

# “The Top 100” World Environmental and Societal Crises

As Signs of Ever More Threatening Planetary Distress, Driven Growth,

**... to Maximize the Force, Speed, & Acceleration of Our World Collision with Natural Limits, a combination of growing world crises that compound each other to become quite unmanageable.**

**So what seems absolutely necessary is to partly unwind capitalism, distributing enough accumulated unearned income to slow the progression and fund the remediation**

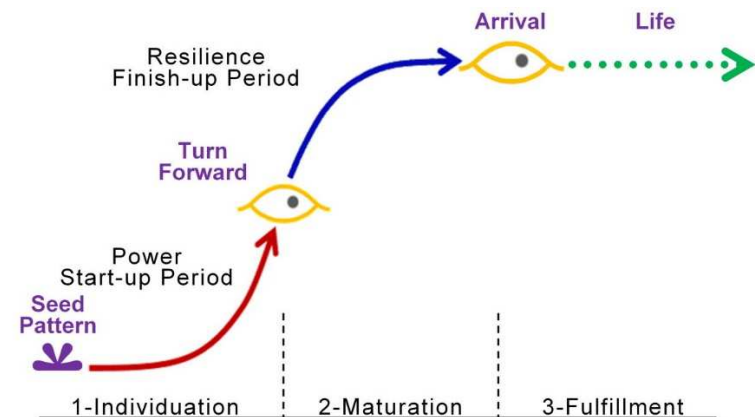
To help edit, write Jessie Henshaw [sy@synapse9.com](mailto:sy@synapse9.com) Also see: <https://synapse9.com/signals/2020/05/26/global-fiduciary-asset-investor-restraint/>

The following tables are for bringing attention to the tidal wave of diverse world crises coming from the growing global pressures on people, resources and nature from the economy. It's also to make clear the need for everyone to focus on *BOTH this common threat as well as separate symptoms and crises*. These separate crises all have a common origin, that we have been neglecting.

- Table 1 is a list of 8 main categories **“General Threats System Overuse – Eight Wide Categories of Growing Systemic Distress.”**
- Table 2 lists **“12 Signs of Approaching Limits of Resilience, System Strain, Disorder”** *You need these general signs of systems in trouble to anticipate new crises and trace ones we already face.*
- Table 3 has 8 sections, A to H (from Table 1) listing about **“100 Growing Systemic Crises caused by maximizing the force, speed, and acceleration of our collision with natural limits,”** divided into the eight categories of Table 2, as sub-tables A to H

As you will see, I've tried to be comprehensive but will have left out or misstated issues you and others might find important. Please add them, and forward a revised Word Doc or line by line copies of additions to me by email. Comments on the First and Second tables would be very welcome too. Table three is such a long list I have not had time to do more than summarize some accumulated understanding of these growing world problems. This list was started in early 2019 with a short collaborative essay by Jan Cox and me for the UN NGO effort to steer the SDGs toward sustainability ([here fyi](#))

People do tire of hearing only about erupting crises and threats. So let me just mention what seems to be the available **true** solution to our common global problem, illustrated by the image below of the stages of natural growth, typifying nature's growth path to secure fulfillment and long life. The figure shows a growth path followed by everything in nature we see as being wonderful, a series of three growth stages: 1) getting a racing head start to develop power (**red**), then 2) preparing for stability, resilience and secure roles in the environment (**blue**), then 3<sup>rd</sup>) enjoying a long life of engagement on the higher plane of mature life forms (**green**)



JLH

# Top 100 Signs of a Planet In Distress

| Line | Loc | Typ | Val | Crises | Related Issues | Cost in % GDP | Research Links & Images |
|------|-----|-----|-----|--------|----------------|---------------|-------------------------|
|------|-----|-----|-----|--------|----------------|---------------|-------------------------|

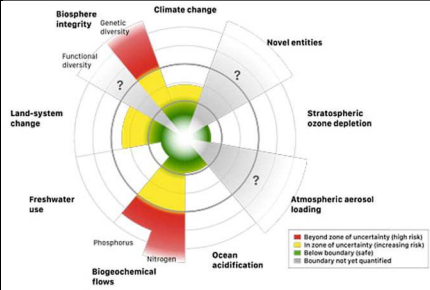

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| Date     | Name           | email              | Code | Val | Comment |
|----------|----------------|--------------------|------|-----|---------|
| 20-02/09 | Jessie Henshaw | sy @ synapse9. com |      |     |         |
|          |                |                    |      |     |         |
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## 0. Leading Impact Documentation, Indicators, Impact Aggregators

| Line      | Loc             | Typ | Val | Subject   | Issues  | Research Links   | Images   |        |                 |           |     |           |       |           |       |           |       |
|-----------|-----------------|-----|-----|---|---|--|--|--------|-----------------|-----------|-----|-----------|-------|-----------|-------|-----------|-------|
| 7         |                 |     |     | <p><b>Emergency on Planet Earth</b> Written by Dr Emily Grossman with the support of the XR Scientists community</p> <p>Fact-checked and reviewed by a wide range of experts in relevant fields</p>   | <p>The number of extreme climate-related disasters - including extreme heat, droughts, floods and storms - <a href="#">has doubled since the early 1990s</a> and studies have shown that more than two thirds of all extreme weather events investigated were <a href="#">made more likely, or more severe, by human-caused climate change.</a></p>   | <p><a href="https://docs.google.com/document/u/0/d/1QdWn7PCDqNUOvzmPaJPMEYqsXKAVcuE0MPxcIVdaKjw/mobilebasic">https://docs.google.com/document/u/0/d/1QdWn7PCDqNUOvzmPaJPMEYqsXKAVcuE0MPxcIVdaKjw/mobilebasic</a></p> <p>Images shows number of extreme climate disasters per year.</p>   | <p>Number of reported disasters per decade - 1971 to 2010</p> <table border="1"> <thead> <tr> <th>Decade</th> <th>Total Disasters</th> </tr> </thead> <tbody> <tr> <td>1971-1980</td> <td>743</td> </tr> <tr> <td>1981-1990</td> <td>1,534</td> </tr> <tr> <td>1991-2000</td> <td>2,386</td> </tr> <tr> <td>2001-2010</td> <td>3,496</td> </tr> </tbody> </table> <p>World Meteorological Association - Atlas of Mortality and Economic Losses from Weather, Climate and Water Extremes - 2014</p> | Decade | Total Disasters | 1971-1980 | 743 | 1981-1990 | 1,534 | 1991-2000 | 2,386 | 2001-2010 | 3,496 |
| Decade    | Total Disasters |     |     |   |   |  |  |        |                 |           |     |           |       |           |       |           |       |
| 1971-1980 | 743             |     |     |   |   |  |  |        |                 |           |     |           |       |           |       |           |       |
| 1981-1990 | 1,534           |     |     |   |   |  |  |        |                 |           |     |           |       |           |       |           |       |
| 1991-2000 | 2,386           |     |     |   |   |  |  |        |                 |           |     |           |       |           |       |           |       |
| 2001-2010 | 3,496           |     |     |   |   |  |  |        |                 |           |     |           |       |           |       |           |       |
| 6         |                 |     |     | <p>The EU Taxonomy 2020/03 EU meant as “a tool to help investors, companies, issuers and project promoters navigate the transition to a low-carbon, resilient and resource-efficient economy”</p> <p>[[j]h – neglects all the growing pressures of growth, on energy use, societal &amp; ecological system, such as from growing consumption congestion, disruption and inequality, etc]]</p> | <p>The EU taxonomy is a tool to help investors understand whether an economic activity is environmentally sustainable, and to navigate the transition to a low-carbon economy.</p> <ul style="list-style-type: none"> <li>Climate Change Mitigation</li> <li>Climate Change Adaptation</li> <li>Sustainable Use and protection of water and marine resources</li> <li>Pollution Prevention and Control</li> <li>Transition to Circular Economy, Waste prevention and recycling</li> <li>Protection of Healthy Ecosystems</li> </ul> | <p>Intro - <a href="http://unpri.org/eu-taxonomy">http://unpri.org/eu-taxonomy</a></p> <p>Article - <a href="https://www.unpri.org/sustainable-markets/eu-sustainable-finance-taxonomy/4567.article">https://www.unpri.org/sustainable-markets/eu-sustainable-finance-taxonomy/4567.article</a></p> <p>March 2020<br/> <a href="#">TEG final report on the EU taxonomy Non-Financial Reporting Directive guidelines.</a></p> | <p>Like all government plans, proposing to reduce carbon while growing energy demand</p>   |        |                 |           |     |           |       |           |       |           |       |

