

Wouldn't it be wonderful if the whole world would

- collaborate in keeping the earth inhabitable? And
- consider other purposes, even an alternative way of life?

That would require an analysis and finally, a plan. Many people together could write such plans using digital technology. That's exactly what this document proposes: not any actual plan, but a platform to write one.

Summary

The following is a proposal to launch a platform (a website, for instance) on which everybody can analyse problems, in particular today's most pressing problem: the decline of the environment.

What would be the result?

The platform could help us to find

- root causes of problems,
- measures against problems,
- alternative goals, to which some problems no longer apply, and
- roadmaps for implementation.

This would result in a template from which people can derive an actual plan. As to the environment, this would not only be an emergency plan but possibly also a perspective on a new way of life.

Who should read this proposal?

If you want to organise, design, or develop such a platform, then please read the rest of this proposal.

How to respond?

Leave your comments about the contents in the project forum of the companion website:

<https://www.eeptpp.info>

You may also express your support in the endorsement forum or use the on-line contact form.

What would be the next step?

From the responses should emerge

- a concrete design or choice of the platform,
- an organisation behind it, and
- support for a fund request.

This document is a rendering of

<https://www.eeptpp.info>

and has no white pages to facilitate on-line reading.

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Preface

A few years ago, I joined several environmental groups because I grew very concerned about our common future. Some of these groups consider fundamental changes to society a prerequisite for keeping the earth as inhabitable as possible. The past year, I learned about so-called citizens' assemblies and it occurred to me that they may profit from a template for a plan. In this document, I propose a platform where one can write such a template. From the decades that I have been writing software for various organisations, I derive some confidence that such a platform is technically feasible. See my linkedin page

<https://nl.linkedin.com/in/arnold-bomans-6b117413>

for details about my background.

I hope that the platform will invite many people to mention both the patently obvious and the fundamentally different measures which are key to our survival.

Arnold Bomans, February 8, 2020

Introduction

The reasons behind this document are as follows.

- The world is experiencing several environmental crises: global warming, collapse of ecosystems, resource scarcity, and so on;
- to tackle the environmental crises, governments, organisations, and communities need a detailed emergency plan (see the note below);
- an emergency plan could be derived from a template (general framework) which lists measures against various problems, along with arguments, as well as possible pathways towards implementation of the measures;
- such a template could be written collaboratively on a digital, global platform; and finally,
- you may be able to contribute to launching such a platform.

The template could be a head start of a plan for actual measures and their implementation. For example, citizens' assemblies (see Wikipedia) may derive a plan from the template and transfer authority to their government for enforcing implementation of the plan. This has the benefit of motivating both citizens and government. The main benefit, however, would be to provide a perspective on fundamental change, as set out in the section on functional specifications on p.6.

Note about the environmental emergency

Cities, nations and even Europe have declared a state of emergency because of the climate: see the corresponding section in 'similar organisations' for references. (By the way, the word 'emergency plan' expresses a dilemma: any emergency calls for immediate action, yet a detailed, extensive plan still needs to be written.) The following mentions some literature about the climate, ecology, and resources.

Climate

Scientists mostly agree that there is global warming and that it is caused by human activity:

J. Cook, D. Nuccitelli, S. A. Green, M. Richardson, B. Winkler, R. Painting, R. Way, P. Jacobs, and A. Skuce (2013). *Quantifying the consensus on anthropogenic global warming in the scientific literature*. In: Environmental research letters, 8 (2).

<https://iopscience.iop.org/article/10.1088/1748-9326/8/2/024024>

According to

<https://scientistswarning.forestry.oregonstate.edu>

13422 scientists support a warning that there is a climate emergency:

William J Ripple, Christopher Wolf, Thomas M Newsome, Phoebe Barnard, William R Moomaw (sept. 1, 2019): *World Scientists' Warning of a Climate Emergency*, Bioscience Magazine.

<https://academic.oup.com/bioscience/article/70/1/8/5610806>

However, more than 800 scientists disagree:

CLINTEL (2020) *There is no climate emergency*.

https://clintel.org/wp-content/uploads/2020/01/2020-January-WCD_A4-01-2020-v2.pdf

This should be contrasted to the growth of CO2 emissions:

G. P. Peters, R. M. Andrew, J. G. Canadell, P. Friedlingstein, R. B. Jackson, J. I. Korsbakken, C. Le Quéré & A. Peregon (2020): *Carbon dioxide emissions continue to grow amidst slowly emerging climate policies*. *Nature Climate Change*, volume 10, pages 3–6.

