Unfuck the Planet - Systematic Change to Handle Climate Emergency

0. Intro

It's pretty much ready for print, now only some finishing touches, formatting, footnotes…

https://genesis.re/book

Technical note about this book

Initially, it was a collection of Google Docs.

I couldn't stop thinking about it and I was constantly adding new stuff, more content, more links, research, data, studies, ideas… Sometimes a document grew out of control, contained so many sidenotes and a new separate one was created.

Now doing this process in reverse - putting it all back together in a single form, Kindle form, Kindle because Amazon is an amazing distribution platform.

Even if you do not have Kindle device, you can install Kindle app on your phone, tablet or a computer. Actually, with some images having a color screen might be better than e-ink.

If there is URL in the text - I encourage you to click and see for yourself - if the URL is in the footnote - it's entirely up to you, always DYOR (do your own research).

You can also download .pdf or .epub whatever you prefer. No DRM *(digital rights management)*, use any format you like and share widely

In the footer of all Google Docs I put the following, this principle remains true here as well:

> *"Creative Commons - Open Source - MIT - WTFPL - Cognitive Liberty - Freedom of Thought - Freedom of Conscience"*

I'm not too bothered if this is Creative Commons version 3 or version 4. No strings attached - my goal is to spread the knowledge, information always wants to be free.

No person should be ever prosecuted for their thoughts.

I am currently based in a surveillance state where people are prosecuted for possession of books. Media feed us with terror and Terrorism Act[1] is making *Nineteen Eighty-Four*[2] and thoughtcrimes a reality.

How did my environmental activism journey start?

It was 2015 when I became obsessed with climate change. It was the wedding of my cousin and me watching the TV in a hotel room in a foreign country. The majority of the adverts *(this is how I learn about the economy)* were about vitamins, supplements, medications… You could get sick just by watching all the symptoms! In between the adverts, all of the news was talking about this little guy:

Did some research, wrote a blog post[3]. You should check this amazing comic strip[4], unfortunately no longer online, preserved in archive.org

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[1] https://genesis.re/wiki#Terrorism_Act
[2] https://en.wikipedia.org/wiki/Nineteen_Eighty-Four
[3] https://blog.mostlydoing.com/2015/11/syria-climate-change-global-warming.html
[4] https://web.archive.org/web/20151222223453/http://www.upworthy.com/what-is-the-role-of-climate-change-in-the-conflict-in-syria

That's how it started…

Here is me at COP24[5] (2018 United Nations Climate Change Conference): https://genesis.re/360/cop24/

I've asked 10+ random people and noone knew how to measure emissions: https://earthscience.stackexchange.com/questions/15774/what-are-the-technical-solutions-to-measure-ceco2-emissions

Noone knew the answer, they just assumed the data is correct. Seriously?

I saw how the politics is made, to create global political party would be too slow.

[5] https://en.wikipedia.org/wiki/2018_United_Nations_Climate_Change_Conference

It’s the Extinction Rebellion that gave me hope.

Previously I wasn’t into protesting, I was into finding solutions.

2019 and I’m realising protest (non-violent direct action) is a very efficient way.

It was the collective assembly that changed my mind… I might be smarter than the average person but I’m not smarter than everyone and I’m definitely not smarter than everyone else combined.

The hive mind, collective consciousness, the energy in the movement is unprecedented.

This book is my contribution towards the movement.

(and my own survival)

3 demands and 10 principles of Extinction Rebellion

There is a wealth of information available online: https://rebellion.earth/the-truth/about-us/

I find these principles worth sharing. It helps align our efforts.

I agree with the demands:

1. Tell The Truth
2. Act Now
3. Beyond Politics

I agree with the principles:

1. we have a shared vision of change
Creating a world that is fit for generations to come.

2. we set our mission on what is necessary
Mobilising 3.5% of the population to achieve system change - using ideas such as "Momentum-driven organising" to achieve this.

3. we need a regenerative culture
Creating a culture which is healthy, resilient and adaptable.

4. we openly challenge ourselves and our toxic system
Leaving our comfort zones to take action for change.

5. we value reflecting and learning

Following a cycle of action, reflection, learning, and planning for more action. Learning from 6. other movements and contexts as well as our own experiences.

6. we welcome everyone and every part of everyone
Working actively to create safer and more accessible spaces.

7. we actively mitigate for power
Breaking down hierarchies of power for more equitable participation.

8. we avoid blaming and shaming
We live in a toxic system, but no one individual is to blame.

9. we are a non-violent network
Using non-violent strategy and tactics as the most effective way to bring about change.

10. we are based on autonomy and decentralisation
We collectively create the structures we need to challenge power. Anyone who follows these core principles and values can take action in the name of Extinction Rebellion.

There are a few more things - it is extremely useful if you attend a local group meeting.

If you are reading this, you are probably already active. If not, check this out - **rebellion.earth/act-now/local-groups** - find your local group:

“Heading for extinction” (watch the talk)

Tell the truth.

Act as if the truth is real.

Here is the talk: https://www.youtube.com/watch?v=b2VkC4SnwY0

Heading for extinction and what to do about it |...

155K views • 11 months ago

It's helpful if we establish common language - watch this talk, it's really important.

A lot of assumptions in this book are based on this talk.

(it's just like laughing with your old friend, you have loads of shared context)

It's important to understand the consequences.

Snippet from "Before the Flood"[6]:

[6] https://www.beforetheflood.com/

Critical thinking

Don't trust. Verify.

Think for yourself.

Make your own judgement.

I'm currently a resident of the **Planet A**. Because of that, my rational game-theory incentives are aligned towards self-preservation.

I actually may be willing to invest my time, energy, money, and effort to tell some useful stuff.

Bit of history

Excellent article from 2008[7], it's perfectly valid Today:

> *"Time is fast running out to stop irreversible climate change, a group of global warming experts warns today. We have only 100 months to avoid disaster. Andrew Simms explains why we must act now - and where to begin"*
>
> *"The most common strategies used by government recently have been wringing their hands and blaming China's rising emissions, and telling individuals to, well, be a bit more careful. On the first get-out, it is delusory to think that countries such as China, India and Brazil will fundamentally change until wealthy countries such as Britain take a lead. And it is wildly unrealistic to think that individuals alone can effect a comprehensive re-engineering of the nation's fossil-fuel-dependent energy, food and transport systems. The government must lead."*

The government must lead, that's why suggesting some sure-fire policy changes.

[7] https://www.theguardian.com/environment/2008/aug/01/climatechange.carbonemissions

1. Policy change

I got a lot of inspiration from Climate Mobilisation Victory Plan[8]. It has a lot of insightful research, actionable policies and historical references. Franklin D. Roosevelt (president of United States at the time) was able to act at short notice because all the plans, contingencies and proposals were already in place.

Check the definition of mobilization[9] on Wikipedia:

> *"The United Kingdom mobilized 22% of its total population for direct military service, more than any other nation of WWII era."*
>
> *"Importantly, some scholars have argued that such large scale mobilization of society and its resources for the purposes of warfare have the effect of aiding in state building. Herbst argues that the demands of reacting to an external aggressor provides a strong enough impetus to force structural changes and also forge a common national identity."*

We will need to change quite a few things so let's start from the beginning.

Historical examples

It was possible to confiscate gold in the US: https://en.wikipedia.org/wiki/Executive_Order_6102

It was possible to delete 47.5% from the bank deposits in Cyprus:
https://en.wikipedia.org/wiki/Capital_levy

It was possible to outlaw all ₹500 and ₹1,000 notes in India:
https://en.wikipedia.org/wiki/2016_Indian_banknote_demonetisation

It was possible to change the sides of the road traffic in Sweden:
https://en.wikipedia.org/wiki/Dagen_H

It was possible to change the units and one plane got too little fuel in Canada:
https://en.wikipedia.org/wiki/Gimli_Glider

It was possible to put a man on the Moon 50 years ago:
https://en.wikipedia.org/wiki/Apollo_program

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[8] https://www.theclimatemobilization.org/victory-plan
[9] https://en.wikipedia.org/wiki/Mobilization

Guiding principles:

- Easy to understand, it should intuitively make sense
- Creates the right incentives, taps into fundamental market forces
- Does not generate worse problems

Fair price for water, meat, dairy and CO_2

This is the most fundamental policy.

These things are highly connected, meat industry consumes a lot of water and generates a lot of greenhouse gases.

Undo 1000+ pages of rules, regulations, subsidies, directives, obsolete laws based on “fake news” industry sponsored research.

- Agree on the facts
- Agree that water is a limited resource and should be priced as such,
- Agree that greenhouse gases contribute to global warming, climate breakdown
- Agree that climate breakdown will trigger catastrophic collapse of society
- Agree that acting on it (prevention) is the uttermost priority
- Agree that acting now is required (now as opposed to 2050)

That’s why watching “Heading for extinction” talk is so important.

Victory Plan

Once again referring to Climate Mobilisation Victory Plan:

> *“By one estimate, the food system as a whole is responsible for about half of global greenhouse gas emissions, with agricultural production contributing 11-15% of global greenhouse gas emissions, processing, packaging, refrigeration, and retailing food contributing 15-20%, and food waste 2-4%. Some 70-90% of global deforestation is caused by agricultural land expansion, mostly for the production of industrial sugarcane, oil palm, soy, maize, rapeseed.”*
>
> *“A major reduction of meat and dairy production as well as a transformation toward a “carbon farming” system could help halt deforestation, reverse global warming through the mass sequestration of carbon dioxide, create a more sustainable economy, and produce yields sufficient to feed the global population.”*

More science

Veganism is 'single biggest way' to reduce our environmental impact on planet, study finds:[10]

> *"Researchers at the University of Oxford found that cutting meat and dairy products from your diet could reduce an individual's carbon footprint from food by up to 73 per cent."*
>
> *"Meanwhile, if everyone stopped eating these foods, they found that global farmland use could be reduced by 75 per cent, an area equivalent to the size of the US, China, Australia and the EU combined."*
>
> *"Not only would this result in a significant drop in greenhouse gas emissions, it would also free up wild land lost to agriculture."*

Avoiding meat and dairy is 'single biggest way' to reduce your impact on Earth[11]:

> *"Biggest analysis to date reveals huge footprint of livestock - it provides just 18% of calories but takes up 83% of farmland"*
>
> *Prof Tim Benton, at the University of Leeds, UK, said: "This is an immensely useful study. It brings together a huge amount of data and that makes its conclusions much more robust. The way we produce food, consume and waste food is unsustainable from a planetary perspective. Given the global obesity crisis, changing diets – eating less livestock produce and more vegetables and fruit – has the potential to make both us and the planet healthier."*

Link to the source[12]: "**Reducing food's environmental impacts through producers and consumers"**

> *"In addition to the reduction in food's annual greenhouse gases emissions, the land no longer required for food production could remove ~8.1 billion metric tons of CO2 from the atmosphere each year over 100 years as natural vegetation re-establishes and soil carbon re-accumulates, based on simulations conducted in the IMAGE integrated assessment model "*

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10 https://www.independent.co.uk/life-style/health-and-families/veganism-environmental-impact-planet-reduced-plant-based-diet-humans-study-a8378631.html

11 https://www.theguardian.com/environment/2018/may/31/avoiding-meat-and-dairy-is-single-biggest-way-to-reduce-your-impact-on-earth

12 https://science.sciencemag.org/content/360/6392/987

"Communicating average product impacts to consumers enables dietary change and should be pursued. Though dietary change is realistic for any individual, widespread behavioral change will be hard to achieve in the narrow timeframe remaining to limit global warming and prevent further, irreversible biodiversity loss."

More science

Guardian article[13]:

"Overall, the FOLU report said the damaging way the world currently produces food and uses land causes $12tn a year in hidden costs to the environment, human health and development."

FOLU - Food and Land Use Coalition. The geek in me appreciates the typography and graphic design of their report[14].

"The global report from the Food and Land Use Coalition (FOLU) proposes a reform agenda – centred around ten critical transitions – of real actionable solutions. These could deliver the needed change to boost progress towards the Sustainable Development Goals (SDGs) and the Paris Agreement, help mitigate the negative effects of climate change, safeguard biodiversity, ensure more healthy diets for all, drastically improve food security and create more inclusive rural economies."

13 https://www.theguardian.com/environment/2019/sep/16/1m-a-minute-the-farming-subsidies-destroying-the-world

14 https://www.foodandlandusecoalition.org/global-report/

We are talking trillions with “t”. That’s comparable to GDP of China. Pretty substantial amount.

Bold claim

“By one estimate, the food system as a whole is responsible for about half of global greenhouse gas emissions”

This is a bold claim and a broad estimate.

There are a lot of dependencies: Earth, climate, food production, society is a complex system.

What if the food had no subsidies and prices were determined by the market?

Just like we model climate, time to model what would happen to society.

See how few people are employed in agriculture

In the developed world it’s less than 5%: https://ourworldindata.org/employment-in-agriculture

Usually, when making a new policy someone will gain, someone will lose. This time around, everyone can win. Beef farmers will still make profits as they can repurpose their land, buildings, machinery, infrastructure, use the manure for compost and still sell some beef - at the updated market prices.

Farmers do not appear to me as super-wealthy individuals, they do not appear to have large lobbies in Brussels (European Union) or Washington DC and yet their affairs so fundamental to the future of the planet.

Mohamed Nasheed[15], president of Maldives in his essay *"We are not prepared to die"* published in the Extinction Rebellion handbook:

> *"I propose a test: the working people who stand to lose most from the end of the fossil-fuel age should be the first to gain from the new, clean economy. And we should apply that test before each and every intervention we make."*

There will be plenty of new opportunities and guys who are no longer coal-miners have nothing to lose and with the right support and incentives can excel in a new model of economy.

Why bother about president of Maldives? According to Wikipedia[16]:

> *With an average ground-level elevation of 1.5 metres (4 ft 11 in) above sea level, it is the world's lowest country, with even its highest natural point being one of the lowest in the world, at 5.1 metres (17 ft).*

Positive side-effects of changing the relationship with food

Market prices and people were growing their own stuff? These are all related, all connected:

- Different land use - forests and other plants capturing CO_2 (drawdown)
- Less top-soil erosion, less fertilizers
- Less shit, with less shit, you can use existing shit as https://en.wikipedia.org/wiki/Manure *(some people call it "organic", in the country where I'm from it was always like that)*
- Less antibiotics in the food system
- Less superbugs *(bugs resistant to antibiotics)*
- Less disease
- Better air quality
- Better water quality
- Less dependence on money
- Less transportation when going to work
- Less stress (stress at work, stress in traffic)

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[15] https://en.wikipedia.org/wiki/Mohamed_Nasheed
[16] https://en.wikipedia.org/wiki/Maldives

- Loneliness, community aspect - bunch of neighbours growing stuff together
- Connection with nature, not in a hurry, zen gardening

Can gardening and connection with nature improve your mental health and overall fitness?

I know this is a bold claim. There is no scientific research because there is no industry lobby that would sponsor it. This claim is based on intuition and connecting various dots, 15 or so bullet points. Add a new line, rather than a comma and it could be 17, my favourite number.

Currently there are no incentives to do that. Food is cheap, food is abundant, in the city like London the cost of food compared to the cost of housing is like 1 to 10.

Why meat happened in the first place?

Note the ironic title of the publication, *"Meat Makes People Powerful"*[17]:

> *"With a special focus on East Asia, Meat Makes People Powerful reveals how national governments regulated and oversaw meat production, helping transform virtually vegetarian cultures into major meat consumers at record speed."*

From the review of that book[18]:

> *"They describe the major role that meat is playing in anthropogenic climate change and environmental pollution in general, as well as in the current global noncommunicable disease pandemic. They also discuss the overwhelmingly negative effects of meat consumption on animal welfare and on social equity."*
>
> *"Warren describes some of these negative effects, including water and air contamination and green-house gas emissions from livestock production, and infectious and noncommunicable diseases from meat consumption. Reducing the role of meat in our world has become an existential issue. For example, it is becoming clear that to avoid climate change catastrophe, greatly reduced animal food consumption must be part of our mitigation strategy and the rise in over-weight and obesity, and associated pandemic of diet-related noncommunicable diseases like diabetes, liver disease, heart disease, has huge social and economic costs."*
>
> *"A major obstacle, however, is the economic power of the food industry, which controls so much of our food environment and food information and has a corrupting influence on science. Can our current understanding of meat's impact on society give new power to arguments from Eastern traditions that call for reduced animal consumption on cultural, religious, and ethical grounds, as well as arguments from Western societies, where leading thinkers have promoted reduced meat consumption for ethical, health, environmental, and social reasons at least since Pythagoras in ancient Greece"*

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[17] https://www.uipress.uiowa.edu/books/9781609385552/meat-makes-people-powerful
[18] https://www.foodsystemsjournal.org/index.php/fsj/article/view/670

Humanity completely lost touch with reality how food is produced. Apples in the UK have the same price around the year, no such thing as seasonality, where are the market forces *(supply and demand, transportation, storage)* in play?