# Top 100 Signs of a Planet In Distress

| Line | Loc | Typ | Val | Crises  | Related Issues   | Cost in % GDP   | Research Links & Images   |
|------|-----|-----|-----|---|--|---|---|
| 5    |     |     |     | SDSN Sustainable Development Report   | Due to the virus compounding previously poor progress, now all 17 goals showing unclear, mixed or sharply negative performance   |   | <a href="https://s3.amazonaws.com/sustainabledevelopment.report/2020/2020_sustainable_development_report.pdf">https://s3.amazonaws.com/sustainabledevelopment.report/2020/2020_sustainable_development_report.pdf</a>   |
| 4    |     |     |     | Stockholm Resilience Centre Nine Planetary Boundaries<br>[[jlh - Great science but proposes to correct a system that works as a whole one part at a time, neglecting the interactions and central financial drivers]] | <ol style="list-style-type: none"> <li><b>Stratospheric ozone depletion</b></li> <li><b>Loss of biosphere integrity (biodiversity loss and extinctions)</b></li> <li>Chemical pollution and the release of novel entities</li> <li><b>Climate Change</b></li> <li><b>Ocean acidification</b></li> <li><b>Freshwater consumption and the global hydrological cycle</b></li> <li><b>Land system change</b></li> <li><b>Nitrogen and phosphorus flows to the biosphere and oceans</b></li> <li><b>Atmospheric aerosol loading</b></li> </ol>            | <a href="https://www.stockholmresilience.org/research/planetary-boundaries/planetary-boundaries/about-the-research/the-nine-planetary-boundaries.html">https://www.stockholmresilience.org/research/planetary-boundaries/planetary-boundaries/about-the-research/the-nine-planetary-boundaries.html</a>  |   |
| 3    |     |     |     | The Great Acceleration  |  |   | <a href="http://www.igbp.net">www.igbp.net</a><br><a href="http://www.stockholmresilience.org">www.stockholmresilience.org</a><br><a href="http://www.futureearth.info">www.futureearth.info</a><br><a href="http://www.gloabaia.org">www.gloabaia.org</a><br><a href="http://www.anthropocene.info">www.anthropocene.info</a><br>The trajectory of the Anthropocene<br><a href="http://www.igbp.net/globalchange/greatacceleration.4.1b8ae20512db692f2a680001630.html">http://www.igbp.net/globalchange/greatacceleration.4.1b8ae20512db692f2a680001630.html</a>  |
| 2    |     |     |     | 2019 Global Assessment Report on Disaster Risk  | - "Disaster risks emanate from development pathways, manifesting from the trade-offs inherent in development processes. In some ways, this has always been well recognized. What is new in today's increasingly interconnected society is the diversity and complexity of threats and hazards, and the complex interaction among them, which result in "an unprecedented global creation of risks, often due to previous socioeconomic development trends interacting with existing and new development dynamics and emerging global threats." P 418 |   | <a href="#">GAR website Conclusion</a>  |

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| Line | Loc | Typ | Val | Crises                       | Related Issues  | Cost in % GDP | Research Links & Images   |
|------|-----|-----|-----|------------------------------|---|---------------|---|
| 1    |     |     |     | 2019 WEF Global Risks Report | Global Risks out of Control - Is the world sleepwalking into a crisis? Global risks are intensifying but the collective will to tackle them appears to be lacking. Instead, divisions are hardening. The world's move into a new phase of state-centred politics, noted in last year's Global Risks Report, continued throughout 2018. The idea of "taking back control"—whether domestically from political rivals or externally from multilateral or supranational organizations—resonates across many countries and many issues. The energy now being expended on consolidating or recovering national control risks weakening collective responses to emerging global challenges. We are drifting deeper into global problems from which we will struggle to extricate ourselves. |               | <a href="http://www3.weforum.org/docs/WEF_Global_Risks_Report_2019.pdf">http://www3.weforum.org/docs/WEF_Global_Risks_Report_2019.pdf</a>  |
|      |     |     |     |                              | 10.   |               |   |

**Table 1 – Signs and Symptoms of Approaching Limits of System Distress**

| Line | Loc | Typ | Val | Condition observed             | Type of emerging distress  | Potential Points of influence   |
|------|-----|-----|-----|--------------------------------|--|---|
| 1    |     |     |     | <b>Growth</b>                  | During its initial exponential period, growth is itself becomes a systemic instability itself, resolved by natural systems during maturation IF enough of the seed capital is distributed  | Since growth is driven by investment in development, one can potentially shift the priorities of investment to address societal and biophysical necessities, rather than just finance             |
| 2    |     |     |     | <b>Increasing Rigidity</b>     | Stress and loss of resilience makes systems rigid and fragile. The balloon only pops after its flexible surface is stretched until it might tear at any point. People, companies, and societies pushed to their limits become rigid before they break too. | These biophysical principles are gathered from long observation <a href="https://synapse9.com/signals/the-key-scientific-question/">https://synapse9.com/signals/the-key-scientific-question/</a> |
| 3    |     |     |     | <b>Strains and deformities</b> | Destructive wearing. Distributed threats. Divergent growth rates a sign of growing strains. Scattered spots of new intrusions  |   |
| 4    |     |     |     | <b>Loss of resilience</b>      | Slower recovery time. Loss of cushions, freedoms, tolerance, generosity  |   |