<https://www.nature.com/articles/s41558-019-0659-6>

Ecosystems

One million species are expected to go extinct:

IPBES (2019) *Nature's Dangerous Decline 'Unprecedented'. Species Extinction Rates 'Accelerating'*. Media Release.

<https://www.ipbes.net/news/Media-Release-Global-Assessment>.

Resources

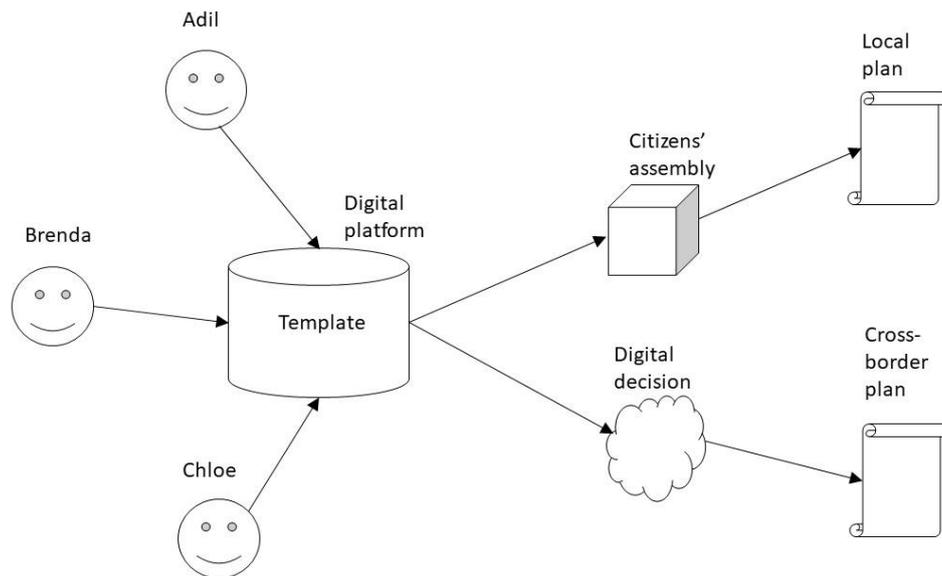
Scarcity from an economic perspective:

OECD (Retrieved feb.2020): *Costs of Inaction and Resource Scarcity: Consequences for Long-Term Economic Growth (CIRCLE). Policy perspectives*.

<http://www.oecd.org/env/indicators-modelling-outlooks/circle.htm>

Project Proposal for an Environmental Emergency Plan Template

The following proposes a project for launching a global digital platform to collaboratively write a template for plans against the environmental crises. The website's address EEPTPP (pronounced "eepeetippee") is an acronym of Environmental Emergency Plan Template Project Proposal. The essence is illustrated as follows.



User Adil describes a particular problem, Brenda suggest a measure against it, and so on. The resulting digital template is used by a citizen's assembly in a country as a headstart for a national plan. Using a digital decision procedure people may also select measures from the template to implement, which leads to a "cross-border plan."

This document concentrates on an emergency plan to combat the environmental crises. The following mentions

- the problem the project would deal with,
- the goal set in order to solve that problem,
- the desired outcome, and
- the assumptions for success.

The other chapters of this document provide the details of the proposal.

Problem

The problem to be addressed is the obligation of individuals and organisations to follow policies which have been based on insufficiently relevant information about the issues at hand, in this case: the environmental crises.

Information about an issue is called relevant if it fully accounts for the contents of that issue without "circumstantial" problems, such as there are: lack of argumentation, deliberation, and

participation; absence of alternatives; taboos on the expression of problems or measures; political dynamics, vested interests, and strategic thinking.

Goal

The goal is to define policies on the basis of relevant information, which includes the desires of those who are bound to these policies, and to let these policies be adopted.

Outcome

The outcome would be a globally accessible digital platform which invites people to judiciously

- define measures against the environmental crises,
- identify the root causes of these crises, and
- redefine the goals, which may allow to bypass the problems altogether

as well as to suggest routes towards implementation of the proposed changes.

The platform would provide a template which allows citizens or their representatives

- to agree on measures,
- to settle on a route towards their implementation, and
- to transfer authority to organisations, communities, or governments for imposing these measures.

Assumptions

The following is assumed:

- analysis and argumentation can be carried out according to specific guidelines;
- inconvenient statements are protected against change or removal;
- information can be presented concisely and comprehensively without duplication.