Meanwhile in the EU - promoting meat

Article[19] and the actual website[20]:

EU spends €71m promoting meat, despite climate goals

Meanwhile in the EU - subsidising meat big time

Guardian article[21] commenting on Greenpeace report[22].

All the sources are public, these images speak more than 100 pages of accounting financial audit report - is anyone reading them at all?

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[19] https://euobserver.com/environment/144364

[20] https://wonderfulbeef.eu/

[21] https://www.theguardian.com/environment/2019/feb/12/nearly-a-fifth-of-eu-budget-goes-on-livestock-farming-greenpeace

[22] https://www.greenpeace.org/eu-unit/issues/nature-food/1803/feeding-problem-dangerous-intensification-animal-farming/

I'm in the camp of don't trust, verify. I encourage you to always check the sources[23][24].

[23] https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/cap-glance_en

[24] https://ec.europa.eu/agriculture/statistics/facts-and-figures_en

The subsidies making meat so cheap?

It feels unreal that 1KG of meat is similar price to 1KG of vegetables[25][26].

In fact meat is cheaper - eating 200g of meat will keep you fed - eating 200g of vegetables feels like a snack (I think it has something to do with nutrition density). Therefore, if you are poor you are more likely to end up eating meat. Who would have thought it?

Tesco Boswell Farms Beef Mince - 20% Fat

(500g)

£1.49

£2.98 / Kg

Waitrose Aberdeen Angus Mince Beef - 15% Fat

(400g)

~~£4.00~~ **£2.00**

£5.00 / Kg

ASDA Butcher's Selection Beef Mince - 20% Fat

(1Kg)

£3.75

£3.75 / Kg

Waitrose Broccoli Crown

(300g)

£1.50

£5.00 / Kg

Waitrose Tenderstem Broccoli

(80g)

£1.10 any 3 for £2.50

£13.75 / £10.42 / Kg

Ocado Organic Broccoli

(300g)

£1.00

£3.33 / Kg

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25 http://www.mysupermarket.co.uk/aldi-price-comparison/Fresh_Meat/ASDA_Butchers_Selection_Beef_Mince_20_Fat_500g.html

26 http://www.mysupermarket.co.uk/Shopping/FindProducts.aspx?Query=broccoli

Loss of nutrients

Hacker News[27]:

> *"This happened due to extermination of soil life through modern farming practices of heavy tilling, fertilizing and monoculture crops. Dead soil is more susceptible to erosion and requires ever increasing amounts of synthetic fertilizer to grow anythin"*

And the research itself[28]:

> *"Magnesium deficiency can be attributed to common dietary practices, medications, and farming techniques, along with estimates that the mineral content of vegetables has declined by as much as 80–90% in the last 100 years."*

Victory Gardens

This is one of the many ways. As societies will change the relationship how the food is produced, it's worth highlighting a notable example from the history.

> *"Young men sacrificed their lives fighting for their country. Women surged into factories and families planted 50 million "Victory Gardens" that supplied 40% of America's vegetables during the war. Scientists and universities pumped out research on behalf of the war effort leading to huge technological and intellectual breakthroughs. More than 10% of the population relocated, often across state lines, in order to find a 'war job'."*

Real posters from the WWII, directly from Wikipedia[29]:

> *"Besides indirectly aiding the war effort, these gardens were also considered a civil 'morale booster' in that gardeners could feel empowered by their contribution of labor and rewarded by the produce grown. This made victory gardens a part of daily life on the home front."*

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[27] https://news.ycombinator.com/item?id=20965771
[28] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6163803/
[29] https://en.wikipedia.org/wiki/Victory_garden

Victory Gardens were commonplace, including White House and Buckingham Palace[30]. Even if it was only for propaganda, it shows it wasn't just some hippies on the fringes.

Markets reacting to meat innovation

Beyond Meat had IPO at $25 per share[31]. Their stock price is pretty insane.

There are other companies innovating in the space:

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[30] https://www.naturespath.com/en-us/blog/victory-gardens-now/
[31] https://www.cnbc.com/2019/05/01/beyond-meat-prices-ipo-at-25-per-share-source.html

- https://impossiblefoods.com/
- https://www.redefinemeat.com

Check the prediction from Winston Churchill from 1931[32]:

> *"We shall escape the absurdity of growing a whole chicken in order to eat the breast or wing, by growing these parts separately under a suitable medium."*

Religious aspect of killing

Religion tried to make it happen: "you shall not kill". Maybe religious leaders can come together and explain to the devotees:

Artificial Insemination Directive (AID)

If you cannot prevent killing, you can make it more difficult to come alive.

There are various laws against animal cruelty.

Being artificially inseminated can be seen as cruel.

Simplified, unified, updated carbon credits market

I really wish it was understandable by the public.

I really wish it was as simple as knowing £1 is worth $1.23

[32] https://quoteinvestigator.com/2017/01/22/meat/

There is so much information (and noise) available and I decided to remove this chapter.

This is to avoid mudding the waters.

There were so many numbers, estimates, allowances, different standards, different years - it was a total mess and no amount of explaining would do justice.

If you have some energy (pun intended) here are some references:

- https://en.wikipedia.org/wiki/Emissions_trading
- https://en.wikipedia.org/wiki/Carbon_emission_trading
- https://en.wikipedia.org/wiki/Renewable_Energy_Certificate_(United_States)
- https://en.wikipedia.org/wiki/Personal_carbon_trading
- https://en.wikipedia.org/wiki/Greenhouse_gas_emissions_accounting
- https://en.wikipedia.org/wiki/Emission_inventory
- https://en.wikipedia.org/wiki/Greenhouse_gas_inventory
- https://en.wikipedia.org/wiki/Certified_Emission_Reduction
- https://en.wikipedia.org/wiki/Clean_Development_Mechanism
- https://en.wikipedia.org/wiki/Carbon_leakage
- https://en.wikipedia.org/wiki/European_Union_Emission_Trading_Scheme#State_allocation_plans

There is a lot of criticism related to the current system.

Here are the source materials: https://ec.europa.eu/clima/policies/ets_en

The handbook is 140 pages long.

There is further criticism about carbon leakage:
https://carbonmarketwatch.org/publications/myth-buster/

For the time being - I agree with the criticism and I'm researching the matter further to provide actionable guidance but that is not possible within the timeframe of this book.

My initial gut feeling - we will have to simplify and unify the system on the international level.

TODO: subject of a separate, in-depth, detailed research with loads of numbers and estimates.

BECCS[33] (Bio-energy with carbon capture and storage)

The IPCC report relies on BECCS to provide negative emissions.

[33] https://en.wikipedia.org/wiki/Bio-energy_with_carbon_capture_and_storage

“BECCS is the process of extracting bioenergy from biomass and capturing and storing the carbon, thus removing it from the atmosphere“

“The carbon in the trees or crops used for the biomass comes from the greenhouse gas carbon dioxide (CO2), which they extract from the atmosphere whilst growing. As of 2019 most BECCS stores some of the carbon and leaves the rest with the bioenergy in the form of a biofuel, such as ethanol. By providing aviation biofuel and reducing the environmental impact of aviation BECCS may help with climate change mitigation.“

“As of 2019 five facilities around the world are actively using BECCS technologies and are capturing approximately 1.5 million tonnes per year “

Some of the projects were cancelled due to the lack of government funding[34]:

It was confirmed on 25 November 2015 following the Chancellor of the Exchequer`s Autumn Statement that the £1bn ring-fenced capital budget for the CCS Competition would no longer be available. The decision meant that the CCS Competition was closed. On that day, the Chief Executive Officer of the Applicant stated that “it is too early to make any definitive decisions about the future of the White Rose project, however it is difficult to imagine its continuation in the absence of crucial Government support”.

The £1b from the government was cancelled but they did it anyway. Pilot on a much smaller scale[35]:

“The commissioning of an innovative Bioenergy Carbon Capture and Storage (BECCS) pilot plant at Drax Power Station has started with the first carbon dioxide expected to be captured in the coming weeks.”

“Drax is partnering with Leeds-based C-Capture and is investing £400,000 in what could be the first of several pilot projects undertaken at the power station to deliver a rapid, lower cost demonstration of BECCS.”

“£1b“ has three characters: £ 1 b
“£400,000“ has eight characters £ 4 0 0 , 0 0 0

It’s important to note that “£1b” is a much bigger number: £ 1 , 0 0 0 , 0 0 0 , 0 0 0

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34 https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010048/EN010048-000820-Secretary%20of%20State%20for%20Energy%20and%20Climate%20Change%20decision%20letter%20and%20statement%20of%20reason.pdf

35 https://www.drax.com/press_release/europes-first-bioenergy-carbon-capture-storage-pilot-now-underway/

We need 2500x increase, not decrease in funding.

I genuinely believe that BECCS will fit nicely with repurposing land using seawater that can sustain algae. Most of the conventional crops require freshwater, while algae produce oxygen and thrive in saltwater environment.

Water situation

This is just unreal, see Guardian article[36]:

> *"In the US we are still governing our water based on compacts made in the 1800s – before the western cities had boomed, before suburban sprawl, before factory farming and a global supply chain and, of course, before climate change."*

In the capitalist system, if there is a scarce commodity, with high demand and limited supply there should be a price for it? Not really, search for "alfalfa california" and be dismayed.

BBC also talks about it[37]:

> *"While historic winter storms have battered much of the US, California is suffering its worst drought on record. So why is America's most valuable farming state using billions of gallons of water to grow hay - specifically alfalfa - which is then shipped to China?"*

If you inspect closely, you'll see the Colorado River dries up before reaching Mexico. If you are reading it on grayscale Kindle, Google Maps satellite photo will not great[38]:

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[36] https://www.theguardian.com/us-news/2019/mar/25/california-water-drought-scarce-saudi-arabia
[37] https://www.bbc.co.uk/news/magazine-26124989
[38] https://goo.gl/maps/Q8QRUDVvBuJy1mRH9

Alfalfa is a cow feed, that's why need to ensure market prices for water, meat, dairy.

When researching this stuff, I was able to find some pretty hilarious "fake news". There a whole chapter on that: banning "fake news".

War over water

Do you think future wars will be over water? Technically speaking, it's nothing new, it's already been happening for 50+ years.

I'm not even trying to summarize that, there are so many resources available:

https://en.wikipedia.org/wiki/Water_conflict_in_the_Middle_East_and_North_Africa
https://en.wikipedia.org/wiki/Water_politics_in_the_Middle_East
https://en.wikipedia.org/wiki/Water_politics_in_the_Nile_Basin
https://en.wikipedia.org/wiki/Water_politics_in_the_Jordan_River_basin
https://en.wikipedia.org/wiki/War_over_Water_(Jordan_river)
https://en.wikipedia.org/wiki/Headwater_Diversion_Plan_(Jordan_River)

> *"The plan was approved by the Arab League in 1964 but Israel prevented the project's development by conducting airstrikes in Syrian territory in April 1967."*

https://en.wikipedia.org/wiki/Sharing_the_water_of_the_Ganges
https://en.wikipedia.org/wiki/War_over_Water
https://en.wikipedia.org/wiki/Water_conflict
https://en.wikipedia.org/wiki/Water_security
https://en.wikipedia.org/wiki/Water_politics
https://en.wikipedia.org/wiki/Water_scarcity

Recently in Turkey there are complaints about historical city Hasankeyf being flooded as Ilisu dam[39] is filling it's reservoir. It only highlights how media are shaping our perception - the initial surveys were in 1954 and the construction started in 2006.

> *"In June 2009, after failing to meet the standards, the European firms officially cut the funding."*

> *"Shortly after the announcement of the funding loss, Turkey's Environment Minister Veysel Eroğlu said 'Let me tell you this, these power plants will be built. No one can stop it. This is the decision of the state and the government.'"*

It's kind of funny that the media report about it only now, and when they report it focuses on some ruins rather than water politics in the region. If you want to now, Turkey is part of NATO and controls another river flowing through Syria and Iraq[40]

> *"Syria and Iraq claim to be suffering severe water shortages due to the project development. Both countries allege that Turkey is intentionally withholding supplies from its downstream neighbors, **turning water into a weapon**. Turkey denies these claims, and insists it has always supplied its southern neighbors with the promised minimum of 500m^3/s.. It argues that Iraq and Syria in fact benefit from the regulated water by the dams as they protect all three riparian countries from seasonal droughts and floods."*

Emphasis mine. I'm curious how many think tanks around Pentagon and evaluating various water scenarios in the region:

- https://en.wikipedia.org/wiki/Mosul_Dam#Demolition_concerns_during_the_2003_invasion
- https://en.wikipedia.org/wiki/Battle_for_Mosul_Dam

Update our accounting models

- https://en.wikipedia.org/wiki/Virtual_water + virtual carbon

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[39] https://en.wikipedia.org/wiki/Ilısu_Dam
[40] https://en.wikipedia.org/wiki/Atat%C3%BCrk_Dam#Geostrategic_importance

- https://en.wikipedia.org/wiki/Triple_bottom_line
- https://en.wikipedia.org/wiki/Gross_National_Happiness - example from Bhutan

Check the Club of Rome and their climate emergency plan[41][42]:

> *Replace GDP growth as the main objective for societal progress:*
> *• Adopt new indicators – such as the Genuine Progress Indicator – that accurately measure human progress, welfare and wellbeing, rather than production growth*
> *• Make sure market prices reflect the true costs of production, i.e. integrating social, environmental and ecosystem decline costs in market pricing.*

The "true cost of production" - including social and environmental is precisely triple bottom line.

In other words - as long as it is legal and profitable to exploit the environment - it will continue. Same applies to "fake news" - if the clickbait title gets you clicks and you are paid from advertising impressions - it will continue, business as usual.

It's the system that is structurally toxic and bad designed, no blaming, no shaming, no pointing fingers.

Until recently I thought it is a legal obligation to maximise the profit. Whether it is 100% true or is it just a common misconception, the CEO bonus is usually related to the stock pricel[43]:

> *"Usually maximizing shareholder value is not a legal obligation, but the product of the pressure that activist shareholders, stock-based compensation schemes and financial markets impose on corporate directors."*

See alternative incorporation models:
- https://en.wikipedia.org/wiki/B_Corporation_(certification)
- https://en.wikipedia.org/wiki/Community_interest_company

Repurpose military technology

You can use the military to defend borders from continous waves of refugees.

Alternatively, you can use the manpower to do something for the climate.

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[41] https://en.wikipedia.org/wiki/Club_of_Rome
[42] https://www.clubofrome.org/project/the-club-of-rome-climate-emergency-plan/
[43] https://www.lawschool.cornell.edu/academics/clarke_business_law_institute/corporations-and-society/Common-Misunderstandings-About-Corporations.cfm

1. Use labour of soldiers to build stuff. Get **muscle, discipline and organization** by lifting heavy objects on a construction site.

2. Use steel and machinery for construction

3. Thicker armor. Fiercer bullets. Arms race. Engineering resource. **Just stop.** Different game.

4. All the fancy nuclear submarines can use their engine to generate electricity.

Russian floating nuclear power station power station is a real thing:

- https://en.wikipedia.org/wiki/Russian_floating_nuclear_power_station
- https://en.wikipedia.org/wiki/Akademik_Lomonosov

Cold war and arms race is a scary thing:

- https://en.wikipedia.org/wiki/Operation_Chrome_Dome
- https://en.wikipedia.org/wiki/1968_Thule_Air_Base_B-52_crash

Build hydropower?