## Top 100 Signs of a Planet In Distress

| Line | Loc | Typ | Val | Crises                           | Related Issues  | Cost in % GDP | Research Links & Images |
|------|-----|-----|-----|----------------------------------|---|---------------|-------------------------|
| 5    |     |     |     | <b>Sacrificing standards</b>     | Living on debt, Pressed to becoming dependent on shortcuts, Ignoring infrastructure, accepting efficiencies that sacrifice stability, extremism   |               |                         |
| 6    |     |     |     | <b>Abnormal interruptions</b>    | Increasing struggle and downtime as a sign of congestion, growing conflicts of interests  |               |                         |
| 7    |     |     |     | <b>Abnormal behavior</b>         | Mice jumping ship or birds go silent. declining responsiveness. Shakes or unfamiliar tremors. Divided interests in times of crisis calling for common efforts.  |               |                         |
| 8    |     |     |     | <b>Silent messenger</b>          | When the canary in the mine dies, there's no more alarm, like the Silent Spring, when birds or insects, are vanishing without warning.  |               |                         |
| 9    |     |     |     | <b>100 Overtaking crises</b>     | See tables 3-A to 3-I   |               |                         |
| 10   |     |     |     | <b>Unusual silence</b>           | Nature 'abhors a vacuum' and emerging systems initially need an orderly calm to develop. Like kids getting into mischief may be signaled by an unexpected calm, or the calms before a local storm.      |               |                         |
| 11   |     |     |     | <b>Increasing overhead costs</b> | Approaching systemic bankruptcy as maintenance costs exceed available income. Diminishing resource returns on resources invested (EROI) Rising environmental costs. Stubborn societal budget inflation. |               |                         |
| 12   |     |     |     | <b>Growing systemic conflict</b> | Crises of all kinds forming waves of disruption, "plagues of plagues." Shifting focuses of desperate response, the whole coming unglued.  |               |                         |

**Table 2 – Types of Widening Gaps in Environmental and Societal Impact Assessment and Response (Categories for Table 3)**

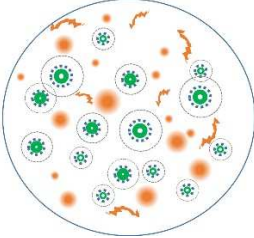
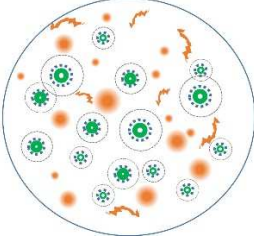
| Line | Loc | Typ | Val | Main Categories of Growing Crises  | Key 1                            | Key 2   |
|------|-----|-----|-----|--|----------------------------------|---|
|      |     | Ord |     | <b>A. Organizational Distress - Crowding, Overload, Congestion, Imbalance, Interference</b><br><b>B. Mental Distress, Misunderstanding, Information Overload, Misread &amp; Changing Signals</b> | <u>Locations zones</u>           | <u>Type of Responsibility</u><br>DA => impact can be measured and |
|      |     | Mdi |     |  | Sys = Systemic<br>Reg = Regional |   |

# Top 100 Signs of a Planet In Distress

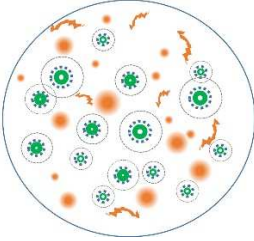
| Line | Loc | Typ                                    | Val | Crises  | Related Issues  | Cost in % GDP | Research Links & Images   |
|------|-----|--|-----|---|---|---------------|---|
|      |     | Isf<br>Esd<br>Edi<br>Hrd<br>Ndd<br>Sro |     | <b>C. Increasing Solution Failures – Forward steps that slide backward</b><br><b>D. Economic And Social Disruption – Societal threats</b><br><b>E. Environmental Disruption – Conflicts with nature</b><br><b>F. Human Resource - Depletion And Degradation</b><br><b>G. Natural Resource - Depletion And Degradation</b><br><b>H. Societal Unmanageability - Loss of Resilience, Rising Overhead</b><br><b>I. Cultural breakdown/failure to reproduce, discontinuity</b> | Loc = Local<br>Eco = Environmental<br>Soc = Societal<br>Ecn = Economic<br>Gov = Governance<br>Fam = Family<br><span style="background-color: yellow; display: inline-block; width: 10px; height: 10px; vertical-align: middle;"></span> = New Entry |               | <b>Directly Attributed to those responsible</b><br>CA => impact is systemic and only <b>Collectively</b> <b>Attributed</b> to shares of responsibility for the economy as a whole<br><br><b>Medium-2, Low-1, Economic cost</b><br><b>Text dividers.</b> to keep each entry a single line without line breaks as needed to paste into the XLS file |

**Table 3 – 100 Growing World Crises Appearing To Mark the Crossing of Planetary Boundaries of Systemic Distress, (from maximizing the force, speed, and acceleration of our economic collision with natural limits.)**

## A. Organizational distress - Crowding, Overload, Congestion, Imbalance

| Line | Loc | Typ | Val | Crises                           | Related Issues   | Cost in % GDP | Research Links  | Images  |
|------|-----|-----|-----|----------------------------------|--|---------------|---|---|
| 1    |     | Ord | 3   | Growth of distressed populations | Tied to growing habitat loss, resource loss, dependence on fossil fuels for food and other services<br><br>Perpetuated by ineffective aid                    |               | In a system that works as a whole, increasing pressure on one part can be absorbed or pushed back on others, such as when the whole comes under distress. |   |
| 2    |     | Ord | 4   | Unequal economic playing field.  | From winners investing in their own success in a pursuit of maximizing growth of their inequality.. With losers suffering government and cultural breakdown. |               |   |  |

# Top 100 Signs of a Planet In Distress

| Line | Loc | Typ | Val | Crises  | Related Issues  | Cost in % GDP | Research Links & Images  |
|------|-----|-----|-----|---|---|---------------|--|
| 3    |     | Ord | 4   | Systemic burdens of crowding and congestion                   | Crowding increases interference and the time it takes to do things and the spread of contagious diseases.. It has a natural limit when sudden system breakdowns can occur, like by spontaneous traffic jams, a natural disruption of smooth flows called "turbulence".. Congestion is also a burden of societal, environmental and economic complexity, interfering with smooth flows, and produced directly by the multiplying of the complexity of our world with growth. |               |   |
| 4    |     | Ord |     | Social and economic costs of complexity                       | Ever increasing complexity of regulations, best practices, negotiations, designs and decision making. Systems designed for efficiency not agile.<br><br>Complication for implementing designs, the 'rule book' often discarded if it's in the way, avoidance of due process and attraction of corruption  |               | Hidden reason why US virus lab tests fell way behind. NYTimes 20-05/21 "These Labs Rushed to Test for Coronavirus. They Had Few Takers" By Katie Thomas<br><br>"The fragmented U.S. health care system has hampered efforts to expand coronavirus testing, by making it difficult for hospitals to switch to new labs with ample capacity."<br><br><a href="https://www.nytimes.com/2020/05/21/health/coronavirus-testing-lab-capacity.html?searchResultPosition=1">https://www.nytimes.com/2020/05/21/health/coronavirus-testing-lab-capacity.html?searchResultPosition=1</a> |
| 5    |     | Ord |     | Increasing hurry with ever more complicated systems and tasks | - number of meds & complexity of conditions, simple reading and sorting tasks   |               | <a href="#">Overloaded Pharmacists Warn They're Making Fatal Mistakes</a>  |
| 6    |     | Ord |     | Increasing societal overhead costs                            | The cost of supporting the growing populations of economically and physically handicapped. Deserving no doubt but increasingly unaffordable. As health care, the military and Social Security are increasingly paid for by increasing debt too.. So we need a "change of life" rather than to continue running our life into the ground.  |               |  |
| 7    |     | Ord |     | Congestion as intrusion                                       | on personal and cultural space,. and so on personal and cultural freedom of movement.   |               |  |
| 8    |     | Ord |     | Increased threat of pandemics                                 | The extensive travel and congested population centers   |               | <b>"The tradeoff between efficiency and resilience is confronted by every sector of society."</b><br><br>Dennis Meadows article:   |