Supposedly, there are also enough resources, as listed in the section about the organisation on p.22.

Function of the Digital Platform

The platform should allow anyone to list problems; risks are also considered a problem for sake of brevity. For each problem, one would be able to indicate

1. measures against the problem,
2. the causes of the problem (down to the root causes) and
3. the goals, which may be reached while bypassing the problem altogether.

The second and third issue avoid the so-called preponderance of the means over the end.¹ Each approach has drawbacks:

1. measures against the problem often cause other problems,
2. removal of the underlying cause probably requires a general measure which takes long to arrive at, and
3. the goals may not be agreed on or power structures prohibit considering alternative goals at all.

Also, a measure against a problem may become superfluous once a more fundamental measure is taken; or it may turn out that the entity which experienced the problem no longer serves the right goal.

Example: why going to the bar is good for the climate

Consider the problem of glass shortage caused by wasting glass from bottles. A remedy for glass shortage is to recycle bottles. However, this measure poses a new problem, namely washing and melting the glass requires a lot of energy which is generated by burning fossil fuel; this emits carbon dioxide and therefore warms the atmosphere.

Measures against the problem

The complexity of this new problem restricts one's attention to the means of recycling bottles, which thus becomes an end in itself. To reach that end without the aforementioned problem, one could use energy from renewable sources. However, that would generate still other problems, like the production, maintenance, and replacement of solar panels.

Causes of the problem

One can also focus on the causes of the problem instead of on its manifestations. The immediate cause of glass waste is the waste of the bottle. So, a slightly more fundamental measure is reusing the bottles. Still, that requires washing the bottles and handling deposits.

¹ Suppose the end A is pursued by the means B but getting to B poses a problem. If one concentrates on the means B, then B becomes an end in itself, phenomenon called *preponderance of the means over the end*. (See *The Philosophy of 'As If'* by H. Vaihinger.) This may have two consequences. First, a solution C is pursued whilst the end A may also be arrived at via a different route, typically after investigation of deeper causes of the problem with B. Second, the focus on the problem with B detracts attention from the question whether A is a desirable goal at all.

Letting everybody bring one's own bottle to the shop (or let the liquid be delivered at home) would solve that problem too, but requires larger investments and sanctions to shop keepers who offer bottles as a service because they need to compete. So, the competitive kind of economy is one of the more fundamental causes of the waste. (It is also the cause of being of the profusion of bottles, see the definitions.) However, it would be time-consuming to precisely specify the kind of economy which encourages profit for the community rather than for individuals.

Reconsidering the goal

If the goal were the common good (and future) then all kinds of drinks would no longer be transported over great distances. In that case, many bottles would not be needed anymore, but consensus about abandoning exotic products is unlikely. This example may be taken one step further for sake of illustration: bottles are containers for only a few people, so there would be little need for them if people gathered in rooms where tasteful drinks are served from large containers, like casks.

Structure of the Digital Platform

The platform would offer a single template in English only.

- The section about the content on p.8 suggests a standard description of the problems, goals, and so on.
 - The graph example on p.10 illustrates the relations between these descriptions, that is, the structure.
 - The rubrication illustration on p.13 shows the table of contents of an example template.
- The definitions on p.17 help to decide where to place issues in the structure (e.g. as cause or as problem.)
- The way this content would be processed is sketched in the section about the procedure on p.19.

Content Structure

The platform should allow repeated or elaborate texts to occur in a single section and let them be referred to. This feature would lead to the following sections.

- Concepts, in particular causes of being.
- Goals along with
 - a quantification or other yardstick,
 - means, that is, preliminary goals (including measures against a problem if solution of the problem is considered a goal)
 - ends, that is, goals of which this goal is a preliminary goal (same remark as for means) and
 - scenarios for sake of illustration.
- Problems (including risks) mentioning their
 - manifestations,
 - causes (of becoming) which can be other problems,
 - causes of being (for which in-text references to concepts may suffice)
 - effects (most of which could automatically be generated as problems caused by this problem)
 - goals (see above) which, if this problem would not exist, would be attained, either immediately or because the disappearance of an effect frees the way for reaching the goal, and
 - instances of the problem (which have no specific measures against them) along with their causes.
- Measures (in the sense of actions) as such.
- Measures against problems, mentioning
 - advantages (reasons for this particular measure instead of an alternative)
 - disadvantages (objections against this particular measure) and
 - instances of the measure.