Water retention and hydropower comes to mind:

- Protecting against floods
- Protecting against droughts
- Protecting against climate extremes
- Storing energy (pumping uphill) when loads of renewables available

There is a caveat though - most of the low-hanging fruits are already exploited. There will be always some negative side effects, just like that example in Turkey.

Build houses

Second area of interest is manufactured housing. You spend money on missiles and drones that destroy houses. You can make money by building homes and infrastructure.

I think it has something to do with abundance vs scarcity mindset.

Abundance mindset - I have more, you have more, everyone has a bigger pie.

Scarcity mindset - I need to protect what I have, steal from you, you steal from me - we are now both invested in the arms race.

A few following points are about decision making, “fake news” and education - these are highly related - cannot make informed decisions based on false information. Carry on with me...

Update the consensus model

So much political indecisiveness. Search for: *"noting welcoming IPCC"*[44]

> *"Saudi Arabia had fought until the last minute in Korea to limit the conclusions of the document."*
>
> ***"With no consensus, under UN rules the passage of text had to be dropped."***
>
> *"We are really angry and find it atrocious that some countries dismiss the messages and the consequences that we are facing, by not accepting what is unequivocal and not acting upon it"*
>
> *"Climate science is not a political football"*

Apparently, climate science is a political football.

Saudi Arabia, US, Russia and Kuwait - countries heavily reliant on oil - blocked the thing.

Saudi Arabia has a strange legal system.
Gay = death.
Weed = death.
Murder = https://en.wikipedia.org/wiki/Blood_money_(restitution)

Saudi Arabia has one of the largest oil reserves, they have incentives to keep dependency on oil, they have incentives to deny the facts.

Of course I'm worried that by shaming them I could become a target of a hitman. Truth cannot be stopped, I really wish Saudi Arabia updated they their definition of truth and was respecting human rights.

Rule of 99% (consensus)

In real life, you are never ever 100% certain about anything.

99% of the scientist tell climate change is real and is caused by humans - 99% is enough.

If 99% is not possible instantly, the next day 95% is OK. After 2 weeks the consensus rule drops to 67% which is the absolute minimum.

If no consensus is reached by this time, back to the drawing board.

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[44] https://www.bbc.co.uk/news/science-environment-46496967

That's where politics kicks in.

Everyone understands the issue, everyone is on the same page. One country is strongly against, other countries can offer something in exchange *(Russia offering vast expanses of Siberia to relocate small island states)*

Rule of 99% (trade-off)

With every new policy, someone will gain, someone will lose. The acceptable treshhold is up to 1% of people losing. Losing but not-losing, surely there will be an adaptation fund in place. For instance - if your job is lost due to changes in the economy, I can easily envision MOOC (Massive Open Online Courses) like Coursera or Udemy organised in local schools, or at your pace at home. Having community and tutor can be helpful, matter of preference.

In the first instance I was thinking about beef farmers losing their business. But they have access to land, machinery, buildings, infrastructure - soon they could be one of the richest guys on the planet.

The payout release can be conditional on meeting targets. In that way the biggest polluters are now the biggest supporters - they will receive payouts only when the targets are met.

Another example - Schengen Area[45]. Border guards surely lost their jobs. But surely they found jobs elsewhere. Small group of people should not block European integration?

And sadly Prison Guards Union who have incentives to keep prison–industrial complex running. It's against the law in many places, but if the police are on strike, who's going to enforce that?

Global education curriculum

Just like “fake news” - avoiding division, getting people aligned. Humans on this planet being in the same team.

By creating a basic program it will be much easier to implement any of the global policies:

- Literacy, numeracy
- English. Alternatively: Latin and Esperanto are not really competitors, Chinese too difficult
- Health, human body, food, nutrition
- Nature, earth sciences, environment
- Making, engineering, tinkering
- Communication, relationships, culture, tolerance, other religions

[45] https://en.wikipedia.org/wiki/Schengen_Area

Check this out, every major religion is against theft, murder, rape. On the fundamental level humans around the world share so many values, everyone shares similar needs.

If we align education, that will help mitigate the conflicts and agree on short-term sacrifices.

Related: https://www.xprize.org/articles/global-learning-xprize-two-grand-prize-winners

Worried about propaganda. Worried that some authoritarian regime can hijack this and push their own agenda. Or maybe the other way round - they are doing this already and now, for a change, we can teach young people how to question things, how not to be a victim of authoritarian regimes?

It's a lengthy and complicated subject.

I've already seen a game - https://mission1point5.com - promoted in an advert.

United Nations is already pushing their agenda in an advert… I expect more similar initiatives in the future.

Immigration Policy

I don't think anyone has an accurate estimate of what will happen in the next couple of years: https://en.wikipedia.org/wiki/Environmental_migrant

This trailer - https://www.kickstarter.com/projects/joshfoxtthc/rally-the-truth-help-us-fund-the-truth-has-changed-tour - says “up to 1 billion”

People who arrive in Europe are exhausted, exposed to life-threatening situations, no savings, no stability.

As a result, they are more likely to commit a crime. Not because they are evil, because they have no choice.

In fact, they are the most risk-taking, resourceful and entrepreneurial people out there, who had enough courage to cross thousands of kilometers in the hope to find a new home.

The ratio of new immigrants is not going to slow down, we need to teach them language, culture and why not provide them jobs with massive public works programme?

Check what Putin is doing with offering free land in Siberia[46]:

> *“The Russian Homestead Act is a 2016 proposal by Russian President Vladimir Putin to give 1 hectare, or 2.5 acres of free land in the Russian Far East to Russian citizens and foreign nationals as long as they live there for five years.“*
>
> *“The program originally was mostly aimed at Ukrainian Citizens, and came about as a possible method of resettling about 500,000 refugees.“*

Public works programme

Check the Colorado River Aqueduct[47]:

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[46] https://en.wikipedia.org/wiki/Russian_Homestead_Act
[47] https://en.wikipedia.org/wiki/Colorado_River_Aqueduct

> *“Originally conceived by William Mulholland and designed by Chief Engineer Frank E. Weymouth of the MWD, it was the largest public works project in southern California during the Great Depression. The project employed 30,000 people over an eight-year period and as many as 10,000 at one time.”*

It is perfectly possible that military, supported by the public and immigrants (see previous point about immigration) will work side by side.

Engineering on a massive scale

Qattara Depression Project:

- https://en.wikipedia.org/wiki/Qattara_Depression_Project

  "Use of nuclear explosives to excavate the canal was another proposal. This fit within the Atoms for Peace program proposed by President Dwight Eisenhower in 1953. Because of the concerns about using a nuclear solution the Egyptian government turned down the plan."

- https://www.energycentral.com/c/ec/qattara-depression-project-time-revisit

  “Ever since the depression was first mapped by the British after the First World War, there have been proposals to link it to the Mediterranean by canal, tunnel, or a combination. Hydroelectric power from seawater flowing into the basin has been the primary interest. The area is hot and dry; rapid evaporation would enable a large inflow of seawater to be sustained indefinitely. The lake formed could support settlements along its shores with local fishing and salt mining economies. It could be expected to cool the region and to increase rainfall as well.”

  “Such massive pumped hydroelectric storage would avoid the need for hundreds of gigawatt hours of dispatchable output from inefficient fossil-fueled peakers and dispatchable coal-fired power plants otherwise needed to back irregular wind and solar PV resources. It could provide clean dispatchable power well in excess of the needs of the Qattara project itself. The market in Europe for that excess capacity might justify construction of the first trans-Mediterranean HVDC transmission line. That would break the “chicken and egg” situation that has stalled the Desertec initiative”

This article is really worth reading. The author has so much in depth knowledge about engineering. It’s definitely worth reading, it actually makes sense… The initial proposals were 100 years ago, various factors, lack of economic viability. But now the technology has moved on, also the economy is shifting. Time to revisit the project, especially that there is a way to do this in stages, without jumping head first.

And related energy transmission projects:

- https://en.wikipedia.org/wiki/Desertec
- https://en.wikipedia.org/wiki/Medgrid

> *"Medgrid project, created at the end of 2010 in Paris, is a large industrial project planned in North Africa, which aims to promote and develop a Euro-Mediterranean electricity network that would provide North Africa & Europe with inexpensive renewable electricity, mostly from solar."*

Solar panels in the UK are "nice to have".

Solar panels on Sahara would have much higher utility:
https://en.wikipedia.org/wiki/Solar_irradiance

UK has a solid baseload, high energy usage around the clock.

I think the highest energy usage is in Winter (heating) in the evening (giant TV) during a commercial break (kettle on).

During that time, solar is not generating electricity, all the baseload has to be provided from other sources.

It's disgusting that subsidies made rich guys richers, people who own a property got some free taxpayers money without solving any underlying problems.

"Home solar panel installations fall by 94% as subsidies cut"[48]

I believe that $1000 worth of solar panels in Africa charges 1000 old Nokia phones, meaningfully improving quality of life for 1000 people.

Flooding desert - YCombinator is thinking big!

http://carbon.ycombinator.com/desert-flooding/

> *"Creating 4.5 million oases that are 1 km2 would allow us to sequester more than current global emissions (41+ giga tonnes of CO2 per year), while only requiring the equivalent of half the landmass of the Sahara desert."*
>
> *"While building the infrastructure of the oases reservoirs would be the first part of the project, cultivating phytoplankton is the second challenge that would allow us to sequester carbon at the massive scale required."*
>
> *"The transferability of these biological, software & hardware technologies across a wider array of problems has the potential to add to the commercial value beyond keeping us alive and our ecosystem in habitable form. For instance, the secondary effects of a portion of the desert land being newly habitable for humans could alter the global real*

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48 https://www.theguardian.com/environment/2019/jun/05/home-solar-panel-installations-fall-by-94-as-subsidies-cut

estate landscape. Figuring out how to autonomously terraform could bolster our abilities to do so on the Moon as well as Mars."

Other proposals

Previous points are big, radical, substantial. The ones below are much smaller.

Plastic and recycling

Please educate me how to properly do recycling.

I see people washing plastic containers - wasting water and energy to heat that water. Does it matter? Tell me exactly how to do this efficiently, if you are shipping it to another part of the planet, there is no point in my "pretending" I do something good.

My suggestion is to make all containers reusable at a minimal effort.

Tweet about containers: https://twitter.com/marsxrobertson/status/1154005084050731008

Tweet about recycling: https://twitter.com/marsxrobertson/status/1141020624170704903

Climate ~~Change~~ or Climate Emergency?

Change the message.

Change is OK, everything is changing.

Warming is good, I like Summer.

Biodiversity loss and species going extinct? Well… It's adaptation (lack thereof) and evolution.

Say I'm a minimal wage manual laborer. I don't even have a passport, I will never see these glaciers that are disappearing somewhere 5000 miles away.

I need to feed my family. I couldn't care less about Panda or Polar Bear.

Can we change language so that people start caring?

Cities (counties) going underwater and the planet is no longer to sustain any life at all, just like happened to Venus[49]:

> *"It is thought that the early environment of Venus was more like that of Earth with liquid water on the surface. At some point in the evolution of Venus, a runaway greenhouse effect occurred, leading to the current greenhouse-dominated atmosphere. Venus's atmosphere has therefore received a great deal of attention from those studying climate change on Earth."*

My suggestion is to replace "climate change" with "climate emergency" or "climate breakdown"

The same wording rule can apply to "sustainable" and "regenerative".

What we do now is completely unsustainable, we need to be regenerative.

No planned obsolescence, built to last

Kind of obvious. 5 years warranty by default changes the game. Simple. Easy. Straightforward.

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[49] https://en.wikipedia.org/wiki/Atmosphere_of_Venus

V2G vehicle to grid

- https://en.wikipedia.org/wiki/Vehicle-to-grid
- https://www.gov.uk/government/news/30-million-investment-in-revolutionary-v2g-technologies

At a given time, only a certain amount of vehicles is on the road. While they are plugged-in, the battery can act as load balancer:

> *"Communicate with the power grid to sell demand response services by either returning electricity to the grid or by throttling their charging rate. V2G storage capabilities can also enable EVs to store and discharge electricity generated from renewable energy sources*

> *such as solar and wind, with output that fluctuates depending on weather and time of day."*

In the era of negative interest rates (even for consumers), negative prices for energy do not surprise me anymore:
https://www.theguardian.com/money/2019/aug/13/danish-bank-launches-worlds-first-negative-interest-rate-mortgage

Sharing economy

https://en.wikipedia.org/wiki/Carsharing

Network is useful only if there is a sufficient density. That's why Airbnb started in NYC and Uber in SF. Founders were very hands-on, including doing quality photos of the apartments as well as asking friends to be the drivers.

On the one hand I appreciate Adam Smith, self-interest of an individual. On the other hand, bike sharing is a commodity and I do not fancy 10 different apps each with £20 minimal deposit. A single unified network could be much more practical *(HINT: if you are entrepreneur build a single app to aggregate them all)*

Change the defaults: housing standards

https://en.wikipedia.org/wiki/Passive_house
https://en.wikipedia.org/wiki/Zero-energy_building

Also disaster resilience with shelter in a basement in any areas affected by tropical storms.

Change the defaults: dairy milk

Subsidising milk:
https://www.gov.uk/government/collections/the-school-milk-subsidy-scheme-guidance

Have we actually established it is healthy or some paid research?

http://www.bbc.com/future/story/20190218-when-did-humans-start-drinking-cows-milk

"When you think about it, milk is a weird thing to drink. It's a liquid made by a cow or other animal to feed its young; we have to squirt it out of the cow's udders to obtain it."

Controversial stuff

I am not sure if this should happen.

These projects may face some political and social obstacles. I'm definitely concerned that you'll stop liking me.

As much as possible I would prefer to make decisions on cost-benefit analysis, facts, research, data, and science.

Would you like to know my opinion? I honestly do not know what is my opinion, so many factors are involved. There are more examples like that - referencing something that exists but does not constitute my viewpoint.

Always think for yourself and be aware multiple viewpoints are available. If you don't know what's going on - follow the money.

If you don't like something, don't dismiss the rest.

My intention is to open space for discussions, and find a language to talk about pressing problems.

Geoengeenering

https://en.wikipedia.org/wiki/Climate_engineering
https://en.wikipedia.org/wiki/Solar_radiation_management
https://en.wikipedia.org/wiki/Reflective_surfaces_(climate_engineering)

> *"Selecting or genetically modifying commercial crops with high albedo has been suggested."*

https://www.independent.co.uk/news/science/artificially-manipulating-arctic-climate-by-whitening-surface-of-ocean-to-reflect-sunlight-back-into-10210896.html

> *"Some researchers have suggested that this radical "geoengineering" approach should be considered in a global emergency if the summer sea ice of the Arctic disappears completely, as climate models predict it will in the coming decades due to global warming."*

https://www.sciencemag.org/news/2016/04/fight-global-warming-senate-calls-study-making-earth-reflect-more-light

> *"For decades studying albedo modification has been taboo in the United States, Keith says, for fear that it would distract from the ultimate goal of zeroing out carbon emissions."*

> *“As a result, many promising proposed climate engineering do not yet have the engineering development or experimental evidence to determine their feasibility or efficacy.“*

Moon in 1969, now we have aerogels, superconductors, nanotechnology, surely we can figure out a way with albedo.

Population

Once again Club of Rome Climate Emergency Plan[50]:

> *"Scale up all commitments to achieve the ambitions set by Family Planning 2020xi in order to provide 120 million more women and girls access to contraceptives by 2020."*
>
> *"Ensure the roll-out by 2025 of UNESCO’s International Technical Guidance on Sexuality Education in all countries, to ensure that girls and boys have access to the highest quality, evidence-based education packages that will enable them to make healthy choices about all aspects of their reproductive and sexual lives"*
>
> *"Ensure the right to gender-transformative education to give every girl the right to a safe, formal, quality education and access to lifelong learning"*
>
> *"Empower women to make choices about reproduction, family size and timing"*

And the TED talk[51] with solutions to reverse global warming:

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[50] https://www.clubofrome.org/project/the-club-of-rome-climate-emergency-plan/

[51] https://www.ted.com/talks/chad_frischmann_100_solutions_to_climate_change/transcript?language=en#t-821596

Family planning sounds more politically correct than anticonception (probably acceptable in a larger number of religions). Educating girls so they are independent, can earn a living in a modern economy rather than be dependent on a guy and having 5 or more kids. Data from World Bank: https://data.worldbank.org/indicator/sp.dyn.tfrt.in?most_recent_value_desc=true

Country	Most Recent Year	Most Recent Value
Niger	2017	7.2
Somalia	2017	6.2
Congo, Dem. Rep.	2017	6.0
Mali	2017	6.0
Chad	2017	5.8
Angola	2017	5.6

Well… Data… Probably easier to go from 7 to 6 than from 1 to 0. Meanwhile in Sweden the “BirthStrike”.