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| Line | Loc | Typ | Val | Crises | Related Issues | Cost in % GDP | Research Links & Images  |
|------|-----|-----|-----|--------|----------------|---------------|--|
|      |     |     |     |        |                |               | <a href="https://www.chelseagreen.com/2020/limits-to-growth-covid-epidemic/">Limits to Growth and the COVID-19 epidemic<br/>https://www.chelseagreen.com/2020/limits-to-growth-covid-epidemic/</a> |

### B. Mental Distress - Misunderstanding, Information Overload, Misread & Changing Signals

| Line | Loc | Typ | Val | Crises   | Related Issues  | Cost in % GDP | Image & Points of influence |
|------|-----|-----|-----|--|---|---------------|-----------------------------|
| 1    |     | Mdi |     | Invisible coupling of growth and its complications                       | People unaware the news does not give a fair picture of the system. Lack of information on the impacts of profits lead to uninformed profitmaking decisions   |               |                             |
| 2    |     | Mdi |     | Mismeasurement of impacts  | Ignorance of the growing untraceable impacts of money. Counting only what business controls omits the global impacts its economic demands also cause.. Failure to take responsibility for the whole |               |                             |
| 3    |     | Mdi |     | Solution failures and denial   | UN SDG backslide, lack of SDG progress  |               |                             |
| 4    |     | Mdi |     | Emerging silos of misinformation   | Social media bubbles masquerading as the world, lack of information as denial.  |               |                             |
| 5    |     | Mdi |     | Mistaking current welfare as an absence of environmental threats         | UN SDGs and other wellbeing indicators fail to factor in real sustainability  |               |                             |
| 6    |     | Mdi |     | Ignorance of the systemic point of diminishing returns                   | Suppression of discussion of limits to growth. Political reactionary movements  |               |                             |
| 7    |     | Mdi |     | Ever-growing demand for productivity complicating and stressing everyone | Blowback as solutions become the problem. Driving a world increasingly dedicated to peace to make peace with environmental war  |               |                             |



## Top 100 Signs of a Planet In Distress

| Line | Loc | Typ | Val | Crises | Related Issues | Cost in % GDP | Research Links & Images |
|------|-----|-----|-----|--------|----------------|---------------|-------------------------|
|------|-----|-----|-----|--------|----------------|---------------|-------------------------|

### C. Increasing Solution Failures

| Line | Loc | Typ | Val | Crises   | Related Issues  | Cost in % GDP | Research Links & Images   |
|------|-----|-----|-----|--|---|---------------|---|
| 1    |     | Isf |     | Designs for maximizing growth to crash through its natural limits                  | driving “conservatives” to challenge all comers with their believe endless growth is a birth right. unleashing our whole wave of growing systemic crises  |               |   |
| 2    |     | Isf |     | Designing the economy for a dispersed travel system                                | when travel and dispersal linked to high value energy consumption. and would become major barriers to adapting to climate change  |               |   |
| 3    |     | Isf |     | Making the economy’s guiding plan maximizing the growth rate of financial profits. | Fooling Leaders and the public into Losing track of nearly everything else we are doing   |               |   |
| 4    |     | Isf |     | The wholesale denial of limits to growth, substituting “sustainability”            | Which in the details is a direct continuation of limitless growth with nicer terminology  |               |   |
| 5    |     | Isf |     | Using efficiency to grow transportation  | and so multiplying fuel use rather than reducing it   |               |   |
| 6    |     | Isf |     | Growth solutions create the growing problems                                       | Among the more curious counterintuitive results of <b>great solutions</b> to the needs created by capitalism is they tend to multiply until that <b>becomes the problem</b> , creating devoted mass movements before thoroughly betraying them. |               | Examples include basing the economy on multiplying energy uses that start as solutions and then create ever greater problems. |

### D. Economic and Social Disruption

| Line | Loc | Typ | Val | Crises  | Related Issues  | Cost in % GDP | Research Links & Images |
|------|-----|-----|-----|---|---|---------------|-------------------------|
| 1    |     | Esd |     | Strains of keeping up with demands for increased productivity | People like technical fixes, then are dismayed when replacing them takes over, to repeat them again and again.. |               |                         |

## Top 100 Signs of a Planet In Distress

| Line | Loc | Typ | Val | Crises  | Related Issues   | Cost in % GDP | Research Links & Images |
|------|-----|-----|-----|---|--|---------------|-------------------------|
|      |     |     |     |   | Rearranging how we live and use the earth faster and faster  |               |                         |
| 2    |     | Esd |     | Growing overhead cost of fighting nature              | Depletion or resources raising their cost. growing costs of maintaining and caring for everything.   |               |                         |
| 3    |     | Esd |     | “Creative destruction” growing distressed communities | As growth accelerates change it tends to rip up and discard working solutions of the past ever faster.. with productive centers racing far ahead it leaves behind growing communities of people with no place to fit in.   |               |                         |
| 4    |     | Esd |     | Failures of poverty elimination                       | Communities that experienced profound failure and perpetuate cultures of failure.. a proud culture would build the learning world they could revive in.. an example may be the current jail reform movement,. thinking to apply to cultural jails people find themselves in, like that produced the opioid epidemic. |               |                         |
| 5    |     | Esd |     | Disruptive rates of change                            | Our information system so very prone to misinformation, building out the design for a new world without individual responsibilities  |               |                         |
| 6    |     | Esd |     | Growth imperative                                     | Both an addiction to “free money” being blind to its ever growing costs to the earth and society, and. a financial practice of making profit to multiply profit that the financial culture had no idea was inherently limited.   |               |                         |
| 7    |     | Esd |     | Unequal competition                                   | Economics says the dominance of the successful provides the greatest good to the greatest number,. When the successful only invest in themselves, as is generally the case, the distributive effect of wealth stops.   |               |                         |
| 8    |     | Esd |     | Digital infrastructure risk                           | The digital tools and data formats that become unreadable, as system memory decay. Interconnection of systems as a hacking threat.   |               |                         |
| 9    |     | Esd |     | Global financial risk                                 | Betting on ever faster increasing income from a diminishing resource is a sure bad bet, waiting for failure.. The financial system may be more prepared for this   |               |                         |