The detailed definitions of cause, problem, and so on are on p.17, where also some light is shed on the derivation of goals and effects.

These sections can be divided into subsections, like goals into sub-goals.

Whether a measure against a problem is accepted or rejected is up to the user of the template.

There would be two more sections dealing with the above sections:

- Categories of the above.
- References from one text or section to the other, allowing substitution of text from a single point of definition.

Conditions (such as fairness) have been omitted because they are too multi-faceted to be cast in a fixed mould.

Graph Example

Here is a loosely formatted illustration of the content structure.

Concepts:

- Recoverables are goods which can be reused after transformation.
- Non-recoverable goods are those which after transformation cannot be reused, like dissipated heat. For sake of illustration, restrict to energy.
- Market economy: distribution of goods according to a price set in the 'market'.

The concept 'market economy' when described more precisely may very well be listed as a measure.

Goals:

- Subsistence (in particular, survival)
 - Quantification: minimum intake of water, protein, minerals, and so on.
 - Means: for water, a well needs to be drilled, and so on.
 - Ends: a decent life.
 - Scenarios: to fetch water, I do not want to walk more than two miles a day.
- Save money: a similar analysis.

Problems:

- Problem G: atmospheric heating caused by anthropogenic emission of greenhouse gases (as well as feedback.)
 - One of the causes: squandering (problem S below.)
 - Goal (i.e. to be attained by solving the problem): subsistence
- Problem X: impending exhaustion of non-renewable energy sources.
 - The causes are squandering (problem S below) of energy and, of course, energy consumption.
 - Goal: subsistence.
- Problem S: squandering, that is, destructing goods or transforming energy into heat without the intended use to the full extent.
 - Effects: problems G and X.
 - Causes: see the instances below.
 - Goal: subsistence (save resources, reduce harm) and save money.
- Problem SE: squandering non-recoverable goods, that is, energy. Instances:
 - Problem SES: squandering of energy in *shops*, which is to say, commercial ones.
 - Cause: the energy cost is easily reflected in the product price (market failure.)
 - Problem SESD: open shop doors when it is cold outside.
 - Cause: the idea that *customers* need to be able to enter the shop hands-free (false attribution of needs.)
 - Problem SESA: illuminated *advertising* in shops during closing time.
 - Cause: the idea that nocturnal advertising raises sales (false imputation of requirements.)
- Problem H: harmful use (as opposed to harmful squandering.)

The entities 'shops', 'customer' and 'advertising' refer to the concept 'market economy' and so do the corresponding problems SES, SESD, and SESA. This indicates that, would the

market economy change, then these entities and problems may vanish. In other words, the market economy is a cause of being of the shops, customer, and advertising. See the definition of cause (starting on p.17) for further information. The cause of being may be stated explicitly.

Other problems are causes as stated for problem SE and common causes such as overpopulation, human vices and delusions.

Measures as such:

- Measure R: rationing, using one of the many mechanisms, like Sprumont's uniform rationing.

Measures against problems:

Against problem S (squandering):

- Measure F: forbid and sanction squandering (and explain why this is necessary.)
 - Against: problem S (squandering) and therefore also problems G (atmospheric heating) and X (resource exhaustion.)
 - Advantage: virtually nothing is lost; people will obey even without inspections because they can hold authorities accountable for their frugality ('I do not want problems with the authorities.')
 - Disadvantage: when conceived unreasonable, it evokes resistance or even increased squandering; it requires inspections, administration, sanctions, jurisdiction, and so on.
 - Instances:
 - against SES (forbid energy waste in shops)
 - against SESD (forbid open shop doors when cold outside)
 - against SESA (forbid illuminated advertising during shop closing time)
- Measure R (rationing, see above) against S.
- Measure W against S: waste control like mechanical light timers in public areas.
- Measure P against S: use solar panels and other renewable sources to generate the energy. Disadvantage: the generated energy is needed elsewhere (not to mention the energy for production.)
- Measure E against S: energy price increase. Disadvantage: the rebound effect.
- Measure M against S: show consumption on meter. Disadvantage: a mere number hardly is an incentive to reduce consumption.

Against problem H (harmful use): rationing

So, rationing is mentioned twice, which is why it is listed as a separate measure. As long as other measures occur once only, they can be stated along with the problem which they are directed against. Notice that there are no particular measures against problems SES, SESD, and SESA because that would require banishing vices or dispelling delusions.

