough to address its global challenges?
10. How can shared values and new security strategies reduce ethnic conflicts, terrorism, and the use of weapons of mass destruction?
11. How can the changing status of women help improve the human condition?
12. How can transnational organized crime networks be stopped from becoming more powerful and sophisticated global enterprises?
13. How can growing energy demands be met safely and efficiently?
14. How can scientific and technological breakthroughs be accelerated to improve the human condition?
15. How can ethical considerations become more routinely incorporated into global decisions?

Global Problems (cont.)

World Economic Forum - 5 risks

1. Weapons of mass destruction
2. Extreme weather
3. Natural disasters
4. Climate change
5. Water crisis

Global Problems (cont.)

UN Global Issues

- Africa
- Ageing
- AIDS
- Atomic energy
- Big data for SDGs
- Children
- Climate change
- Decolonization
- Democracy
- Food
- Health
- Human rights
- International justice
- Oceans / law of the sea
- Peace and security
- Population
- Refugees
- Water
- Women

Global Problems (cont.)

Borgen Project – Top 10 Problems that can be solved

1. Armed Conflict
2. Chronic Disease
3. Education
4. Infectious Disease
5. Population Growth
6. Biodiversity
7. Climate Change
8. Hunger and Malnutrition
9. Natural Disasters
10. Water and Sanitation

Global Problems (cont.)

Borgen Project – 17 Sustainable Development Goals

1. End poverty
2. End hunger and improve nutrition and sustainable agriculture
3. Promote well being for all ages
4. Ensure equitable and quality education
5. Achieve gender equality
6. Ensure water and sanitation for all
7. Ensure access to modern energy for all
8. Promote sustainable economic growth and productive employment
9. Build resilient and innovative infrastructure
10. Reduce inequality
11. Make settlements safe, resilient and sustainable
12. Ensure sustainable consumption and production patterns
13. Take urgent action to combat climate change
14. Conserve and sustainably use Earth's water
15. Promote sustainable use of terrestrial ecosystems and forests, and halt and reverse land degradation and biodiversity loss
16. Promote peaceful societies, provide access to justice and build effective, accountable institutions
17. Implement and revitalize the Global Partnership for Sustainable Development

Global Problems (cont.)

Scientific American - 20 Big Questions about Future of Humanity

1. Does humanity have a future beyond Earth?
2. When and where do you think we will find extraterrestrial life?
3. Will we ever understand the nature of consciousness?
4. Will the entire world one day have adequate health care?
5. Will brain science change criminal law?
6. What is the chance Homo sapiens will survive for the next 500 years?
7. Are we any closer to preventing nuclear holocaust?
8. Will sex become obsolescent?
9. Could we one day replace all of the tissues in the human body through engineering?
10. Can we avoid a "sixth extinction"?
11. Can we feed the planet without destroying it?
12. Will we ever colonize outer space?
13. Will we discover a twin Earth?
14. Will there ever be a cure for Alzheimer's?
15. Will we use wearable technologies to detect our emotions?
16. Will we ever figure out what dark matter is?
17. Will we get control of intractable brain diseases like schizophrenia or autism?
18. Will technology eliminate the need for animal testing in drug development?
19. Will gender equality be achieved in the sciences?
20. Do you think we will one day be able to predict natural disasters such as earthquakes with warning times of days or hours?