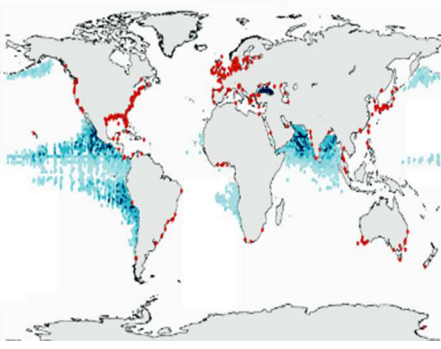
## Top 100 Signs of a Planet In Distress

| Line | Loc | Typ | Val | Crises                              | Related Issues   | Cost in % GDP | Research Links & Images   |
|------|-----|-----|-----|-------------------------------------|--|---------------|---|
|      |     |     |     |                                     | than it seems, but a crash to last a long time seems most likely. people with life savings accounts relying on stability, are clearly not prepared though  |               |   |
| 10   |     | Esd |     | Increasing economic inequity        | As environmental resistance increases only the most competitive  |               |   |
| 11   |     | Esd |     | Rising disaster risks and costs     | All these different kinds of crises create growing disasters in people's lives with as rapidly growing costs. That ever faster rising global disaster cost makes our growth agenda totally unprofitable  |               |   |
| 12   |     | Esd |     | Industrial pollution                | Regulation and innovation have greatly reduced visible pollution, except for the ones we can't seem to decouple from generating wealth, like CO2, like plastic, and whatever pollutant it is causing the autism epidemic.  |               |   |
| 13   |     | Esd |     | Rising oceans, and coastal flooding | Still "locked in" due to our finding no way to make the radical changes required to halt warming,. is the seeming sure major loss of coastal civilization in the next century or so.. as all plans still are to maintain boundless growth of energy use to grow the economy,. using renewables only to ADD to fossil fuels |               |   |
| 14   |     | Esd |     | Development climate zone changes,   | One of the greatest costs of climate change is likely to require us to rebuild our homes, and provide solar farms with 2 to 4 times the floor area, to heat and cool them.   |               |   |
| 15   |     | Esd |     | Extremes of weather forces          | We've seen important increases in weather severity, and good research indicates it's likely to accelerate until we make quite radical changes.. Climate change is directly related to air movement, increased air movement to compensate for the increased insulation value of the air.                                    |               | see <a href="https://synapse9.com/signals/2019/12/17/growth-constant-fingerprints-of-economically-driven-climate-change/">https://synapse9.com/signals/2019/12/17/growth-constant-fingerprints-of-economically-driven-climate-change/</a> |
| 16   |     | Esd |     | Extremes of high and low river flow | Swings between flood and draught on river basins causing havoc for agriculture, planning and recovery.   |               |   |

## Top 100 Signs of a Planet In Distress

| Line | Loc | Typ | Val | Crises                   | Related Issues   | Cost in % GDP | Research Links & Images              |
|------|-----|-----|-----|--------------------------|--|---------------|--------------------------------------|
| 17   |     | Esd |     | World Food Crises        | Climate change crop failures, reliance on industrial rather than community farming practices.  |               | <a href="#">Planetary boundaries</a> |
| 18   |     | Esd |     | World hunger             | Endemic poverty in virtually every country.  |               | <a href="#">International crises</a> |
| 19   |     | Esd |     | The severity of COVID-19 | Spread by the air flight of the wealthy to hit rich and poor in a congested world with great force, handicapped by “just in time” economies without disaster planning capability, manmade getting worse over time. |               |                                      |

### E. Environmental Disruption

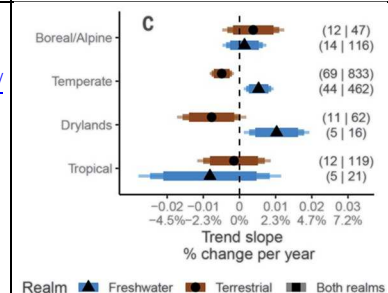
| Line | Loc | Typ | Val | Crises   | Related Issues  | Cost in % GDP | Research Links  | Images  |
|------|-----|-----|-----|--|---|---------------|---|---|
| 1    |     | Edi |     | Climate change                                       | Myriad disruptive changes to the norms of the earth, we'd never have guessed even if initially more responsive.   |               | <a href="#">Wikipedia - Planetary boundaries</a>  |   |
| 2    |     | Edi |     | Ocean Acidification                                  | CO2 absorbed threatens corals and other fragile shelled animals, potentially threatening the whole food chain of the oceans.  |               | <a href="#">Wikipedia - Planetary boundaries</a>  |   |
| 3    |     | Edi |     | Ocean deoxygenation and expansion of hypoxic zones - | Sixty years ago, only 33 ocean sites suffered from low oxygen levels. That number skyrocketed to 700 in 2011. . River outflow located eutrophication (red). Global hypoxic zones 2%, ½ caused by global warming. (blue) |               | The UNESCO <a href="#">Ocean is Losing its Breath, Declining Oxygen in the World's Ocean and Coastal Waters</a> – CBS News <a href="#">World's oceans are losing oxygen at a dangerous, unprecedented rate as temperatures rise.</a><br><a href="https://en.wikipedia.org/wiki/Ocean_deoxygenation">https://en.wikipedia.org/wiki/Ocean_deoxygenation</a> |  |
| 4    |     | Edi |     | Biodiversity Loss, Great mass extinction             |   |               | <a href="#">Wikipedia - Planetary boundaries</a><br><a href="#">Google scholar Biodiversity Trends</a>  | Insect Abundance  |

# Top 100 Signs of a Planet In Distress

| Line | Loc | Typ | Val | Crises                                   | Related Issues   | Cost in % GDP | Research Links & Images   |
|------|-----|-----|-----|--|--|---------------|---|
|      |     |     |     |  |  |               | <p><b>C</b></p> <p>Legend: Realm ▲ Freshwater ■ Terrestrial ■ Both realms</p>   |
| 5    |     | Edi |     | Food chain threats, and moving habitats, | Polar bears stranded, Coffee zones moving,. African agriculture zones, Opening of Canadian and Russian north. Ocean CO2 pollution, |               |   |
| 6    |     | Edi |     | Animal Habitat Loss                      | Human development concentrated in former wildlife homes.. Paving over soils. Human-animal disease interactions. Deforestation      |               |   |
| 7    |     | Edi |     | Sharp Animal population decline          | Population decline - Living Planet Index.  |               | <a href="https://royalsocietypublishing.org/doi/full/10.1098/rstb.2004.1584">https://royalsocietypublishing.org/doi/full/10.1098/rstb.2004.1584</a> |
| 8    |     | Edi |     | Loss of pollinators                      | In global decline of bee species, bumble bees in particular now, bat populations   |               |   |
| 9    |     | Edi |     | Contamination/decontamination of soils   | Chemical pollution, only moved not eliminated as each storage site becomes a chemical threat to people                             |               |   |