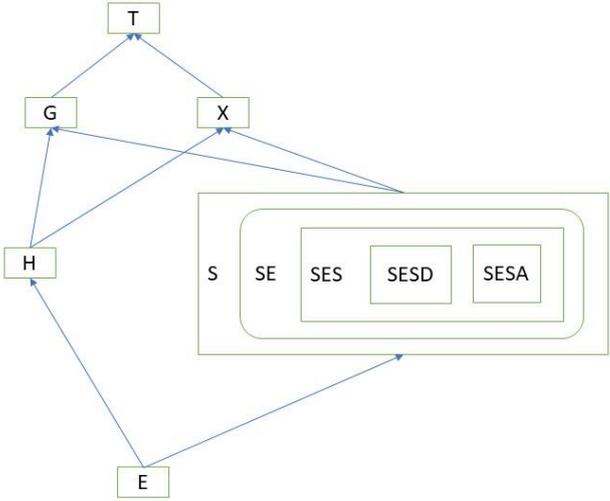
Categories:

- rationing is labelled organisational
- mechanical light timers are technical or perhaps also behavioural.

Trivially, the common cause of all problems is the mere existence of entities which experience these problems. This common cause is denoted by the letter E. Though trivial, this common cause leads to fundamental questions about overpopulation, civilisation, and the like.

If an entity suffers from a problem long enough, it will succumb to it. Such termination of an entity is the effect common to all its problems (when persistent) and is indicated by the letter T.

The causes and effects of the example can now be summarized in the following causal graph, where every two phenomena have a common cause and a common effect. The graph is equipped with types and subtypes.



The graph can contain cycles (causal feedback) if the order of time between events is ignored. For example, air-conditioning running on fossil fuel causes the mean temperature to rise, which in turn intensifies the use of air-conditioning.

The causes of being have not been indicated because they can easily be deduced. For instance, a shop is the cause of being of a shop door and of a shop advertisement: it is the second 'S' in 'SES'. Yet, causes of being are important so they should not be overlooked.

Graphs have only been added as an illustration -- users should be allowed to enter text only.

Rubrication Example

The following is the table of contents of a draft template for measures.

- 1 Concepts
 - 1.1 Entity
 - 1.2 Needs, wants, and claims
 - 1.3 Commons
- 2 Goals and Objectives
 - 2.1 Subsistence
 - 2.1.1 Food Supply
 - 2.1.2 Water Supply
 - 2.1.3 Other Material Supplies
 - 2.1.4 Energy Supply
 - 2.1.5 Comfort
 - 2.2 Well-Being
 - 2.2.1 Dignity
 - 2.2.2 Autonomy
 - 2.2.3 Conviviality
 - 2.3 Knowledge
 - 2.3.1 Learning
 - 2.3.2 Registration
- 3 Causes
 - 3.1 Abstraction
 - 3.2 Impercipient
 - 3.3 Irresponsibility
 - 3.4 Delusions
 - 3.4.1 Rebound Effect
 - 3.4.2 False Needs
 - 3.5 Improper Use
 - 3.5.1 Power Abuse
 - 3.5.2 Use as an Alibi
 - 3.6 Overpopulation
 - 3.7 Overconsumption
 - 3.8 Overproduction
 - 3.9 Economic System
 - 3.10 Organisational Structure
 - 3.11 Technological Advance
 - 3.12 Autonomous Reinforcement
 - 3.12.1 Albedo Loss
 - 3.12.2 Permafrost Thawing
 - 3.12.3 Wildfires
- 4 Problems
 - 4.1 Collapse of the Environment
 - 4.1.1 Atmosphere Collapse
 - 4.1.1.1 Storms
 - 4.1.1.2 Sealevel Rise
 - 4.1.1.3 Excessive Precipitation
 - 4.1.1.4 Drought
 - 4.1.1.5 Heat Waves