Humanitarian killing and cannibalism WTF?

When I was searching for the term “humanitarian killing”, it was mostly humanitarian workers killed in some hostile places. What I really meant was a conscious decision to die, in order to increase chances of survival of someone else.

Now I see this, someone getting a lot of press for suggesting something equally controversial. I want some media attention too!

- *“Scientist suggests eating human flesh to fight climate change”*[52]
- *“A Swedish scientist suggested the climate crisis could lead people to consider eating human flesh. It's not the first time a scientist has suggested the idea.”*[53]
- *“Scientist suggests new response to climate change: cannibalism”*[54]

I’m particularly worried about sub-saharan Africa and Lake Chad[55].

> *“Lake Chad is economically important, providing water to more than 30 million people living in the four countries surrounding it (Chad, Cameroon, Niger, and Nigeria) on the edge of the Sahara.”*

90% is already gone but the “good news” is that it won’t disappear overnight, people will have a chance to migrate but that cause a lot of instability in other, also not massively wealthy areas.

Keep the nuclear power for now

I’ve seen the talk delivered by sufficiently qualified person that was focusing on raw data[56].

Compare these two:

- https://en.wikipedia.org/wiki/Dam_failure
- https://en.wikipedia.org/wiki/Nuclear_and_radiation_accidents_and_incidents

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[52] https://nypost.com/2019/09/09/scientist-suggests-eating-human-flesh-to-fight-climate-change/
[53] https://www.businessinsider.com/cannibalism-eating-human-flesh-climate-change-2019-9
[54] https://futurism.com/the-byte/scientist-cannibalism-climate-change
[55] https://en.wikipedia.org/wiki/Lake_Chad
[56] https://twitter.com/marsxrobertson/status/1167837086688468992

Factor Matrix

Source	Price [Ect/kWh]	CO2 [gCO2eq/kWh]	Deaths [TWh^{-1}]
Coal	8.0	820	25
Nuclear	5.0	12	2
Hydropower	2.0	24	1
Gas	12.0	490	4
Solar	44.0	48	1
Wind	12.0	12	2

Nuclear power is not ideal but opening new coal mines and coal plants isn't much better. Until we transition to the model of economy and energy production we should keep existing nuclear power plants.

"We Work the Black Seam" by Sting released in 1985, a tribute to miner's strike[57][58]:

> *One day in a nuclear age*
> *They may understand our rage*
> *They build machines that they can't control*
> *And bury the waste in a great big hole*

Another chart showcasing the emissions from nuclear, courtesy of the guys who delivered a brilliant game *"Planet A — The Tragedy of the CO_2mmons"*[59][60][61][62]

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[57] https://en.wikipedia.org/wiki/UK_miners'_strike_(1984%E2%80%9385)
[58] https://en.wikipedia.org/wiki/The_Dream_of_the_Blue_Turtles
[59] https://medium.com/ethberlin/introducing-planet-a-the-tragedy-of-the-co%E2%82%82mmons-90e35c229475
[60] https://events.ccc.de/camp/2019/wiki/Projects:Planet_A_%E2%80%94_The_Tragedy_of_the_CO%E2%82%82mmons
[61] https://twitter.com/marsxrobertson/status/1165594718979481600
[62] https://github.com/social-dist0rtion-protocol/planet-a

Lignite is also called “brown coal”. Germany is phasing out their nuclear power, they already closed down the coal mines but that’s in favour of coal imports and trying to cut down the forest and use something worse than coal:

- https://en.wikipedia.org/wiki/Hambach_surface_mine
- https://en.wikipedia.org/wiki/Hambach_Forest

> *“Hambach Forest is an ancient forest located in North Rhine-Westphalia, western Germany, near Buir between Cologne and Aachen. It is planned to be cleared as part of the Hambach surface mine by owner RWE AG. There have been ongoing protests and occupations to prevent this since 2012.”*

In Australia they plan to open this coal mine: https://en.wikipedia.org/wiki/Carmichael_coal_mine

In Poland they just opened a new one:
https://www.jsw.pl/en/media/news/article/new-mine-in-jsw/

Search for “china build coal power plants” and it is scary, business as usual.

Any new construction project must offset CO_2 10x

Some infrastructure projects are required. Maybe they are not perfect, maybe they will cause some collateral damage but not creating them will make things even worse.

As a rule of thumb: CO_2 10x

Check https://en.wikipedia.org/wiki/Planning_gain and “section 106”

There are two infrastructure projects in the UK: HS2 and Silvertown Tunnel.

I get the idea that they are not perfect and during construction there will be some damage to the environment but in the long run they are likely to bring a series of benefits. Please consider all the facts, all the factors, make sure all voices are heard and accounted for.

Silvertown Tunnel?

As someone who lives in South-East London and is experiencing Blackwall Tunnel traffic *(and pollution generated by the cars being stationary)* I actually really want this tunnel to happen, it will be a gamechanger.

I believe that investment in infrastructure is a good investment that will enhance London and the whole region.

We need to properly assess the pros and cons. Maybe building the tunnel is not super great but not building is actually much worse?

Check population of Norway. Check population of London. Currently the deepest tunnel: https://en.wikipedia.org/wiki/Eiksund_Tunnel

> *The tunnel is 7,765 metres (25,476 ft) long and reaches a depth of −287 metres (−942 ft), which makes it the deepest undersea tunnel of its kind in the world.*
>
> *The tunnel was built as part of a large project including 3 tunnels and a bridge connecting several islands to the mainland. The bridge–tunnel complex serves the municipalities of Herøy, Sande, Ulstein, Hareid, Ørsta, and Volda, which together have over 40,000 inhabitants.*

See another tunnel in the making: https://en.wikipedia.org/wiki/Rogfast

> *The project will be a world record with respect to its 27-kilometre (17 mi) length and its maximum depth of 392 metres (1,286 ft) below sea level.*

Before suggesting alternatives such as *“self driving cars will have AI agents allowing them to drive in convoys”* do a quick reality check.

HS2

https://www.theguardian.com/environment/2019/apr/27/extinction-rebellion-activists-scale-trees-in-anti-hs2-protest

> *"HS2 will create extra capacity on our transport network, taking cars and lorries off the road. The project will also deliver a new green corridor made up of more than 650 hectares of new woodland, wetland and wildlife habitats alongside the line."*
>
> *"More than 7m new native trees and shrubs will be planted to help blend the line into the landscape and leave a lasting legacy of high-quality green spaces all along the route. HS2 Ltd is working closely with the Environment Agency and Affinity Water to ensure construction activities do not adversely affect the flow, level or quality of surface waters and groundwater in the Chilterns-Colne Valley area."*

http://stophs2.org/facts - who has the better facts? Can we find a middle ground?

7m new trees, green corridor… Can we have a cycle route alongside the HS2 as well? It could be used by emergency / servicing vehicles as well as open regions for cycling tourism.

If you look at - https://www.theclimatemobilization.org/climate-mobilization - "high speed electrified railroads" are suggested. But maybe their proposal is US centric, maybe in the UK our train network is good enough?

Insects

BBC article "UN urges people to eat insects to fight world hunger"[63]:

> *"Insects are everywhere and they reproduce quickly, and they have high growth and feed conversion rates and a low environmental footprint"*
>
> *"The authors point out that insects are nutritious, with high protein, fat and mineral content."*

FAO (Food and Agriculture Organisation) report "Edible insects - Future prospects for food and feed security"[64].

People have been eating insects everywhere, all the time. It's only recently that it is not cool.

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[63] https://www.bbc.co.uk/news/world-22508439
[64] http://www.fao.org/3/i3253e/i3253e00.htm

https://en.wikipedia.org/wiki/Food_and_drink_prohibitions - we will have to rething our relationship with food, insects are pretty “acceptable” in my book.

Tim Ferris was promoting Exo protein bars made of crickets on his podcast:

- https://www.kickstarter.com/projects/exoprotein/exo-protein-bars-made-from-cricket-flour
- https://venturebeat.com/2014/09/23/1m-for-cookies-made-from-crickets-tim-ferris-thinks-these-will-jump-into-our-diets/

2. Fake News

Matter so important it deserves its own chapter.

In principle, I’m for full freedom, liberty, voluntaryism, free speech.

At the same time, there are certain actions that are dangerous.

Flat Earth is not dangerous and I couldn't care less.

Climate change is affecting everyone and creates a dangerous situation. There are certain people who are prepared to take action to avoid climate catastrophe but if they are unsure if this is really for real?

To get this issue out of the question will help align everyone on the same page.

https://en.wikipedia.org/wiki/Paradox_of_tolerance - I’m tolerant but I’m not tolerating intolerance. Kind of paradoxical, right?

> *“The paradox of tolerance states that if a society is tolerant without limit, its ability to be tolerant is eventually seized or destroyed by the intolerant. Karl Popper described it as the seemingly paradoxical idea that, "In order to maintain a tolerant society, the society must be intolerant of intolerance." Popper took pains to make clear that he did not mean the expression of intolerant words and ideas, but in fact the opposite: They who must not be tolerated are those who wish to silence discussion and debate.”*

Example of fake news

https://twitter.com/realdonaldtrump/status/1094375749279248385 - I reported some related tweets as abusive (deceiptive), your version of reality is likely to be different now.

At first, I thought it is an irony, parody, provocation. That lady is pretty serious about climate change denial. Twitter gives them a platform because climate change denial is not illegal.

I really wish we were discussing on the basis of facts, truth, reality, scientific consensus. Otherwise, legitimate people who could provide meaningful comments to Green New Deal are disputing if climate change is happening or not.

Another example of fake news

That's why the law against "fake news" and "climate change denial" is needed. Check interview with Bill Gates from 20 years ago[65]:

> *"It's all there: there's no way of finding out whether this stuff has any bottom to it or whether someone has just made it up."*

Growing alfalfa (water heavy crop) in the middle of a desert during drought is ecocide and should be treated as such.

California Alfalfa & Forage Association - http://www.calhay.org/ - you have land, you have the machinery, buildings and infrastructure. Surely you can grow another crop…

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65 https://www.huffingtonpost.co.uk/entry/terry-pratchett-fake-news-bill-gates_n_5cee60e6e4b0793c23480d37

Deep fakes

“Fraudsters deepfake CEO’s voice to trick manager into transferring $243,000”[66]

Deep fake with Obama: https://www.youtube.com/watch?v=cQ54GDm1eL0

Stay woke bitches!

BREXIT was a “democratic” vote?

It was “democratic” in the same way Hitler was “democratic”. Check the voting card[67]:

Volksabstimmung und Großdeutscher Reichstag

Stimmzettel

Bist Du mit der am 13. März 1938 vollzogenen

Wiedervereinigung Österreichs mit dem Deutschen Reich

einverstanden und stimmst Du für die Liste unseres Führers

Adolf Hitler?

Ja

Nein

It was a military technology deployed towards citizens of the UK:

- https://en.wikipedia.org/wiki/Psychological_warfare

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66 https://thenextweb.com/security/2019/09/02/fraudsters-deepfake-ceos-voice-to-trick-manager-into-transferring-243000/

67 https://en.wikipedia.org/wiki/File:Stimmzettel-Anschluss.jpg

- https://en.wikipedia.org/wiki/Psychological_operations_(United_States)
- https://en.wikipedia.org/wiki/Hybrid_warfare
- https://en.wikipedia.org/wiki/Psychometrics

They illegally obtained a large number of data points about each voter:

- Someone is religious - message about Islam for them.
- Someone has health issues - message about NHS for them.
- Someone likes cats - use cat image in the advert for them.

Blade Runner, Minority Report, all these futuristic movies becoming pretty much a reality.

It's just like playing chess and knowing your opponent next move, or breaking Enigma and decode U-boot orders during battle of Atlantic - pretty much a game changer.

You should definitely watch "The Great Hack": https://youtu.be/iX8GxLP1FHo

Laws are made in response to the event, there was no taxation on Bitcoin before Bitcoin. There were no laws explicitly saying *"you cannot do _____"* because the lawmakers were not aware _____ is possible. No one really knew it is happening, only after some guys blew the whistle.

One can debate whether BREXIT is good or wrong. One can debate whether a second vote is desirable. It perfectly possible to realise that actually we we did know the full scope of consequences, as the campaign was focused on “fake news”.

I’m pretty sure very few voting for BREXIT realised the trouble of the North Ireland border. Was it a part of the debate during the campaign?

Digital, Culture, Media and Sport Committee

Oral evidence: Fake News, HC 363

Source:
https://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/digital-culture-media-and-sport-committee/fake-news/oral/81592.pdf

> *“I found documents from Nigel Oakes, the co-founder of the SCL Group, who was in charge of our defence division, stating that the target audience analysis methodology, TAA, used to be export controlled by the British Government. That would mean that the methodology was considered a weapon—weapons grade communications tactics—which means that we had to tell the British Government if that was going to be deployed in another country outside the United Kingdom.”*

SCL Group[68] is the parent company to Cambridge Analytica.

In my opinion it wasn’t a democratic vote, It was a military technology deployed towards citizens of the UK.

Current war is happening on Twitter

- WW1 in trenches
- WW2 blitzkrieg
- cold war espionage

[68] https://en.wikipedia.org/wiki/SCL_Group

- these days war is happenning on Twitter and Facebook

https://blog.twitter.com/en_us/topics/company/2019/information_operations_directed_at_Hong_Kong.html

> *"We are disclosing a significant state-backed information operation focused on the situation in Hong Kong, specifically the protest movement and their calls for political change."*
>
> *"This disclosure consists of 936 accounts originating from within the People's Republic of China (PRC). Overall, these accounts were deliberately and specifically attempting to sow political discord in Hong Kong, including undermining the legitimacy and political positions of the protest movement on the ground."*

Not only China (PRC) and Hong Kong: United Arab Emirates & Egypt, Saudi Arabia, Spain, Ecuador:
https://blog.twitter.com/en_us/topics/company/2019/info-ops-disclosure-data-september-2019.html

See the Facebook FTC fine:
https://www.theverge.com/2019/7/12/20692524/facebook-five-billion-ftc-fine-embarrassing-joke

> *"Here's another way to say it: the biggest FTC fine in United States history increased Mark Zuckerberg's net worth."*

The fine is related to data misuse and Cambridge Analytica scandal, the amount was so little that the stock price went up, market was expecting much worse news. Or may it was the removal of uncertainty that made the stock increase in price.

Here is a statement from the president of Microsoft[69]:

> *"Today, the tech giants — whose tools have been used to interfere in fair and free elections — are posing a much bigger threat to the political stability of many countries, including the U.S."*

The climate will be decided on the media. That's why one of the core demand of Extinction Rebellion is to TELL THE TRUTH: http://tellthetruth.media/

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69 https://www.npr.org/2019/09/13/760478177/microsoft-president-democracy-is-at-stake-regulate-big-tech

I wrote a super lengthy thread on Kleros Forum[70]. In this book I've summarized the key findings. I think a "reality filter" can work, read on...

"Reality Filter" incentives

"Reality Filter" is a working name of a Chrome (or Brave, or Firefox, or Opera, or Safari) Extension that would help annotate the web.

I am aware of this tool - https://web.hypothes.is/ - that got some serious funding but I think they focus more on academia rather than media outlets.

Realistically speaking we will never know the truth 100% times with 100% confidence but the information that something is questionable, disputable, subject to interpretation, not telling the full picture, focusing no out-of-context detail that is misleading - I have my own brain to analyse additional information.

I'd be happy to support "Reality Filter" with $10 monthly subscription so that army of internet trolls have a few cents each to highlight "fake news".