# Top 100 Signs of a Planet In Distress

| Line | Loc | Typ | Val | Crises                                     | Related Issues  | Cost in % GDP | Research Links & Images  |
|------|-----|-----|-----|--|---|---------------|--|
| 10   |     | Edi |     | Invasive species & ecological disruption   | Boreal forest loss due to invasive parasites. Chinese river fish taking over the Chicago river and water system clogging shellfish in the great lakes, spread by shipping vessel dumping of waste water taken in elsewhere.. Pets or animals imported for one reason and becoming invasive. forest loss |               |  |
| 11   |     | Edi |     | Agricultural land loss                     | Industrial disturbance. urban and suburban sprawl   |               | <a href="#">Wikipedia - Planetary boundaries</a>   |
| 12   |     | Edi |     | Land devoted to waste disposal             | Fracking effluent pits, ever expanding chemical and urban waste dumps,. superfund sites.  |               |  |
| 13   |     | Edi |     | Freshwater depletion                       | Mining aquifers and desertification of farmland   |               | <a href="#">Wikipedia - Planetary boundaries</a>   |
| 14   |     | Edi |     | Natural Resource Depletion And Degradation | Ever faster consumption of finite natural resources.  |               | <a href="#">Wikipedia - Planetary boundaries</a><br><a href="#">4.1.3 Nitrogen cycle</a> <a href="#">4.1.4 Phosphorus</a> <a href="#">4.1.8 Ozone depletion</a> <a href="#">4.1.9 Atmospheric aerosols</a> <a href="#">4.1.10 Chemical pollution</a> |
| 15   |     | Edi |     | Insect Armageddon??                        | Meta-analysis reveals major declines in terrestrial but increases in freshwater insect abundances.  |               | Science 24 Apr 2020: Vol. 368, Issue 6489, pp. 417-420 DOI: 10.1126/science.aax9931<br><a href="https://science.sciencemag.org/content/368/6489/417">https://science.sciencemag.org/content/368/6489/417</a>   |



## F. Human Resource Depletion And Degradation

| Line | Loc | Typ | Val | Crises                                    | Related Issues   | Cost in % GDP | Research Links & Images |
|------|-----|-----|-----|---|--|---------------|-------------------------|
| 1    |     | Hrd |     | Increase in People living with disability | An effect of interfering with the survival of people, raising the 'unproductive' medical overhead cost |               |                         |

## Top 100 Signs of a Planet In Distress

| Line | Loc | Typ | Val | Crises  | Related Issues  | Cost in % GDP | Research Links & Images   |
|------|-----|-----|-----|---|---|---------------|---|
| 2    |     | Hrd |     | Genome drift favoring medically risk prone people | An effect of interfering with the survival of people, raising the 'unproductive' medical overhead cost  |               |   |
| 3    |     | Hrd |     | Regions of distress, despair and social breakdown | The "Trump base" is culture bound by a common despair.. Governing, social and family overload of increasingly complex demands   |               |   |
| 4    |     | Hrd |     | Loss of human languages                           | approximately 90% of existing languages expected to be dead or unrecoverable by the end of the. Roland, Ethan C. and Gregory Landua. 2013. Regenerative Enterprise: Optimizing for Multi-. Capital Abundance  |               | <a href="https://www.rescue.org/article/top-10-crises-world-should-be-watching-2019">https://www.rescue.org/article/top-10-crises-world-should-be-watching-2019</a> - Venezuela, Democratic Republic of Congo, Central African Republic, Nigeria, South Sudan, Ethiopia, Somalia, Yemen, Serbia, Afghanistan. |
| 5    |     | Hrd |     | Societal Governance breakdowns                    | Failed societies from both being economic losers and internal political dissention. The invasion of malign indigenous sub-cultures responding to the global disruptions of their ways of life, as people hating the world.. Often the result of economic marginalization in a world where the rich do take ever more of the spoils. |               |   |
| 6    |     | Hrd |     | Involuntary traumatic migration                   | From widespread governance breakdown. And global aid being better at growing helpless populations than really helping them. Given all the convergent opposing forces..<br>Republic 4. Burundi 5. Ukraine 6. Venezuela 7. Mali 8. Libya 9. Ethiopia 10. Palestine  |               | Norwegian Refugee Council's annual list of the <a href="#">world's most neglected displacement crises</a> 1. Cameroon 2. The Democratic Republic of the Congo 3. The Central African  |
| 7    |     | Hrd |     | Traumatic societal distress                       | Epidemic drug addiction. Political and economic governance failures   |               |   |
| 8    |     | Hrd |     | Distressed populations and communities            | Shifting technology excluding its former regions and localities. Cultural distress causing regional drug addiction  |               |   |
| 9    |     | Hrd |     | Urban migration and Rural flight. Mass migration. | Moving wealth to the cities away from the country. Abandoning sustainable rural communities, for swelling rootless populations of cities  |               |   |
| 10   |     | Hrd |     | Loss of Indigenous cultures & knowledge           | A deeply shameful process of economic genocide. Hard to see how it can be   |               |   |

## Top 100 Signs of a Planet In Distress

| Line | Loc | Typ | Val | Crises                           | Related Issues  | Cost in % GDP | Research Links & Images   |
|------|-----|-----|-----|----------------------------------|---|---------------|---|
|      |     |     |     |                                  | undone, other than by making space for continuity.  |               |   |
| 11   |     | Hrd |     | Declining quality of relief      | In an ever more demanding and less resilient world that is ever less space for true relief and relaxation.  |               |   |
| 12   |     | Hrd |     | Diseases of Prosperity/Affluence | diseases of affluence include mostly chronic non-communicable diseases (NCDs) with economic development believed to be an important risk factor   |               | <a href="https://en.wikipedia.org/wiki/Diseases_of_affluence">https://en.wikipedia.org/wiki/Diseases_of_affluence</a> |
| 13   |     | Hrd |     | Human Genome Pollution           | Thought to naturally result from medical interventions that increase the viable reproduction of unhealthy people, such as for NCDs, artificial immunity with vaccinations   |               |   |
| 14   |     | Hrd |     | Growing diseases of healthcare   | Overuse of antibiotics and life extension's effect of increasing the number and severity of illnesses we live with. Increasing global contact risks pandemics. Healthcare shifting the gene pool toward more unhealthy people |               |   |