- 4.1.1.6 Cold Waves
 - 4.1.2 Cryosphere Collapse
 - 4.1.2.1 Glacier Melting
 - 4.1.2.2 Polar Ice Cap Melting
 - 4.1.3 Hydrosphere Collapse
 - 4.1.3.1 Acidification
 - 4.1.3.2 Anoxic Zones
 - 4.1.3.3 Warming
 - 4.1.4 Litho- and Pedosphere Collapse
 - 4.1.4.1 Extrusion-Induced Earth Quakes
 - 4.1.4.2 Soil Erosion
 - 4.1.5 Resource Scarcity
 - 4.1.5.1 Freshwater
 - 4.1.5.2 Phosphor
 - 4.1.5.3 Rare Metals
 - 4.1.5.4 Sand
 - 4.1.5.5 Fossil Fuel
 - 4.1.6 Pollution
 - 4.2 Disappearance of Entities
 - 4.2.1 Biosphere Collapse
 - 4.2.1.1 Species Extinction
 - 4.2.1.2 Deforestation and Desertification
 - 4.2.1.3 Soil Fungi Disappearance
 - 4.2.1.4 Coral Reef Disappearance
 - 4.2.1.5 Phytoplankton Disappearance (uncertain)
 - 4.2.1.6 Other Flora and Fauna Decline
 - 4.2.2 Disappearance of Inanimate Entities
 - 4.2.2.1 Loss of Cultural Heritage
 - 4.2.2.2 Loss of Knowledge
 - 4.3 Unmet Needs
 - 4.3.1 Suffering
 - 4.3.1.1 Famine
 - 4.3.1.2 Premature Death
 - 4.3.1.3 Conflict
 - 4.3.1.4 Diseases
 - 4.3.2 Migration
 - 4.3.2.1 Human Migration
 - 4.3.2.2 Endangered Indigeneous Peoples
 - 4.3.2.3 Invasive Species
- 5 Measures as such
 - 5.1 Guaranteeing Lower Bounds
 - 5.2 Imposing Upper Bounds
 - 5.3 Rationing Resources (i.e. setting both lower and upper bounds)
 - 5.4 Discouragement
 - 5.5 Need-Based Aid Economy
 - 5.6 De-digitisation
- 6 Measures against Problems
 - 6.1 Refraining from Existence
 - 6.1.1 Graceful termination
 - 6.1.2 Halting Human Overpopulation

- 6.1.3 Animal and Plant Population Control
 - 6.2 Guaranteeing Subsistence
 - 6.2.1 Guaranteeing lower Bounds
 - 6.2.2 Military Defence Reinforcement
 - 6.3 Promoting Purposeful Activities
 - 6.4 Preserving Information
 - 6.4.1 Preserving Biological Information
 - 6.4.2 Preserving Knowledge and Culture
 - 6.5 Preserving Products
 - 6.6 Combating Squandering
 - 6.6.1 Reusing Durable Goods
 - 6.6.2 Reusing Recoverables
 - 6.6.3 Reducing Squandering of Non-recoverable Goods
 - 6.7 Avoiding Harmful Surplus
 - 6.7.1 Prohibiting Unnecessary Harmful Activity
 - 6.7.2 Stopping Inculcation of False Needs
 - 6.7.3 Imposing upper Bounds
 - 6.8 Balancing Populations
 - 6.8.1 Preservation of indigenous Peoples
 - 6.8.2 Halting Invasive Species
 - 6.8.3 Reducing Animal Domestication
 - 6.9 Institutional Change
 - 6.9.1 Optimising Use of Services and Resources
 - 6.9.2 Introducing Participatory Organisations
 - 6.9.3 Promoting to Act Responsibly
 - 6.9.4 Compensating Loss of Investment
 - 6.10 Introducing Non-Monetary Economies
 - 6.11 Avoiding Harmful Improper Use
 - 6.11.1 Restraining Social Obligations
 - 6.11.2 Improving the Use of Money
 - 6.11.3 Imposing upper Bounds
 - 6.12 Technological Measures
 - 6.12.1 Sustainable Consumption
 - 6.12.2 Sustainable Production
 - 6.12.3 Preventing Waste Release
 - 6.12.4 Combating Pollution
 - 6.12.5 Restoration
- 7 Categories
 - 7.1 Pollution
 - 7.1.1 By Contaminant
 - 7.1.2 By Environment
- 8 Procedural Matters
 - 8.1 Temporary Cessation of Non-Vital Activities
 - 8.2 Public Deliberation about Measures
 - 8.2.1 Inform the Public about the Environmental Crises
 - 8.2.2 Public Decision about Measures
 - 8.3 Transfer Authority to Governments and Organisations
 - 8.3.1 Reinforcement of the Judicature
 - 8.3.1.1 Judicature to Enforce Measures
 - 8.3.1.2 Judicature against Harmful Improper Use

- 8.3.2 Proclamation of the Measures
- 8.3.3 Preparation of the Public for the Measures
- 8.3.4 Implementation of the Measures

Definitions

Following are definitions of goal, problem, and cause, as well as a few auxiliary concepts.