"real news" propaganda

https://twitter.com/thejuicemedia/status/1168771110814437377 - this video is super funny, the whole channel is full of genuine satire.

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70 https://forum.kleros.io/t/extending-fake-news-prevention-mechanism-banning-fake-news-just-like-you-ban-chemical-weapons-land-mines-and-nukes/249

3. Comms - digital infrastructure handbook - OPSEC

Whatever you do - stay safe online!

Main reasons for this chapter: simplicity and specificity.

There are some good resources but they are:

- not specific to protests (computer security in general)
- not updated as of 2019
- too technical, too detailed

Good resource 1: https://en.wikipedia.org/wiki/CryptoParty

> **CryptoParty** (Crypto-Party) is a grassroots global endeavour[1] to introduce the basics of practical cryptography such as the Tor anonymity network, key signing parties, disk encryption and virtual private networks to the general public.[2][3] The project primarily consists of a series of free public workshops.

CryptoParty handbook is very detailed: https://www.cryptoparty.in/learn/handbook
So much knowledge but do you really need to know all the details?

Good resource 2: https://ssd.eff.org

SURVEILLANCE SELF-DEFENSE
TIPS, TOOLS AND HOW-TOS FOR SAFER ONLINE COMMUNICATIONS
A PROJECT OF THE ELECTRONIC FRONTIER FOUNDATION

Good resource 3:

Organizing in small groups:
https://rebellion.earth/wp-content/uploads/2019/04/XR-Affinity-Group-Pack.pdf

(I will refer to it a few times throughout this document, as some of the content overlaps)

Security hygiene

Some basic stuff that you should do anyway, regardless of anything.

Strong passwords

Don't be that guy:

Password reuse, password manager

Something I keep telling myself because I fully understand the implications.

And yet I'm not without guilt here. Worried about the vendor lock-in with the paid ones, the free one - https://www.lastpass.com/pricing - integration with Chrome autofill could be better.

You can check if your passwords are already out there - https://haveibeenpwned.com/

https://en.wikipedia.org/wiki/List_of_password_managers

2FA (two-factor authentication)

SMS **NO NO NO**

- https://medium.com/coinmonks/the-most-expensive-lesson-of-my-life-details-of-sim-port-hack-35de11517124
- https://en.wikipedia.org/wiki/SIM_swap_scam

Google Authenticator

At some point in the past, my physical device with Google Authenticator app was a single point of failure.

I had no guarantee that various services will have 2FA recovery option. When setting up 2FA not every service was displaying a recovery code.

I was actively seeking an alternative: https://softwarerecs.stackexchange.com/a/51551/2637

Authy

Authy synchronizes nicely across the devices. As I was researching stuff I've improved my security.

https://authy.com/blog/understanding-authys-multi-device-feature/
Install Authy on at least two devices and then disable "Allow Multi-Device" after that.

Multi-device Disable
Enable/Disable new installs. learn more

In that way, even if you lose 1 device, you'll still have another one.

Lesson from the HQ in London

If you are hardcore hacker bear with me...

The whole XR runs on Google Docs, WhatsApp and Facebook Events.

I approve this choice, given the circumstances it simply makes sense.

That's what works.

That's what people use

That's what most people know how to use (even non-technical).

CCCAMP19 in Germany hardcore hackers and real life activists in London different vibe, different skills.

Phone at home[71]

I genuinely think that taking your main mobile phone is **NOT** needed.

You may be forced to unlock you and then what? Check this thread:
https://twitter.com/marsxrobertson/status/1169580828546015232

(still doing research, expect updates)

[71] Unless you prepare and know what you are doing, that's why this guide

It can create a liability for you, plus communication is not guaranteed to work. *(there will be more on that in the next chapters)*

But what about social media reporting? I don't know… I quit Facebook and Instagram some time ago. Sometimes I tweet @marsXrobertson. Maybe if you are a social-media-heavy person then take your phone but then look at [1] and know how to prepare.

Let your family know what are you up.

Use a sharpie and write on your wrist emergency contact number.

https://tfl.gov.uk/wifi-data-collection - WiFi signals can aid the police to estimate the number of people.

https://www.wired.co.uk/article/brexit-march-peoples-vote-crowd-size

> *One way is "heat-mapping" using mobile phone or Wi-Fi signals. "This approach detects the presence and strength of the radio signals sent out from mobile devices and creates a 'heat map'.*
> *Another complication is that the sheer number of people present on Saturday overloaded mobile phone networks, making it impossible to use.*

https://www.independent.co.uk/news/uk/home-news/london-tube-wifi-down-internet-not-working-underground-protest-extinction-rebellion-a8873681.html

> *TfL and BTP's decision was criticised by privacy watchdog Big Brother Watch as "disproportionate" and "deeply authoritarian".*
> *"Shutting down digital infrastructure in response to a peaceful protest is deeply authoritarian," said Griff Ferris, legal and policy officer at Big Brother Watch.*

IMSI catcher[72]

> *"A telephone eavesdropping device used for intercepting mobile phone traffic and tracking location data of mobile phone users. Essentially a "fake" mobile tower acting between the target mobile phone and the service provider's real towers, it is considered a man-in-the-middle (MITM) attack. The 3G wireless standard offers some risk mitigation due to mutual authentication required from both the handset and the network. However, sophisticated attacks may be able to downgrade 3G and LTE to non-LTE network services which do not require mutual authentication."*

Don't want to freak you out.

Just be aware of what technology is out there.

That's why suggesting - phone at home, unless you know what you are doing, you really need it, you are aware of the risks.

Collect old "burner phones"

London is a busy town, to go on eBay and sell your old phone would be too much hassle.

- Description
- Shipping options
- Notification emails

Do I really want to do all of this to obtain a few quid? I prefer to have a backup option in case my phone is damaged or when I go overseas and I need another SIM.

---

[72] https://en.wikipedia.org/wiki/IMSI-catcher

Conclusion - loads of perfectly usable phones able to handle Signal and other apps that lying useless in a cupboard drawer.

It's a brilliant idea. Full support. You should organize it in your local community as well:

Donate a phone !

We are looking for action phones for the upcoming #globalstrike for climate

Reclaim Club Culture is the initiator of AFD Wegbassen, other Protests and a network of political clubs in Berlin. Currently we start mobilizing to support fridays for future in their call for a global strike on 20th of September.

After having put together many protests in the past, we now want to upgrade our phone communcation for political interventions and demonstrations to come.

Our goal is to act free of repression, so we would glady accept any of your „outdated" smartphones for us to use in upcoming protets and actions. For example phones that are set up with a secure Android, Lineage OS or IOS system. A key feature for us is that Signal runs stable on it and phone calls can be taken. Battery packs can be replaced by us in case that they are broken or not running well.

Additionally we need your help for setting up secure communication systems. Please support us by dropping of your old phones at our decentral office at 1komona. A box is placed in front of our office to collect them.

See you in the future, see you in a bit, yours, RCC.

Location: Reclaim Club Culture @Decentrale office in lower 1komona village

London is different - they prefer old bikes - https://xrbikes.com/

The Great **Signal** ~~Debate~~ Consensus

Signal is for activists. Not for hackers.

You are an activist, just use Signal. *(some other tools will be described later for completeness)*

Chances are other activists are already there, it has the network effect.

Affinity Group Welcome Pack:
https://rebellion.earth/wp-content/uploads/2019/04/XR-Affinity-Group-Pack.pdf

> *Create a Group Chat/Email Group to keep in touch (Signal.org is a downloadable app and is good for group chats, this is a more secure way of staying in touch regarding actions, planning, etc.)*

It isn't just me who advocates Signal. I'm on the practical end - we play a bigger game - there is no need to discuss this matter forever.

By removing a decision point, you have more energy to focus on other more important stuff.

Disposable SIM

You need to receive SMS to register to Signal.

In many countries, a phone number is associated with your legal passport name, it's effectively your identity.

Maybe you could get a disposable SIM? UK has pretty relaxed laws in that regard.

Anyone can buy any SIM for £1 in any shop or order a FREE one online

https://www.vodafone.co.uk/mobile/pay-as-you-go-plans/payg-1

> *With Pay as you go 1, you won't be charged a penny on the days you don't use your phone. If you do, it's just 20p a minute, 20p a text, and 20p for every 5MB of data. Once you've spent £1 in a day, you won't be charged a penny more until midnight. You'll also receive unlimited minutes, texts and 500MB of data to use until then.*

No contract, no nothing, £1 per day limit, simply PAYG, reasonable.

Just confirmed it's working. Able to receive SMS with absolutely zero financial cost on my end. Received the SIM in the post for FREE, put into a phone and received SMS from Signal. When onboarding there was an option "call instead" so surely you can use a landline as well?

It's intense:

- https://privacyinternational.org/long-read/3109/africa-sim-card-registration-only-increases-monitoring-and-exclusion
- https://privacyinternational.org/long-read/3018/timeline-sim-card-registration-laws

War on terror or war on privacy?

No SIM options

I haven't tried it in practice. You mileage may vary, getting a physical SIM and confirming the SMS is simple enough workaround.

Notes from brainstorming session:

- https://apps.apple.com/us/app/text-me-phone-call-texting/id514485964
- Twilio / VOIP
- No Google Services, web version with websockets (drains battery)
- Developer version, you compile from source?
- https://theintercept.com/2017/09/28/signal-tutorial-second-phone-number/
- Libre Signal: https://github.com/LibreSignal/LibreSignal/issues/37#issuecomment-217231557
- Subpoena, this what happened when they asked Signal to provide data: https://www.reddit.com/r/signal/comments/csz1or/2016_grandjury_subpoena_series_of_correspondence/

Attachment A

Account	Information
[redacted]	N/A
[redacted]	Last connection date: [redacted] Unix millis Account created: [redacted] Unix millis

If you are more hardcore than me - GO FOR IT

(just don't overengineer, overcomplicate, we have more important problems to solve)

If you are Signal (Open Whisper Systems) and want to enable no number signup - GO FOR IT

As we were discussing security measures, someone shared their experience:

"During our sensitive meetings, everyone leaves their phone in a fridge"

Shared this feedback on the forum. Someone else said: ***"microwave is better"***

During such meeting you can echange PGP keys - https://en.wikipedia.org/wiki/Key_signing_party - **Signal is for activists, not for hackers.**

Technology is here to serve you.

If all of your group is on WhatsApp and none of you on Signal - maybe the balance of convenience says use WhatsApp?

Security and usability is often a trade-off, Signal balances it well.

Other communication tools

These are relatively popular and well established, I have been using them or have heard of them from multiple sources.

nextcloud.com

If you want to un-Google yourself… *(more about Google further down)*

Mattermost

Open source Slack.

Rocket.chat

Another open source Slack.

Jabber / XMPP

Just like email but for instant messaging. Signal is easier to setup.

Note that even if you use your own server, it is likely to leave some metadata in transit.

Riot / Matrix

Similar to Jabber / XMPP.

Wire

Similar to Signal.

PGP / TOR / VPN / Tails...

General purpose tools, refer to other resources.

Did you know TOR, just like the internet was initially a military technology?

https://en.wikipedia.org/wiki/Tor_(anonymity_network)

> *The core principle of Tor, "onion routing", was developed in the mid-1990s by United States Naval Research Laboratory employees, with the purpose of protecting U.S. intelligence communications online. Onion routing was further developed by DARPA in 1997.*
>
> *The Tor Project states that Tor users include "normal people" who wish to keep their Internet activities private from websites and advertisers, people concerned about cyber-spying, users who are evading censorship such as activists, journalists, and military professionals.*

Diversity of tactics and independence of groups

Various affinity groups can use different tactics.

One group talks with the press. Another group does not.

One group does this. Another group does that.

Each group follow the principles, but within the action they have independence.

Working with media - tellthetruth.media

This is so important I put online a dedicated website: tellthetruth.media

It is related to the "fake news" policy. How do you define truth?

Plan maximum is to have a streetside studio, invite the experts, have our own space and create quality content... 24/7, 4K, 60fps. International news networks will be likely to pick it up.

No airtime for flat Earth.
No airtime for climate change deniers.

Focus on actionable policies.
Focus on economic adaptation.

Communicate the facts.
Background, context, future implications. Presenting the full picture.
IPCC consensus has failed - the "Heading for Extinction" talk is an amazing reason, it explains how politics got into way of science.

Dedicated media person

Once again great advice from the great manual:
https://rebellion.earth/wp-content/uploads/2019/04/XR-Affinity-Group-Pack.pdf

> *Media Liaison: Helps facilitate the interactions between the group and the media. Prepares press releases and makes calls to get desired media on site at the time of the action. Should know issues and sound bites and be able to speak clearly and articulately to reporters and TV cameras.* ***May wish to dress more conservatively to convey an impression of respectability if interviewed on camera.***

Working with local press

Tell them how to verify the information.

Tell them in advance what is going to happen.

Love it:
https://rebellion.earth/2019/09/23/the-international-rebellion-continues-from-7-october-extinction-rebellion-uk-to-shutdown-westminster-for-at-least-two-weeks-2/

Each media outlet is seeking high quality, verified, trustworthy information. To work with them before the action and provide quality content - they will appreciate it!

That could be make or break factor of this whole campaign.

Getting the support of regular people. Getting the support of media.

Communicating the action plan and educating people. This is an amazing example, Bristol being one of the most forward thinking outposts in the UK.

Check this article about hand signals[73]:

This is a great example how press can educate people about what is going on with the protests, what is the main motivation, what is really happening in relation to **Climate Emergency**.

[73] https://www.bristolpost.co.uk/news/bristol-news/hand-signals-extinction-rebellion-use-3109897

Perspective matters ...

12:01 PM - 9 Dec 2018

36,003 Retweets **62,416** Likes

380 36K 62K

Noone said it has to be exactly the same picture:
https://petapixel.com/2018/12/12/that-debunking-of-a-paris-protest-fire-photo-is-fake/

The side-by-side picture is about the perspective, to show that the same thing can be portrayed in a number of ways…

Working with celebrities

They can amplify the message.

In the world with no leaders, everyone is politically-correct-pussy, kids aspire to be like guys they see in the music videos. To get support from celebrities - we need them to repost our quality content (see previous point of working with media)

https://www.wmagazine.com/story/beyonce-jay-z-vegan-manifesto

Beyoncé and Jay-Z "Challenge" You to Try Veganism

> *Still, they aren't expecting anyone to stick veganism 24/7, or change their lifestyle overnight; instead, their current "mission" is to convince people to incorporate more plant-based meals into their usual diets, which they say is enough to bring about a*

"profound impact on our health and the environment." (According to researchers at the University of Oxford, veganism is in fact the "single biggest way" to reduce your carbon footprint and impact on the environment.)

I can fully appreciate vegan values without being vegan extremist. I accept the responsible (as opposed to animal agriculture) use of animal products.

I was thinking that Malibu fire could do something. Your house is literally on fire, it is directly related to drought and climate change... https://en.wikipedia.org/wiki/Woolsey_Fire - note I don't know hardly any of these guys.

Many celebrities are among those who lost their homes, including Kim Basinger,[41] Tracey E. Bregman,[42] Gerard Butler,[43] Miley Cyrus and Liam Hemsworth,[44] Scott Derrickson,[45] Fred Durst,[46] Joe Flanigan,[47] Mike Garson,[48] Camille Grammer,[49] Daryl Hannah and Neil Young,[50] Gabe Kapler,[51] Catherine Oxenberg,[52] Lil Pump,[53] Robin Thicke,[45] Andrew von Oeyen[54] and Eric Wynalda.[55]

Leo is legit

Look at the date of the Oprah article:

2015 Oscar Speech: https://www.youtube.com/watch?v=AOoP56eXtzM

1.1 million followers helps[74]:

[74] https://twitter.com/amandapalmer/status/1176912003442577414

Working with Police

- To protect and to serve: https://en.wikipedia.org/wiki/To_protect_and_to_serve
- https://en.wikipedia.org/wiki/Police_oath

"I, do solemnly, sincerely and truly declare and affirm that I will faithfully discharge the duties of the office of constable with fairness, integrity, diligence and impartiality,and that I will uphold fundamental human rights and accord equal respect to all people, according to law."

You need to figure out what are the rights in your country!