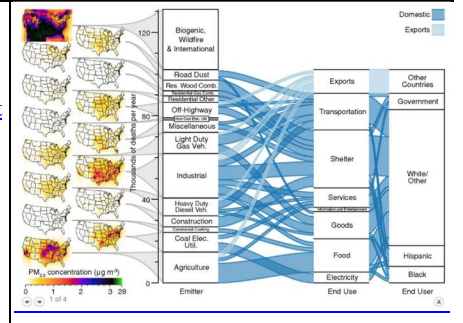
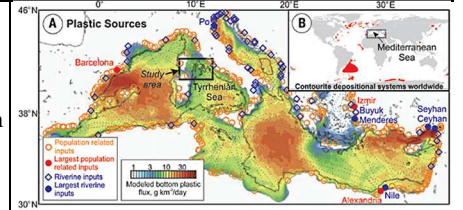
### G. Natural Resource Depletion And Degradation

| Line | Loc | Typ | Val | Crises                                       | Related Issues   | Cost in % GDP | Research Links | Images |
|------|-----|-----|-----|--|--|---------------|----------------|--------|
| 1    |     | Ndd |     | Medicinal, biochemical and genetic resources | In global decline  |               |                |        |
| 2    |     | Ndd |     | Natural Resource depletion                   | Loss and depletion of soils, loss of ground water,   |               |                |        |
| 3    |     | Ndd |     | Deforestation                                | Caused by development. by climate change   |               |                |        |
| 4    |     | Ndd |     | Fresh water crisis                           | Ground water depletion, clean river water depletion. Floods from too much rain in too short a time |               |                |        |
| 5    |     | Ndd |     | Ocean pollution with plastic waste           | The ocean gyres of floating plastic, with so many other crises and chemistry no                    |               |                |        |



# Top 100 Signs of a Planet In Distress

| Line | Loc | Typ | Val | Crises  | Related Issues   | Cost in % GDP | Research Links & Images   |
|------|-----|-----|-----|---|--|---------------|---|
|      |     |     |     |   | solution, as yet, we toy with very marginal solutions like alternate shopping bags.  |               |   |
| 6.1  |     | Ndd |     | Lake and ocean plastic and microplastic waste | Often consumed disabling sea birds, mammals, and ocean life lake and ocean pollution   |               |   |
| 6.2  |     | Ndd |     | Ocean floor microplastics                     | Concentration at deep sea biodiversity hotspots.   |               | <p>Jun 5 2020 Science - <a href="#">Seafloor microplastic hotspots controlled by deep-sea circulation</a>.</p> <p>Study in Mediterranean off the coast of Italy here, we demonstrate that the spatial distribution and ultimate fate of microplastics are strongly controlled by near-bed thermohaline currents (bottom currents). These currents are known to supply oxygen and nutrients to deep-sea benthos, suggesting that deep-sea biodiversity hotspots are also likely to be microplastic hotspots.</p> |
| 6.3  |     | Ndd |     | Overfishing                                   | National fleets ignoring coastal rights. National resistance to global regulation.   |               |   |
| 7    |     | Ndd |     | Climate habitat zone shifts                   | Resource migration. Fish and crab climate zone shifts. Coffee soils and climate zone shifts. regional resource loss. Highway habitat division  |               |   |
| 8    |     | Ndd |     | Ocean dead zones                              | Runoff from agricultural or high population rivers.  |               |   |
| 9    |     | Ndd |     | The drying of forests prone to fire           | Fires in Russia, California, Australia, likely to cause major culture change.  |               |   |
| 10   |     | Ndd |     | Accumulating GHGs pollution                   |  |               | <a href="https://www.wri.org/news/beyond-renewables-how-reduce-energy-related-emissions-measuring-what-matters">https://www.wri.org/news/beyond-renewables-how-reduce-energy-related-emissions-measuring-what-matters</a>   |
| 11   |     |     |     | Environmental inequity                        | <p>The natural match between less economic success and worse choices of environment, made worse by congestion, is extensively documented, but the causation is not left at that.</p> <p>The important angle seems to be that the distress for “essential workers” with less environmental choice. a glaring systemic failure, a “canary in the coal mine.”</p> |               | <p>Inequity in consumption of goods and services adds to racial–ethnic disparities in air pollution exposure</p> <p><a href="https://www.pnas.org/content/116/13/6001.short">https://www.pnas.org/content/116/13/6001.short</a></p>   |



# Top 100 Signs of a Planet In Distress

| Line | Loc | Typ | Val | Crises                     | Related Issues  | Cost in % GDP | Research Links & Images |
|------|-----|-----|-----|----------------------------|---|---------------|-------------------------|
| 12   |     | Ndd |     | Declining resource quality | As the best resources are used first, we end with ever faster growing resource demands for poorest resources. |               |                         |

## H. Societal Unmanageability - Loss of Resilience, Rising Overhead, False Visions

| Line | Loc | Typ | Val | Crises  | Related Issues  | Cost in % GDP | Research Links & Images   |
|------|-----|-----|-----|---|---|---------------|---|
| 1    |     | Sro |     | Macro Economic failure  | Strategic error in building the future on a model of the past. Not responding to the growth of costly externalities as a sign to shift from takeoff growth strategies to landing growth strategies.   |               |   |
| 2    |     | Sro |     | Failures of both science and governance in guiding an ever more complex and rapidly changing economy. | UN climate response failure to see the primary cause of climate change has always been growth.. Failure to study growth in nature to understand how it usually builds secure homes for the system doing the building.. Consider the massive commitment of the UN to the SDGs, only to find they relied on growth having the opposite of its natural effect. |               |   |
| 3    |     | Sro |     | Failure of science to notice the natural roles of growth in nature                                    | False theory of nature as using our models of control.. The Centrality of growth in natural systems ignored by science.   |               |   |
| 4    |     | Sro |     | Trusting efficiency to reduce impacts when it very clearly does the reverse.                          | The very clear global data is that Jevons was quite correct, that improving unit efficiency in a growth economy multiplies unit production to drive impacts exponentially.  |               | <p><b>Growth Constants of the World Economy Indexed by Growth Rate</b><br/>Components indexed to GDP(PPP) at 1971 proportional to relative growth rates</p> <ul style="list-style-type: none"> <li>World GDP (consumption): 3.24 % 22 yrs</li> <li>Meat Prod: 2.60 % 26 yrs</li> <li>Food Prod: 2.31 % 30 yrs</li> <li>Energy use: 2.04 % 34 yrs</li> <li>CO2 PPM: 2.06 % 37 yrs</li> <li>CO2 emission: 1.73 % 41 yrs</li> <li>Efficiency S/GDP/E: 1.19 % 59 yrs</li> </ul> |
| 5    |     | Sro |     | Overload of crises causing negligence we'd never have condoned before                                 | Markets heading for the sky and culture breaking apart  |               |   |