A **state** (or **status**) of an entity is an attribute which can appear or vanish after some time, for example, hungry as an attribute of a person.

A **goal** is a future state of an entity which is desired by people (there is little use for the word ‘**actor**’ or ‘**agent**’ here.) It does not make sense to talk about goals which cannot be attained or which, on the other hand, would be reached without any effort. For example, letting the sun set when seen from a particular location is not an endeavour worth talking about.

A **sub-goal** of a goal is a goal which must have been reached at the same time the main goal is attained. For example, to eradicate poverty, the sub-goals are both the availability of freshwater and the availability of food.

A **preliminary goal** (sometimes **objective**) of a goal is one which must be reached before the ultimate goal is attained, or more generally, which is a necessary condition. For example, before returning to horse and carriage, horses must be bred.

A **means** is a method for changing the status of an entity. A preliminary goal can also be a means, like horse breeding in the previous example.

An **end** is a goal which is to be attained using a particular means. Hence, the expression ‘means to an end’.² If the goal is to solve a problem, then the means is called a **measure** against the problem.

A **problem** is an obstacle to attaining a particular goal or end. An insoluble problem can be mentioned in order to show that other problems cannot be solved either.

A **sub-problem** of a problem is part of a problem. See sub-goal for an example.

A **problem type** is a problem having additional attributes. (It is a subtype of the problem.) For example, squandering energy is a type of squandering (when considered a problem.)

A **measure** is an action against a problem. (A goal is a future state which people want to reach, so by definition there is a problem which obstructs reaching the goal. Therefore, there an **action** towards a goal naturally translates to a measure against the corresponding problem.)

² *Zweck* (‘end’) in J. Mittelstrass (ed.) *Enzyklopädie Philosophie und Wissenschaftstheorie*, Stuttgart & Weimar: J.B. Metzler, 1996.

A **phenomenon** is an event, thing, attribute of the event, or even a law. For example, the fall of a thunderbolt, the thunderbolt itself, the velocity of its fall, or even the law for that velocity.³

A **cause** of (or **reason** for) a phenomenon (which is the **effect** of the cause) is a phenomenon which is a sufficient condition for the effect, that is, if the cause occurs, then so does the effect, but there may be other causes for the same effect. (A **necessary condition** for an effect is a phenomenon for which the effect is a sufficient condition. In other words, without this phenomenon, no effect.) If a cause is discussed, then some necessary conditions often are tacitly assumed.⁴ (If some conditions are unknown, then there is only a chance of the relation between cause and effect.) A **cause of becoming** is a cause of a change or of the coming into existence of something. By definition, it occurs before the effect. A **cause of being** is a cause productive of the sustained existence of a being.⁵

Effects in the present context are only interesting if they are problems. So, causes inherit the problematic nature of their effects and therefore will be presented as problems.

For example, the combined cause of the more frequent Australian bushfires in 2019 and 2020 is drought and heat (no mention needs to be made of lightning, trees, and so on.) A cause of the more frequent forest fires in Brazil and neighbouring countries is clearance of forest for agriculture; fire to torch the woods obviously is a necessary condition.

This leads to a counterexample: smoke is a sufficient condition for fire but it does not cause fire because it does not precede fire.

To illustrate the causes of being and of becoming: synthetic polymers are a cause of being of many plastics; ignition is the cause of becoming of a fire; trees are both the cause of being of the sustained forest fire and the cause of becoming of every new flame.

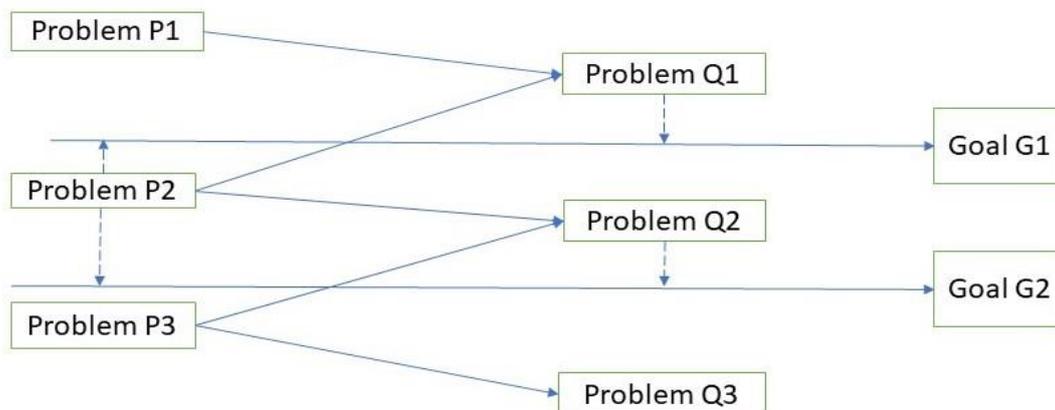
A cause of one problem may or may not be a problem, depending on the goal. For example, heat as a necessary condition for bushfire is not an obstacle for survival of the bush but it can be a problem for people at work. However, the problematic nature of the effect easily carries over to the cause. For example, plastic polluting the seas strictly seen is only a problem when swallowed by marine fauna; it is more natural to consider the pollution proper a problem too.