Know and exercise your rights

I'm based in London, so by definition it will be UK centric:
https://www.gov.uk/police-powers-to-stop-and-search-your-rights

Have the number to call legal support: https://greenandblackcross.org/bustcard/

ADVICE ON ARREST

Say **"NO COMMENT"** to all police questions during casual chats, 'booking in' or interviews, until you meet with a recommended solicitor (below).
At the police station you may wish to give your name, address, and date of birth to speed your release.

Do not accept a **CAUTION** without advice from a recommended solicitor. This is an admission of responsibility and goes on the police national computer.

You have the right to **FREE LEGAL ADVICE** at the police station.
NO DUTY SOLICITOR: Duty solicitors don't always have experience with protest law, we recommend asking the police to contact one of the following:

Bindmans, London
HJA (Hodge Jones and Allen), London
ITN (Irvine Thanvi Natas), London
Kellys, Brighton

These firms can often offer support outside of their area, if informed in advance.

Some other great resources:

https://greenandblackcross.org/guides/laws/
https://greenandblackcross.org/guides/key-advice/
https://rebellion.earth/act-now/resources/legal-info/

Can you imagine the protest culture is so advanced in the UK there is a dedicated organisation for that?

Make it slow to them. Verify their identity. Take a note of their of their badge, police station

Chances are that in return they will make it slow for you as well.

Strength in numbers, they cannot arrest everyone.

Arrest preparation

https://extinctionrebellion.files.wordpress.com/2019/03/arrest-part-1-preparation.pdf

Consequences of Arrest

Read here about the common charges that you may face and make yourself aware of the **sentences.** How much is the possible fine, what's a typical sentence and how long if custodial?(p8)
XR do not contribute towards court fines, court costs or legal costs.

Criminal Record (p9)
Arrests can show up in the following places: DBS checks **(normally employment related), applications to stay in** the UK (visa or EU **national) and applications to travel in some** countries.The record won't necessarily be a **problem, but reading more** is highly recommended.

Mental Health (p12)
The process of **getting arrested can be stressful and if you** are charged, court **cases can add** further strain. **Take care of your mental and** emotional health.

Personal Details (p13)
You can be required to give your DNA, fingerprints and photo for any offence, **excluding non-recordable** offences **(e.g. Obstruction** of the Highway and Breach of the Peace).

Financial (p14)
If you don't qualify for legal aid you will **likely need to self represent or pay** towards legal representation. How much is the possible fine, are you liable for **damages? Take into account travel, court costs and possible loss of earnings.**

Protest law

https://www.gov.uk/protests-and-marches-letting-the-police-know
If there's no march organised as part of your protest, you don't have to tell the police.

Thank you. We are not marching. We are staying.

Squat law

https://www.gov.uk/squatting-law
Although squatting in non-residential building or land is not in itself a crime, it's a crime to damage the property.

Protective species law

https://www.gov.uk/guidance/protected-species-how-to-review-planning-applications
https://www.gov.uk/guidance/protected-plants-protection-surveys-and-licences

Can we plant some things so that it is the Police who is breaking the law?

Don’t take (unnecessary) personal risks

I’m a father, school-age children, I will play it safe from behind a firewall.

(I’m not this type of hacker, my main skill right now is organising notes)

Family always first.

Working with TelCo

Please keep the communication online.

We have backup options and contingencies, as you will see.

If you think that shutting down the internet will slow us down? Think of reputational damage to you and the government.

Back at 35C3 I ran a session:
https://events.ccc.de/congress/2018/wiki/index.php/Session:Extinction_Rebellion_-_NOT_shutting_down_the_internet_-_civil_disobedience_(non_violent_direct_action)_on_a_massive_scale

Realised that some people will die - logistics centre not delivering medicine on time. Internet is centralised in a few points…

Internet shutdown - contingency planning

In a capital city like London or Berlin, the shutdown of the internet would be costly.

They did it recently in Moscow and are contemplating in Hong Kong:

- https://edition.cnn.com/2019/08/29/tech/hong-kong-internet-block-emergency-powers-intl-hnk/index.html

- https://netblocks.org/reports/evidence-of-internet-disruptions-in-russia-during-moscow-opposition-protests-XADErzBg
- https://www.independent.co.uk/news/uk/home-news/london-tube-wifi-down-internet-not-working-underground-protest-extinction-rebellion-a8873681.html - also in London, but for public WiFi

"Shutting down digital infrastructure in response to a peaceful protest is deeply authoritarian," said Griff Ferris, legal and policy officer at Big Brother Watch.

Another instance (Bangladesh): https://www.economist.com/news/2019/09/04/bangladesh-bans-mobile-phones-for-1m-rohingya-refugees (it's happening everywhere all the time)

Yet another instance (Sudan): https://www.washingtonpost.com/politics/2019/06/13/end-mass-protests-sudan-has-cut-off-internet-access-nationwide-heres-why/?noredirect=on

Physical info points

Located on-site.

Info points communicating with the hub.

Physical info hub

Located off-site (outside of the protest hotspot)

Agreement with the media that any broadcast has confirmed the information.

If you want to go ultra secure, then location the information centre in another country. London Police cannot raid a place in Berlin that easily.

Using SIM from another country?

Free roaming in the EU.
UK SIM in Berlin can send SMS to another UK SIM in Berlin at no extra cost.
Then you can get rid off the SIM.

Walkie Talkie

Of course.

Flags?

Looks pretty old school...

Bridgefy

- https://news.ycombinator.com/item?id=20861948
- https://www.forbes.com/sites/johnkoetsier/2019/09/02/hong-kong-protestors-using-mesh-messaging-app-china-cant-block-usage-up-3685/#26ccfe7f135a
- https://www.bridgefy.me/

Some other stuff in the hacker news thread:

- https://gotenna.com/
- https://briarproject.org/ (not cross-platform)
- https://www.manyver.se/

Mesh networking

TODO: would be amazing to have the network set up in London.

- https://wiki.freifunk.net/FAQ_Technik
- https://en.wikipedia.org/wiki/List_of_wireless_community_networks_by_region
- https://en.wikipedia.org/wiki/List_of_router_firmware_projects
- https://openwrt.org/toh/recommended_routers
- https://openwireless.org/routers.html
- https://advancedtomato.com/
- https://libremesh.org/

> *Usually, mesh networks are decentralized, bottom-up organized, deployed and maintained by the people using them. We believe this is the only way for achieving a real free network out of control of the governments and global enterprises.*

Raspberry Pi is apparently not the best hardware for the mesh network:
https://raspberrypi.stackexchange.com/questions/101827/is-raspberrypi-powerful-enough-to-act-as-a-node-of-a-mesh-network

(routers are much more suited for the job)

London references:
- https://www.thinksmallcell.com/Urban/city-of-london-deploy-urban-small-cell-mesh-network.html
- https://wiki.london.hackspace.org.uk/view/Group:Amateur_Radio

Pirate Box / Freedom Box

Ability to share files withing the WiFi area.

https://www.niemanlab.org/2014/11/can-mesh-networks-and-offline-wireless-move-from-protest-tools-to-news/

TODO: research if mesh network possible using these.

Oversaturaturation of network and 5G?

Big question mark. Central London should have enough capacity. Recently they launched 5G. Maybe 5G will stay online because it's super early, infancy adoption?

Don't ask me about 5G, I have no idea about the health implications, did some research, I think it could be a great citizens' science project: https://docs.google.com/document/d/1urR0pBsSon-gDvWK2dLwve6KAqkO8r8GzHV1Dri_C8A/edit?usp=sharing

(adopt a rat, quantify their measure life signals)

Known attack vectors

You cannot solve an unsolvable problem.

There will be always a systematic risk.

Undercover cops

Of course.

Losing your device

Of course.

False flag attacks

Of course.

Far-right neo-nazi eco-fascists

It's definitely a risk.

https://theintercept.com/2019/08/05/el-paso-shooting-eco-fascism-migration/

"You are so unsustainable"

It's easier for them, Police can run diesel powered cars.

We cannot run a diesel generator because that would be picked up by media

We will inevitable use some products that we use are packaged in plastic. There is no other way, everything is plastic coated this way.

"Can switch off my light, cannot switch off consumerist society"

At this point, a small individual action cannot make an impactful change - only a systematic change on the government level. As long as it is legal and profitable to exploit the environment, the destruction will continue.

“Normal people want to go to work”

Sorry for disruption, this is an emergency, cause much bigger than being late to work.

Lessons from Standing Rock, Occupy, 🇭🇰HK…

Occupy Wall Street was about finance. Here it is about survival.

Some notable historical events:

- https://en.wikipedia.org/wiki/Reclaim_the_Streets - loads of links and historical references
- https://en.wikipedia.org/wiki/1999_Seattle_WTO_protests
- https://en.wikipedia.org/wiki/2009_G20_London_summit_protests
- https://en.wikipedia.org/wiki/2010_G20_Toronto_summit_protests
- https://en.wikipedia.org/wiki/2017_G20_Hamburg_summit#Protests
- https://en.wikipedia.org/wiki/Occupy_Wall_Street
- https://en.wikipedia.org/wiki/Occupy_London
- https://en.wikipedia.org/wiki/2011_London_anti-cuts_protest
- https://en.wikipedia.org/wiki/Anti-austerity_movement_in_the_United_Kingdom
- https://en.wikipedia.org/wiki/J30_Protests

Do I need to get a gas mask, laser pen, tin foil hat?

https://twitter.com/alessabocchi/status/1156513770254012416

Hong Kong protestors are on another level. Here they're using lasers to avoid facial recognition cameras. A cyber war against Chinese artificial intelligence.

L'important

3:35 AM - 31 Jul 2019

89,516 Retweets **254,879** Likes

2.1K 90K 255K

Decent services providers

riseup.net

You can use the whole range of their services, but email requires an invitation.

RISEUP

Riseup provides online communication tools for people and groups working on liberatory social change. We are a project to create democratic alternatives and practice self-determination by controlling our own secure means of communications.

Nextcloud.com

Nextcloud

https://nextcloud.com ▾

Nextcloud is the most deployed self-hosted file share and collaboration platform on the web. Access & collaborate across your devices. Your data remains under ...

ProtonMail.com

https://protonmail.com/law-enforcement

Secure email: ProtonMail is free encrypted email.

https://protonmail.com ▾

ProtonMail is the world's largest secure email service, developed by CERN and MIT scientists. We are open source and protected by Swiss privacy law.

Lavabit.com

Blast from the past, Edward Snowden was using them: https://en.wikipedia.org/wiki/Lavabit

> *Lavabit is an open-source encrypted webmail service, founded in 2004. The service suspended its operations on August 8, 2013 after the U.S. Federal Government ordered it to turn over its Secure Sockets Layer (SSL) private keys, in order to allow the government to spy on Edward Snowden's email.*
>
> *Lavabit is believed to be the first technology firm that has chosen to suspend or shut down its operation rather than comply with an order from the United States government to reveal information or grant access to information.*

Now they are operating again.

Removing dependency on Google

I'm 100% totally aware that some guys are against Google.

I see Google as the most powerful *(maybe even too powerful)* company on the **planet A**.

I'm keen to see Google changing their logo for the upcoming strike.

Honestly I believe we have a more important problems to solve right now.

Honestly I believe Google Docs are very useful when collectively working on documents.

Right now in this point in time, point in the **Climate Emergency** I'm OK to use Google Docs

If you want to use Android without Google Services, there are some options:

- F droid - an alternative to Google Play
- https://fsfe.org/campaigns/android/liberate.en.html#OS
- https://lineageos.org/
- https://replicant.us

Nothing to hide argument

If you communicate using insecure tools, you may endanger your sources.

https://en.wikipedia.org/wiki/Nothing_to_hide_argument

I've been to the countless hacker events, I realized that I do not want to participate in the arms race. There is always smarter and more determined than me: https://xkcd.com/538/

I don't trust my hardware, I don't trust my operating system, I don't trust my browser, I don't trust myself. Even if I used everything completely open-source, I lack the capacity to verify the code, especially in the light of https://en.wikipedia.org/wiki/Underhanded_C_Contest

As a result, I made a conscious decision, I'm not participating in the surveillance arms race[75]:

- Everything in Public https://genesis.re/wiki#Everything_In_Public
- Open by Default
- Radical Transparency

IPFS - in case they want to shut you down

https://en.wikipedia.org/wiki/InterPlanetary_File_System

> *The Catalan independence referendum, taking place in September–October 2017, was deemed illegal by the Constitutional Court of Spain and many related websites were blocked. Subsequently, the Catalan Pirate Party mirrored the website on IPFS to bypass the High Court of Justice of Catalonia order of blocking.*

More about IPFS Catalunya situation: https://news.ycombinator.com/item?id=15367531

Censorship resistance via Steemit

Funny how my post was censored:
https://steemit.com/censorship/@genesisre/was-it-censorship-need-to-verify-the-facts-the-message-was-there-now-i-cannot-find-it

Steemit, on the other hand, can only hardcode your username on the frontend:
https://github.com/steemit/condenser/commit/cdf56507e11f367f6decc42a6c059c2d30db9cf4

An offline version of the website

Both make your website available online:

- https://caniuse.com/#feat=web-app-manifest
- https://caniuse.com/#feat=webworkers

Call for projects - Fire Chat open-source clone

https://en.wikipedia.org/wiki/FireChat

> *FireChat first became popular in 2014 in Iraq following government restrictions on internet use, and thereafter during the Hong Kong protests. In 2015, FireChat was also promoted by protesters during the 2015 Ecuadorian protests. On September 11, 2015, during the pro-independence demonstration called Free Way to the Catalan Republic, FireChat was used 131,000 times.*

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[75] I still use VPN, TOR, OTR, PGP, Tails, TrueCrypt whenever practical, suitable, necessary.

- Not open-source MEH
- Proprietary protocol MEH
- Requires email verification MEH
- Last time I tried there was some error MEH[76]

Overall experience MEH - maybe we can built an open-source clone?

Advanced stuff, crypto porn

TrueCrypt hidden volumes

https://truecrypt.ch/downloads/

Plausible deniability:

- You input password 1: regular files.
- You input password 1 and 2: regular files and something else

Polyglot files

https://truepolyglot.hackade.org/

You can have a .ZIP that is also a .PDF

Something “mildly interesting”

Police sometimes may want a small success, something to put into statistics.

Plus if you have nothing incriminating, that can be suspicious too.

Maybe you can have a few pirated MP3 for a bargaining power? You’ll plead guilty to misdemanour to avoid a felony? **CONTROVERSIAL** (I have not tried this in practice)

[76] https://twitter.com/marsxrobertson/status/1164638968052404224

POLICE THREATEN TO ARREST FB USERS MOCKING MINUSCULE CANNABIS SEIZURE

Dead-man switch

Also known as https://en.wikipedia.org/wiki/Warrant_canary
Something that can inform others in case of gag order.

USBKill

https://en.wikipedia.org/wiki/USBKill

Steganography

Hiding stuff in plain sight

If you are going to buy some Bitcoin, you may as well use this referral link: https://genesis.re/ref/coinbase

Some [other referral links in the final section](). I'm morally OK with that, this book is totally free, it costs you nothing to buy me a coffee.

5. Plan B

Initially described on the wiki[77], alongside many other articles in the Climate Change category.

In the intro I mentioned COP24 and losing hope. One door closes, another one opens.

Plan B was created and soon after realised that Extinction Rebellion brings hope…

We will still have time to figure out Plan B but it's good to start setting up the foundation now.

Why?

Why people are migrating? Not enough food, instability, seeking better prospects.

We cannot possibly accommodate millions of refugees, we need to make their homes habitable again.

Let's make Earth habitable again!

One of the top policies - repurposing military technology - refers to manufactured housing.

[77] https://genesis.re/wiki#Plan_B

Collaboration AND competition (antirivalry)

The whole trick - incentive transfer of knowledge rather than cut throat competition and sabotage.

Milestones. Checkpoints. Metrics. Scoring. Reviews.

Open source from the ground up, including the meta-design of the competition - just like the X-Prize visioneering[78], anyone could come and design metrics.

Periodical checkpoints to compare the notes, do the scoring, allow less successful teams to catch-up and resume another round of collaboration AND competition.