## Top 100 Signs of a Planet In Distress

| Line | Loc | Typ | Val | Crises   | Related Issues   | Cost in % GDP | Research Links & Images |
|------|-----|-----|-----|--|--|---------------|-------------------------|
| 6    |     | Sro |     | Increasing solution failures   | Rapid technological succession, solutions multiplied till they become the problem and force societal disruption  |               |                         |
| 7    |     | Sro |     | Sustainability non-compliance<br>while 63% of their member organizations develop and evaluate their sustainability policies at the CEO level, 37% reflect these goals into a code of conduct, 31% articulate sustainability positions within their subsidiaries, and only 33% actually integrate sustainability principles into the parent organization's strategies and operations. | Difficulty if targets, misdefinition, not profitable. Fewer than 10% of organizations link executive pay rewards to their sustainability performance; only around 20% include sustainability performance standards into employee evaluations.. data reported in the 2013 Global Corporate Sustainability Report by the United Nations Global Compact 3 <a href="https://www.unglobalcompact.org/library/371">https://www.unglobalcompact.org/library/371</a> |               |                         |
| 8    |     | Sro |     | Regional and National Government failure   | People revolting due to failure of governments to serve the common subject. Hong Kong, Iran, Iraq, Lebanon, Algeria, Argentina, Bolivia, Ukraine. Conflict between local and global econ forces  |               |                         |
| 9    |     | Sro |     | Breakdown of democracy   | Breakdown of distressed nations and regions, Authoritarian ascendency – European & US far right wings, Putin and Xi Jinping leading perpetual economic and political war.  |               |                         |
| 10   |     | Sro |     | Sovereign debt   | Debt in US growing twice as fast as the economy, seeming to say the spending of borrowed money is our only source of real growth.  |               |                         |
| 11   |     | Sro |     | Obsessions with sectarian conflict   | Unclear if ancient sectarian violence is greater now, but sure seems like it, with religions continuing to say my way or the highway to everyone in ear shot   |               |                         |
| 12   |     | Sro |     | Frantic pace of change   | Our minds fool us by presenting the ever faster changing world in daily changing snapshots that seem to present the “ever  |               |                         |

# Top 100 Signs of a Planet In Distress

| Line | Loc | Typ | Val | Crises  | Related Issues  | Cost in % GDP | Research Links & Images   |
|------|-----|-----|-----|---|---|---------------|---|
|      |     |     |     |   | present” as not changing.. No effort to keep the culture as a whole up on how the world it is part of is making everything it knows outmoded.. Parents having little way to relate to the world of their children |               |   |
| 13   |     | Sro |     | Neglect of existing infrastructure  | Rebuilding things is more costly than building them in the first place, and as crises emerge collective responses to each shrink rather than grow.  |               |   |
| 14   |     | Sro |     | Neglect of future infrastructure  | Failing to see that the end of growth requires a vision for the future, how to make a sustainable world.. Difficult for a culture that does not know how we got to where we are                                   |               |   |
| 15   |     | Sro |     | Short term dodges for long term crises                                    | Mining resources ever faster. Replacing people with technology. Counting up local business impacts and not global.  |               |   |
| 16   |     | Sro |     | Shrinking patience with events, as all systems seem to change ever faster | Logical future of technology in making past technology more rapidly outmoded.. Strategies hampered by ever shifting foundations   |               |   |
| 17   |     | Sro |     | Rapidly growing challenges  | Climate change then land encroachment of climate change solutions   |               |   |
| 18   |     | Sro |     | Failing circular resource plans   | An economy with circular resource use doesn't exist, but it remains most everyone's favorite false solution.  |               |   |
| 19   |     | Sro |     | Gross miscalculation of business environmental impacts,                   | Failure of sustainability science to develop any plan for internalizing all our externalities,. miscalculation of climate change costs, totally ignoring growth   |               | Just writing off the environmental impacts of business people, see SEA<br><a href="http://www.mdpi.com/2071-1050/3/10/1908/">http://www.mdpi.com/2071-1050/3/10/1908/</a> |
| 20   |     | Sro |     | Underestimate of growing disaster risks                                   | Ignoring the disaster growth rates built into sustaining global growth.   |               |   |
| 21   |     | Sro |     | Vast uncounted economic impacts   | Failure to account for impacts of business people in the supply chains for end products<br><br>Failure to account for systemic impacts now associated with individual business operations                         |               |   |
| 22   |     | Sro |     | Terrorism   | Erupting in many forms around the world, a new constant. .  |               |   |

## Top 100 Signs of a Planet In Distress

| Line | Loc | Typ | Val | Crises  | Related Issues   | Cost in % GDP | Research Links & Images   |
|------|-----|-----|-----|---|--|---------------|---|
| 23   |     | Sro |     | Illicit financial flows                                 | Tackling Illicit Financial Flows (IFFs) at the United Nations: what will the FACTI Panel deliver?                |               | <a href="#">Download UN Monitor #13 (pdf version).</a><br><a href="#">Wikipedia</a>                                 |
| 24   |     | Sro |     | Major Political crises                                  |  |               | <a href="https://en.wikipedia.org/wiki/International_crisis">https://en.wikipedia.org/wiki/International_crisis</a> |
| 25   |     | Sro |     | Boundless financial growth imperitive                   | Ever rising demand for financial returns from finite and insecure global resources.                              |               |   |
| 26   |     |     |     | Rising culture conflict as a divergence of world views. | Simultaneous unification of world culture as rapid change violates the realities of many combative sub-cultures. |               |   |
|      |     |     |     |   |  |               |   |

### I. Cultural breakdown/discontinuity/failure to reproduce working ways of knowing and living

| Line | Loc | Typ | Val | Crises  | Related Issues  | Cost in % GDP | Research Links & Images  |
|------|-----|-----|-----|---|---|---------------|--|
| 1    |     | Sro |     | Unmanageable convergence of crises  | The combined effect of all the kinds of earth crises listed above render many cultures inept and disinherited, breaking cultural continuity   |               | Cultural continuity over thousands of years is the human inheritance, except for repeated “dark ages” when cultures die, very possible to be the natural end of modern global growth culture,  |
| 2    |     |     |     | Cultural discontinuity, the succession problem  | Cultures contain all the worldviews on which people rely. When they become impossible, such as from increasingly rapid and hasty change, cultural abandonment has to occur.   |               |  |
| 3    |     |     |     | Civilizations Collapse<br>Not just “diminishing returns” but real promoting real societal bankruptcy. | The long history of dark ages provides something of a map of how it’s done, by a society creating conditions in which their cultures cannot reproduce.<br><br>It seems never to be due to outside forces, but inside forces such as relying on exponential growth, driving impossible challenges and destroying environments. |               | <b>Why Civilizations Collapse</b> Shows a highly speculative but fertile imagination of how it happens, an intuitively coherent view of societal_collapse as an irreversible failure to reproduce societal knowledge. A real warning for the disruptive change and social chaos we are developing today.<br><a href="https://thesideview.co/journal/why-civilizations-collapse/...">@SamoBurja</a> |
|      |     |     |     |   |   |               |  |

# Top 100 Signs of a Planet In Distress

| Line | Loc | Typ | Val | Crises | Related Issues | Cost in %<br>GDP | Research Links & Images |
|------|-----|-----|-----|--------|----------------|------------------|-------------------------|
|------|-----|-----|-----|--------|----------------|------------------|-------------------------|

**Added Ref's and Notes**

| Date | Source & comment | Code | Val | Item |
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