The following picture illustrates the computation of effects and goals as well as the inheritance of the problematic nature of effects.

³ H.W.B. Joseph, *Introduction to Logic*, 2nd ed. Oxford: Clarendon, 1916 (Impression 1931, 1st ed. 1906) p.427.

⁴ *Kausalität* in the same *Enzyklopädie* and *Causation* in P. Edwards (ed.) *The Encyclopedia of Philosophy*, New York: MacMillan & the Free Press; London: Collier MacMillan, 1967.

⁵ G.H. Joyce, *Principles of Logic*, London etc.: Longmans, 1908, p.247.



Problem Q1 is caused by problem P1 and P2. Problem Q2 is caused by P3 and also by P2. Problem Q3 is caused by P3 too. What are the effects of P2? As P2 is the cause of Q1 and of Q2, these are two of its effects. However, to determine whether there are no other effects, problem Q3 and possibly many other problems need to be considered. So, manually entering the effects is more efficient, provides a double-check, and does not force the user to specify causes in other problems only to list the effects.

Now for an illustration of the inheritance of a problematic nature. The goal G1 is hindered by problem Q1 and similarly, Q2 is an obstacle to reaching G2. This has been indicated by the dashed vertical arrows emanating from Q1 and Q2 which, as it were, block the arrows towards goals G1 and G2. Which goals are blocked by problem P2? That is, how to derive the vertical dashed arrows which point from P2 to the vertical arrows? The effects of P2 are Q1 and Q2, which hinder getting to G1 and G2, so P2 indirectly blocks both G1 and G2. Rather than carrying out this deduction, one would manually enter these goals as the ones blocked by P2. This is also more natural, because a phenomenon which as such is harmless but which cause a problem is considered a problem too. In other words, this is a picture of how the problematic nature of Q1 and Q2 carries over to P2.

Procedural Structure

The content would be accompanied by the following sections:

- Discussion by contributors and moderators
- References to publications
- Questions
- Things to be done

The discussion thread would list, for example, counterarguments against disadvantages. The conclusion, however, would just be the list of advantages and disadvantages in the content sections.

Requirements of the Digital Platform

The platform would have to have the following technical features.

- Global access (e.g. using an internet browser.)
- Scalable (start with few users but allow many.)
- The structure of each kind of section is common, mandatory, and centrally updatable.
- Authorisation: roles such as for moderators who e.g. point to possible improvements of style, like style of argumentation.
- Optionally, an approval workflow for the style but not for the content. So, all contributions would remain clearly visible.
- Collaborative editing. Concurrency control preferably is by locking text fragments being edited for a limited time.
- Version control: store previous versions of the content (not e.g. of the discussion thread) but do not cater for branching to avoid merge conflicts.
- Identity management (allowing a nickname) and protection of persons (GDPR etc.)
- Commons license (no intellectual property of contributions.)
- The content would have to be convertible to a document (so with omission of details.)
- A graph structure (see the example) by means of references instead of a hierarchy.
- Preferably, dependency management in the sense of substitution of referred content, notification of broken links or changed referred content, logical references, and the like.
- A guarantee for continued support.

The cost would mainly be due to personnel, hardware, and possibly licenses.

Organisation of the Digital Platform

The platform initially may be simple but eventually would require staffing for the following.

- Technique: software and hardware management.
- Procedures:
 - setting rules for argumentation style;
 - moderation of contributions (though all content is published)
 - monitoring (preventing overlap of contributions, improving language, etcetera) and
 - conflict resolution.
- Communication:
 - generate publicity to get input for the template; and
 - notify governments, organisations, and so on about the resulting template.
- Funding.

Certainly, this list is not exhaustive.

Similar Platforms and Organisations

See the menu 'similar' on www.eeptpp.info.

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