More opportunities to learn from each other. Sharing knowledge to maximize the impact.

Avoiding dead ends, putting teams back on track.

Ensuring the right incentives to share the progress at all stages of the program.

Materials and technology

Now we have much more than just stone, wood, steel, glass.

Some of them I had a chance to experience myself, pretty revolutionary:

- Nanotechnology, superconductors, graphene, aerogel, carbon fiber
- GoPro suction - if you touch it with your hand it isn't even sticky, but on a flat surface...
- Facebook 3D-printed drones beaming the internet through the lasers - so incredibly lightweight, staying up in the air for months
- Sugru
- Space blanket

Elements of the design

Food

https://www.astroplant.io/
http://growing-underground.com/
Growing cycles around the year, totally possible.

[78] https://www.xprize.org/visioneering

Water

Recycling and harvesting. Filtering.
Example: https://showerloop.org/

Oxygen

Not applicable in the Earth version. Assume we have atmosphere. Not required for MVP. Might be handy in extended version for space exploration.

Energy

Efficient use, store and production.

Waste

Leave no trace policy. Can be used as manure or solid fuel.

X Prize

In the meanwhile - polishing the idea, being resourceful with what is available, I hope X Prize will pick up this idea.

https://en.wikipedia.org/wiki/Ansari_X_Prize#Motivation

> *Diamandis developed a fully formed idea for a "suborbital space barnstorming prize", and set an initial goal of finding backers to support a US$10 million prize.*

I totally subscribe to the **bold** and **abundance** mindset.

Economy of the scale

In this iteration we design a self-sustainable unit. Further down the line, it is a perfectly valid option to have shared resources, such as town hall for groups of 10+ units.

Plan B vs BaseX

When sharing the concept of "Plan B" with others, a common reaction is - that's something Elon Musk is doing, making humanity the interplanetary species.

SpaceX - mission to Mars. But who will design the settlement?

Also BaseX, decimal system, human have ten fingers. X is Roman numerals mean 10, spot on.

XPrize[79] has "X" in their name:

Blueprint of a civilization

The concept could be modular and create aggregate and use of common parts - a few capsules coming together and making use of shared equipment (economy of the scale).

Learning how to live on Earth before spreading out to other space.

A few decades from now you can just hop into the capsule and float in the space - either independently or as a part of a compound.

Bir Tawil

Bir Tawil[80] is a piece of land that noone claims:

> *"Its terra nullius status results from a discrepancy between the straight political boundary between Egypt and Sudan established in 1899, and the irregular administrative boundary established in 1902. Egypt asserts the political boundary, and Sudan asserts the administrative boundary, with the result that the Hala'ib Triangle is claimed by both and Bir Tawil by neither. In 2014, author Alastair Bonnett described Bir Tawil as the only place on Earth that was habitable but was not claimed by any recognised government."*

With the Plan B technology we could totally legally create a new country.

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[79] https://en.wikipedia.org/wiki/X_Prize_Foundation
[80] https://en.wikipedia.org/wiki/Bir_Tawil

Of course both countries prefer more land and more coast line. Of course none of the countries wants the smaller thing. That's how Liberland situation was created.

Dunabe river is an international waterway, rivers sometimes take a shortcut and there is a pocket of land. Just like with Bir Tawil, countries prefer more land, and to say "Liberland is mine" would mean something else is not yours. As a result, noone wants it...

Picture taken at CCCAMP19, exactly 4 years later after my initial induction to Liberland.

6. Liquid Democracy

Let's begin with a story of horses and rockets.

Can you imagine that our future Mars civilization will be determined by the size of a horse? Roman roads - two horses in width. Railroads same width. Tunnels made to measure. Size of the rocket flying to Mars limited by the size of component that goes through the tunnel, because of the size of a horse? This story has some truth in it, you can debate whether "determined" or "influenced" is the right term[81].

The current model of democracy - voting for representatives once every few years.

Voting for delegates made sense in 1800. Ship from UK to US took couple of weeks to cross the Atlantic. To have a delegate meant you do not have to travel that often to make your point across, the representative was there.

If we assume that technology has improved, now we have internet, Facebook, iPhones and Androids *(that completely destroyed social fabric of society)* maybe we can acknowledge that democracy should also evolve?

Current democracy in the UK and in the US

First-past-the-post[82] in the UK that is an open invitation to tactical voting[83]

Electoral college[84] in the US and see what happened in 2000 when counting votes in Florida[85]:

"The Florida vote was ultimately settled in Bush's favor by a margin of 537 votes"

Al Gore ultimately lost the battle, he continued to work on environmental issues, together with IPCC got the Nobel Peace Prize in 2007[86]

Liquid Democracy explained in simple terms

5 minutes YouTube video: https://youtu.be/fg0_Vhldz-8

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[81] http://www.astrodigital.org/space/stshorse.html
[82] https://en.wikipedia.org/wiki/First-past-the-post_voting
[83] https://en.wikipedia.org/wiki/Tactical_voting
[84] https://en.wikipedia.org/wiki/United_States_Electoral_College
[85] https://en.wikipedia.org/wiki/2000_United_States_presidential_election_recount_in_Florida
[86] https://en.wikipedia.org/wiki/2007_Nobel_Peace_Prize

For example - I know little about abortion. I'm not a woman, not a pregnant woman, not a medical specialist, not a religious authority. I will happily delegate my vote in that vote towards a friend who is a doctor and is much more informed. They can also delegate their vote is even more informed, say gynecologist expert. For that reason "liquid democracy" it is also known as delegative democracy.

Directly from Wikipedia definition: https://en.wikipedia.org/wiki/Liquid_democracy

> *Voters can either vote directly or delegate their vote to other participants; voters may also select different delegates for different issues. In other words, individual A of a society can delegate their power to another individual B – and withdraw such power again at any time.*
>
> *Liquid democracy lies between direct and representative democracy. In direct democracy, participants must vote personally on all issues, while in representative democracy participants vote for representatives once in certain election cycles. Meanwhile, liquid democracy does not depend on representatives but rather on a weighted and transitory delegation of votes. Liquid democracy through elections can empower individuals to become sole interpreters of the interests of the nation. It allows for citizens to vote directly on policy issues, delegate their votes on one or multiple policy areas to delegates of their choosing, delegate votes to one or more people, delegated to them as a weighted voter, or get rid of their votes' delegations whenever they please.*

Citizens' Assembly?

I am convinced that Liquid Democracy is superior to Citizen's Assembly suggested in the current form.

I understand the demand of “Beyond Politics” - Extinction Rebellion is not a political movement. At the same time, when overhauling economy, society we can do something with the governance models as well.

See the XR position: https://www.youtube.com/watch?v=cGNkd7MtpDw

XR's position on Brexit and a General Election | Extinction...

3.3K views • 20 hours ago

Peaceful takeover

Nations taking over:

- https://en.wikipedia.org/wiki/Independence_Day_(United_States)
- https://en.wikipedia.org/wiki/Indian_Independence_Act_1947
- https://en.wikipedia.org/wiki/Decolonisation_of_Africa
- https://en.wikipedia.org/wiki/Dissolution_of_the_Soviet_Union
- https://en.wikipedia.org/wiki/Breakup_of_Yugoslavia

People revolting:

- https://en.wikipedia.org/wiki/Peasants%27_Revolt
- https://en.wikipedia.org/wiki/Cornish_rebellion_of_1497

Most recent attempt:

- https://en.wikipedia.org/wiki/2014_Scottish_independence_referendum

The turnout of 84.6% was the highest recorded for an election or referendum in the United Kingdom since the introduction of universal suffrage.

I believe that it is possible to peacefully and legally become the government.

So now we are government and then what? Without a clear plan, chaos would emerge…

Voting without government announcing the vote

I know this is a radical idea. It is still possible without the government declaring a new vote. It should be enough for 50% of the guys registered for vote to deliver the vote to the nearest train station.

Enough to prove that you are a human and you live in the UK. A few items required:
1. Copy of passport / national ID / driving licence / birth certificate
2. Proof of address *(bank statement / utility bill)*

On the envelope put: **"REMAIN EUROPE"** or **"BREXIT LEAVE"** (or any other issue)

We will ask United Nations observers to count the votes.
We will ensure that it is legally binding.
We are no longer influencing the government.
We are the government.

Why train station, not a polling station? Train stations are well known, well defined.

Everyone knows where the nearest train station is + easily transportable to London.

Not everyone knows where is the polling station (libraries, schools, churches, town halls)

I am totally aware that the likehood of such event is low, at the same it's not impossible.

I can imagine overall mobilisation, people going to a train station with the copy of their passport / driving licence / national ID and a proof of address to cast a vote. At the same time - it's rather complicated, unnecessary, convoluted. Too many dependendencies, too many other priorities.

Just bear in mind it wasn't democractic vote, check the chapter about "fake news".

Various random bonus miscellaneous notes

This is an all-you-can-eat so pick and choose the ideas that you like. I mostly agree with most of them, otherwise I wouldn't be sharing them. Use your critical judgment and when in doubt DYOR - do your own research, always do your own research.

Post-capitalism

https://en.wikipedia.org/wiki/Post-capitalism
https://en.wikipedia.org/wiki/Post-scarcity_economy
https://en.wikipedia.org/wiki/Anti-rival_good
https://en.wikipedia.org/wiki/Network_effect
https://en.wikipedia.org/wiki/Metcalfe`s_law

J.P. Morgan wasn't a charitable guy:

https://en.wikipedia.org/wiki/History_of_rail_transportation_in_the_United_States#Expansion_and_consolidation_(1878–1916)

> *"New York financier J.P. Morgan played an increasingly dominant role in consolidating the rail system in the late 19th century. He orchestrated reorganizations and consolidations in all parts of the United States. Morgan raised large sums in Europe, but instead of only handling the funds, he helped the railroads reorganize and achieve greater efficiencies. He fought against the speculators interested in speculative profits, and built a vision of an integrated transportation system."*

Certain things make sense if they are unified.

Why trains are so expensive?

Look how many train companies operate in the UK:
https://en.wikipedia.org/wiki/List_of_companies_operating_trains_in_the_United_Kingdom

Ticket machines have so many options.

I have zero loyalty to train brands - just get me from A to B, on time, without spending a small fortune. (trains in the UK are expensive, flying around Europe is much cheaper)

As I write these words, it's 23:09 on Thursday. The cheapest flight from London to Edinburgh for tomorrow is £49 only. The cheapest train[87] I could find is £89.

I have zero loyalty to electricity providers. Previously it was communism vs capitalism. I'm not into communism camp, I'm into post-capitalism as there is a certain limit to how much you can grow in terms of GDP. That's why in the previous chapters suggested a new metric.

[87] http://ojp.nationalrail.co.uk/service/timesandfares/London/EDB/tomorrow/0800/dep?directonly

This is a paradigm shift on many levels. I believe that blockchain is making it possible. Just imagine a situation where 66 million citizens of the UK have shares in the rail network. This level of ownership and decision making is not possible before.

The change will not happen overnight, and I dare to speculate the change is already happening, more people are waking up…. Let's see how situation will evolve.

"War on drugs"

It is with regret that Prison Guards Worker Union *(several thousand people)* is shaping the consciousness of the planet. Why? It's primarily them who have incentives to keep prison–industrial complex[88] going.

[88] https://en.wikipedia.org/wiki/Prison–industrial_complex

THE NOBEL PRIZE

MAPS
MULTIDISCIPLINARY ASSOCIATION FOR PSYCHEDELIC STUDIES

Why MAPS and Rick Doblin?

- Providing legal access to groundbreaking medicines
- Reducing dependency on alcohol, tobacco, and addiction to so-called "legal" drugs
- Making research possible, basing policies on facts, data, science.
- Undoing "war on drugs", 50+ years of "fake news" propaganda fuelling prison–industrial complex: https://en.wikipedia.org/wiki/Prison–industrial_complex

  "A domino effect has occurred: tough-on-drug policies led to overcrowding in prisons; this was one of the factors which led to the realisation of the profiting gain from prison privatisation; and this incentive became one of the factors which eventually led to the system now known as the prison-industrial complex."

- Allowing non-violent offenders (under obsolete law) carry-on with their lives
- At a conservative estimate saving millions of lives in a meaningful way every year.

GLOBAL COMMISSION ON DRUG POLICY

In June 2011, the commission said: "The global war on drugs has failed, with devastating consequences for individuals and societies around the world."[2] The emphasis in drug policy on harsh law enforcement over four decades has not accomplished its goal of banishing drugs and has in fact spawned wide, dramatic eruptions of violence, the report continued. By way of alternative, the GCDP report "advocates decriminalizing drug use by those who do no harm to others."[3]

Philippines' 'War on Drugs'

Since taking office on June 30, 2016, Philippine President Rodrigo Duterte has carried out a "war on drugs" that has led to the deaths of over 12,000 Filipinos to date, mostly urban poor. At least 2,555 of the killings have been attributed to the Philippine National Police. Duterte and other senior officials have instigated and incited the killings in a campaign that could amount to crimes against humanity.

HUMAN RIGHTS WATCH

Process of nomination and selection

The Norwegian Nobel Committee is responsible for selecting the Nobel Peace Prize Laureates. A nomination may be submitted by any persons who are qualified to nominate.Qualified nominators include: University professors, professors emeriti and associate professors of history, social sciences, law, philosophy, theology, and religion.

If you are a professor please submit Rick!

"FOR THE GREATEST BENEFIT TO HUMANKIND"

ALFRED NOBEL

I'm financially supporting Psychedelic Society, voting with my wallet is more powerful than likes on Facebook.

I understand the public perception, the generation of my parents is in the camp "drugs are bad".

I'm in the camp "drugs can be also bad" - without education, without experience, unsuitable set & settings, unknown dosage, unknown purity, pre-existing mental health conditions, combined with other substances such as alcohol, in the atmosphere of doing something illegal and risking time in jail - these are potentially harmful circumstances

With the proper preparation, education, guidance: 80% of the participants said it's one of the top 5 most important (meaningful) events of their life and 50% said it's the most important (meaningful).

I'm in the camp choice, freedom, education, I'm not in the camp of "fake news" propaganda of the 1960s

Effective altruism

https://www.effectivealtruism.org/

> *"Effective altruism is about answering one simple question: how can we use our resources to help others the most?"*
>
> *"Rather than just doing what feels right, we use evidence and careful analysis to find the very best causes to work on."*

My favourite anti-example: helping children working on toxic waste dumping ground by providing them with protective footwear. It does not solve any underlying problems, such as dumping waste, poverty, lack of education.

Another anti-example: donating life jackets for refugees from Syria to enhance the safety of their sea travel. We need to solve the underlying problems and that is why I suggested Plan B - initially for 1% to have a backup option, further down the line the innovation and economy of the scale should make possible to build a human habitat for 1/100 cost of a missile that destroyed it in the first place.

Buying clean energy?

I'm not sure if an individual choosing *"green energy supplier"* is making any difference.

The logic is as follows: **higher demand for green energy = less demand for other energy.**

Less demand, therefore lower price, those who are polluting the most now have fewer incentives to switch. Supply and demand, elementary market forces.

Divesting from fossil fuels?

"Fossil fuel divestment has 'zero' climate impact, says Bill Gates"

The article is behind a paywall but check this comment[89]:

> *"Divestment also results in less shareholder oversight of emission heavy companies because environmentally conscious investors are selling their shares to investors with less scruples."*
>
> *"According to Fossil Free, asset managers with about 10 trillion under management have committed to divesting. If you assume 10% of that is tracking something like the S&P 500, then these investors have sold about 80 million shares of Chevron. In 2018, shareholders introduced a proposal asking Chevron to limit its methane emissions. That proposal failed with 46% of the vote. 80 million shares would have been enough to swing the vote to 54% in favor."*

As you can see, global economy is a complex intertwined system…

False illusion

How many times have you heard "save paper" or "unplug chargers"?

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[89] https://news.ycombinator.com/item?id=20998948

It really pisses me off, I don't print because ink prices are extortionate, the business model of hardware companies depend on it.

Regarding devices, there is a law - https://en.wikipedia.org/wiki/One_Watt_Initiative - that tells how much energy it is allowed to use in the standby mode. Do some math, know how much you are saving, make your judgment based on factual data[90]:

> *The total vampire power draw of our power strip, combined with chargers for an iPhone 6, iPad Air, MacBook Air (2013), Surface Pro 2, Samsung Chromebook, and a Nexus 7 measured a grand total of 0.3 watts.*
>
> *Let's assume these are all plugged in 24 hours a day, 7 days a week, over an entire year. There are 8760 hours in a year. That equates to 2.628 kilowatt hours (kWh).*
>
> *According to the EIA, the average cost of electricity in the US is 12.98 cents per kWh. This means that those 2.628 kWh of electricity will cost about 34.1 cents over an entire year.*
>
> *The real cost is actually lower, as you'll be charging your devices with these chargers sometimes, so they won't always be drawing vampire power. You'll probably unplug them to take them with you sometimes, too.*
>
> *Either way, this shows us that the amount of vampire power consumed by your chargers is extremely small and really isn't worth worrying about. If you like the convenience of leaving your chargers plugged, go for it.*
>
> *Yes, it's true that you could save a tiny amount of electricity by unplugging your chargers, but you could save a much larger amount of electricity by looking to heating, cooling, lighting, laundry, your computer and other more significant power drains.*

Why does it bother me? Just like "fake news", I'm affected by it. People who might be willing to do some actual stuff, now can say: "I'm doing my part, I'm unplugging my chargers"

I really wish such factual data approach was more dominant in our society and governance.

Extinction Rebellion and putting pressure on the government - spot on. At this stage, only a change on the government level can suffice.

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[90] https://www.howtogeek.com/231886/tested-should-you-unplug-chargers-when-youre-not-using-them/

Acknowledge the power of corporations?

Currently, they can lobby, here is how much Microsoft is spending in European Parliament[91]: €5m

Surely you can lookup how much money Google, Facebook and similar are spending in the US Congress.

On the other hand, check a country like Nauru[92]:

> *Nauru is the third-smallest country in the world behind Vatican City and Monaco, making it the smallest state in the South Pacific Ocean, the smallest state outside of Europe, the smallest island state, and the smallest republic. Additionally, its population of 11,347 is the world's third smallest, after the Vatican and Tuvalu.*
> *By measure of mean body mass index (BMI) Nauruans are the most overweight people in the world; 97 per cent of men and 93 per cent of women are overweight or obese.*

You can check their Gross Domestic Product.[93]

Who is more powerful: Nauru or Google or Microsoft or Facebook?

Who has more capacity to influence global affairs?

I actually made this posted just before the Burning Man to convince the Google guys to change their logo before the strike:

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[91] https://lobbyfacts.eu/representative/60239386204445e2b0fb38cada46b204/microsoft-corporatio
[92] https://en.wikipedia.org/wiki/Nauru
[93] https://www.cia.gov/library/publications/the-world-factbook/geos/nr.html

DEAR GOOGLE, WITH A SINGLE LINE OF CODE

YOU CAN SHIFT PERCEPTION OF PLANET A

PLEASE NOTE, THERE IS CURRENTLY NO PLANET B

Dear Googlers, Burnerns, Silicon Valley SingularityU Transhumanism Effective Altruists, please pass this message, United Nations climate science political football consensus failed.

Make your life count

Some guys took it a little bit too far:
https://en.wikipedia.org/wiki/2019_Hong_Kong_anti-extradition_bill_protests

Injuries and arrests	
Death(s)	5 (all suicides)[13][14][15][16][17]
Injuries	2,100+ (as of 15 August 2019)[12]
Arrested	748 (as of 16 August 2019)[18]

During Hong Kong protest 5 people have committed suicides.

While I do not support such desperate actions (non-violent action), pure math and game of numbers tells me - in the protest of 100k people lasting for a month, someone somewhere will die.

Media: tell the truth. **tellthetruth.media** Don't seek sensationalist click-bait titles.

It can be viewed as extreme and according to 10 principles it is not endorsed. Photo of the year: http://100photos.time.com/photos/malcolm-browne-burning-monk

Heathrow Pause and Roger Hallam

Prison is a poor strategy.

Article from Independent[94]:

> *"Hours after being released from custody on Friday night, Mr Hallam breached his bail conditions of not going within five miles of an airport or possessing any drone-related materials, the group said."*
>
> *"He was re-arrested by London's Metropolitan Police close to the airport's southern perimeter on Saturday."*

If you are released on bail, don't break the conditions a few hours later.

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94 https://www.independent.co.uk/news/uk/home-news/heathrow-drone-protests-extinction-rebellion-roger-hallam-arrest-a9105556.html

If I was assigned to a task of shutting down the airport, I would probably… I'm sorry, I live in surveillance state, as mentioned in the intro there is a Terrorism Act in force and thoughtcrimes.

Just don't bullshit me that the expansion is good, still frame from the video[95]:

Protest Song

https://en.wikipedia.org/wiki/Protest_song

There was talk at CCCAMP19[96] was about various cultural things in China.

This song fits our mission perfectly and have very catchy title… TARARA TA-RA-RA

Europe - The Final Countdown
https://www.youtube.com/watch?v=9jK-NcRmVcw

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[95] https://www.youtube.com/watch?v=Q0TXsabfoF4

[96] https://events.ccc.de/camp/2019/wiki/Session:Do_you_hear_the_people_sing_%E2%80%93_the_song_of_the_Hong_Kong_protests

We're leaving together,
But still it's farewell
And maybe we'll come back
To earth, who can tell?
I guess there is no one to blame *(we are no blaming, the system is broken)*
We're leaving ground (leaving ground)
Will things ever be the same again?
It's the final countdown
The final countdown
Oh
We're heading for Venus (Venus) *(Earth losing ability to reflect heat, becoming another Venus)*
And still we stand tall
'Cause maybe they've seen us (seen us)
And welcome us all, yeah
With so many light years to go
And things to be found (to be found)
I'm sure that we'll all miss her so

Copenhagen as an example of Net Zero 2025

https://www.theguardian.com/environment/2013/apr/12/copenhagen-push-carbon-neutral-2025

> *"The Adelgade plant draws cool seawater from an intake pipe located near the picturesque Nyhavn Canal and then delivers the chilled water through insulated pipes to buildings"*

What can work in a city of 500k (Copenhagen) will not work in London.

Just like Amsterdam, there is a long history of planning the city around bike culture.

Just like sprawling suburbs of Los Angeles are built around car culture.

Still we can take loads of inspiration. The heat exchange and cooling coming from the earth - that's one of the cool technologies used in "passive house" buildings.

Iceland as an example of Citizens' Assembly

https://en.wikipedia.org/wiki/2010–13_Icelandic_constitutional_reform

What is possible in a country of 300k may not be feasible in the UK or Germany.

We can still take a lot of inspiration.

Ecocide[97]

> *"Ecocide is criminalized human activity that violates the principles of environmental justice, such as causing extensive damage or destroying ecosystems or harming the health and well-being of a species (including humans). It has not yet been accepted as an international crime by the United Nations."*

ITT[98] (payments for not exploiting)

> *"The initiative was launched in 2007 by president Rafael Correa which offered a perpetual suspension of oil extraction in part of the Yasuni National Park called Ishpingo-Tambococha-Tiputini (ITT) in return for payments of $3.6 billion from the international community (half of what Ecuador would have realized in revenue from exploiting the resources at 2007 prices). It envisioned the transition to a sustainable economy, using the funds to create jobs in such sectors as renewable energy while respecting the region's biodiversity and social equality. However by 2012 only $200 million had been pledged and by 2013 the plan had abandoned and drilling started in 2016."*

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[97] https://en.wikipedia.org/wiki/Ecocide
[98] https://en.wikipedia.org/wiki/Yasuní-ITT_Initiative

It got some serious press coverage. We are a decade later, would we behave differently now?

- https://www.washingtonpost.com/news/wonk/wp/2013/08/16/ecuador-asked-the-world-to-pay-it-not-to-drill-for-oil-the-world-said-no/
- https://www.theguardian.com/environment/2010/aug/04/ecuador-oil-drilling-deal-un

Doomsday Clock[99]

> *"The Doomsday Clock is a symbol which represents the likelihood of a man-made global catastrophe. Maintained since 1947 by the members of the Bulletin of the Atomic Scientists, The Clock is a metaphor for threats to humanity from unchecked scientific and technical advances."*
>
> *"In 2019, the Bulletin reaffirmed the "two minutes to midnight" time, citing continuing climate change and Trump administration's abandonment of U.S. efforts to lead the world toward decarbonization; U.S. withdrawal from Joint Comprehensive Plan of Action and Intermediate-Range Nuclear Forces Treaty; U.S. and Russian nuclear modernization efforts; information warfare threats and other dangers from "disruptive technologies" such as synthetic biology, artificial intelligence, and cyberwarfare."*

World Scientists' Warning to Humanity[100]

> *"In November 2017, 15,364 scientists signed a World Scientists' Warning to Humanity."*
>
> *"The Second Notice included 9 time-series graphs of key indicators, each correlated to a specific issue mentioned in the original 1992 warning, to show that most environmental issues are continuing to trend in the wrong direction, most with no discernible change in rate. The article included 13 specific steps humanity could take to transition to sustainability."*

Green New Deal

Is both too extreme and not specific enough.

Next version will be much more acceptable.

- https://en.wikipedia.org/wiki/Green_New_Deal
- https://ocasio-cortez.house.gov/sites/ocasio-cortez.house.gov/files/Resolution%20on%20a%20Green%20New%20Deal.pdf
- https://www.vox.com/videos/2019/6/12/18653754/green-new-deal-video

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[99] https://en.wikipedia.org/wiki/Doomsday_Clock
[100] https://en.wikipedia.org/wiki/World_Scientists%27_Warning_to_Humanity

- https://twitter.com/realdonaldtrump/status/1094375749279248385

Deep Adaptation[101]

"The purpose of this conceptual paper is to provide readers with an opportunity to reassess their work and life in the face of an inevitable nearterm social collapse due to climate change."

Vice[102]:

"The Climate Change Paper So Depressing It's Sending People to Therapy"

Tell the truth. It is fundamentally fundamental. The paper is balanced and well-researched.

Acceptance and happiness

No path to happiness, happiness is the way, happiness comes from within.

Singularity is near?

We live in a simulation?

So many factors beyond our control.

Maintaining your own health and happiness is probably the most important thing you can do.

Look after yourself, your family, your community.

Affiliate links, thank you for FREE MONEY

This book is free.

Just because this book is free, it does not mean it is worthless. You can still support this project via affiliate links.

These links come at zero cost, actually negative cost to you, getting a discount or something for free.

Stuff I use, vouch and recommend, otherwise they wouldn't be here.

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[101] https://www.lifeworth.com/deepadaptation.pdf

[102] https://www.vice.com/en_uk/article/vbwpdb/the-climate-change-paper-so-depressing-its-sending-people-to-therapy

I use my own domain in case the referral link goes down

Coinbase

https://genesis.re/ref/coinbase
You'll both receive £8.28 in Bitcoin when they buy or sell £82.83 or more on Coinbase!

I know that Bitcoin is controversial in environmental circles, but I'm also in technology and governance circles.

https://cbeci.org/faq

UNIVERSITY OF CAMBRIDGE Judge Business School | Cambridge Centre for Alternative Finance | Cambridge Bitcoin Electricity Consumption Index

> *There is currently little evidence suggesting that Bitcoin directly contributes to climate change. Even when assuming that Bitcoin mining was exclusively powered by coal - a very unrealistic scenario given that a non-trivial number of facilities run exclusively on renewables - total carbon dioxide emissions would not exceed 58 million tons of CO_2, which would roughly correspond to 0.17% of the world's total emissions.*
>
> *This is not to say that environmental concerns regarding Bitcoin's electricity consumption should be disregarded. There are valid concerns that Bitcoin's growing electricity consumption may pose a threat to achieving the United Nations Sustainable Development Goals in the future.*
>
> *However, current figures should be put into perspective: available data shows that even in the worst case (i.e. mining exclusively powered by coal), Bitcoin's environmental footprint currently remains marginal at best.*

It's a very involved debate indeed. Honey badger does not care. Honey what?

Bitcoin is called "honey badger of money", here is why[103]:

> *"It is primarily a carnivorous species and has few natural predators because of its thick skin, strength and ferocious defensive abilities. It is listed as the "world's most fearless animal" in the 2002 edition of the Guinness Book of World Records."*

[103] https://en.wikipedia.org/wiki/Honey_badger

2nd Coinbase link (different referral programme)

https://genesis.re/ref/coinbase2
"Invite up to 4 friends to earn XLM too! They can be new or existing Coinbase users. You'll earn $10 in XLM for each eligible friend who completes a lesson."

I converted XLM to BTC, I'm the "maximalist" camp. YMMV - your mileage may vary..

American Express

https://genesis.re/ref/amex
You'll receive £30 cashback for your next approved friend.
Your friend will receive £25 cashback when they apply for the Platinum Cashback Credit Card, are approved and when they first spend over £1 on the Card.

Monzo

https://genesis.re/ref/monzo
Hey, I think you should get a Monzo account. Get one through this link and we'll both get £5!

TransferWise

https://genesis.re/ref/transferwise
Free international transfer

AirBnb

https://genesis.re/ref/airbnb
When you sign up, you'll get £25 off your first home booking of £55 or more and £9 towards an experience of £36 or more.

Uber

https://genesis.re/ref/uber
£3 off first ride.

NOTE: you may want to find a more generous voucher elsewhere.

Booking.com

https://genesis.re/ref/booking

Get a £15.00 reward when you book your next trip using this code: 4D6BAEE8

Drivy

https://genesis.re/ref/drivy
Just rented car on Sunday, P2P car rental, much easier that heading to the airport to pick it up.

Moo

https://genesis.re/ref/moo
Take 25% off your purchase! Special thanks to your friend!

Luci Light (Amazon)

https://genesis.re/ref/luci
Luci Pro Outdoor 2.0

- waterproof
- dustproof
- camping
- romantic
- inflatable so does not take much space
- ethical, practical, sustainable
- TOP10 items you'd take to a remote island *(knife, rope, water container being TOP 3)*
- now it can even charge your phone!

XR Handbook (Amazon)

https://genesis.re/ref/drill

Visionary artwork

If you like it, follow link: **https://genesis.re/artwork**

Talk to me about ERC-721 standard: http://erc721.org/

Hire me, work with me

Open for business, open for collaboration, open for consulting gigs: **email@genesis.re**

Why I need money (on top of paying mundane bills)

I saw an island for $1m[104] but then I realized - even if I had one million in cash, available to deploy right now it would be irresponsible to pull the trigger without a proper business plan. Because I was focusing energy on this book, I haven't not invested enough time and attention into detailed numbers, here is just the summary.

"Realising human potential to heal the planet"

[104] https://www.privateislandsonline.com

It helps if you understand Entrepreneur First[105] vision - getting super smart PhDs in Machine Learning, AI, astrophysics and teaching them everything about startups, running a business, allowing these guys to mingle, form friendships and launch businesses.

It's pre-idea stage. Idea will come later, you'll have a chance to bounce all sorts of ideas with your peers, mentors, industry experts.

The trouble with London (and any other major city) is that there is a shortage of housing. If I was to relocate to a new city, it would definitely took some effort to find a suitable accommodation.

Bureaucracy, paperwork, health & safety is pretty huge in the UK, to rent a place they usually want to do a reference check, guarantor, payslips (proof of work) and it can get rather complicated. If the goal of the programme is to mingle with others, create a dedicated coworking coliving space.

We are doing something from scratch, the whole thing is designed for flow and human performance optimisation.

You can also think https://en.wikipedia.org/wiki/POC21_innovation_camp but on a permanent basis.

[105] https://en.wikipedia.org/wiki/Entrepreneur_First

Tried with astralship.org but I made a series of mistakes. In a way, I failed, but I did not give up. There is always another chance coming and this time around I'll be a little bit wiser.

Setbacks are the name of the game. I'm still alive, I'm still in the game.

Currently rebuilding myself, reestablishing my base and stability.

Let's be friends, let's be in touch: https://genesis.re

Share this book

In my version of reality[106], information always wants to be free.

Please share this book widely.

https://genesis.re/book

[106] Is there a such thing as universal truth?