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A FRAMEWORK FOR ADVOCACY

Employing Science to go from Anger to Advocacy

Introduction

Many get angry when they understand that scientific insights are being ignored - to the detriment of nature, and even future prosperity. Some turn that anger into advocacy. This is for you and your group. You might be for example nature protection associations, or local community developers. Or you might be a scientist. This booklet is to help you turn scientific insight into a comprehensive briefing for local advocacy and action groups. It won't help you design campaigns, but it will help you translate scientific insight into specific, targeted demands. We offer help to produce several specific types of documents: internal campaign briefings and public pamphlets.

You will notice we give examples from Sweden, many from activism around forestry. This is because we have ourselves been active, through the local nature protection association, in attempting to halt clear-cutting of sensitive old growth forests. We were absolute beginners from the start but we learned a lot along the way. Especially as we were developing the Real Capital Framework at the same time, so we could try things in practice. We hope this manual will help you too if you are just beginning to engage in that which calls for your attention.

The methodology is based on the Real Capital Framework (RCF), originally designed to help scientists and policy advisors create compelling decision basis reports for policy makers. The framework is the work of Stephen Hinton, one of the authors of this manual.

Table Of Contents

How to use the booklet. 4

What is Real Capital? 5

Environmental capital maintenance (embracing sustainable cost accounting) 8

Prepare to circumvent mainstream economists 11

Step 1. Setting the scene. 11

Step 2. Identify the Threatened Real Capital and other Real Capital related to your concerns. 13

Step 3. Identify how to measure the status of the threatened capital 15

Step 4. Having identified what is, you now need to identify what should be. 16

4.2 Visualising the gap 18

Step 5. State the consequences of inaction 24

Step 6. Explore the materiality of the situation: where responsibility lies 25

Step 7. Dive into technology 27

Step 8. Find policy statements from material actors (Hold authorities to their own words) 33

Step 9. Craft Authority Challenges (Demand accountability) 36

Step 10. Check out the economics 37

Step 11. Summarise your findings in a science based brief to advocacy 38

Appendix 40

How to use the booklet.

For an issue you are currently working on, you can use the step-by step methodology outlined. If you are not working on an issue at the moment, the steps will explain the scope of what is needed to produce a sound campaign basis.

Note that society is extremely complex. Scientific insights typically go through multiple layers of expertise and responsibilities before they get translated into measure and laws. The task of bringing scientific insight into public discourse is therefore complex. You will have to navigate multiple disciplines and perspectives, often using the same words but meaning different things.

Start with the method overview, Do familiarise yourself with the concepts of Real Capital on the patreon blog if you find the summary explanations insufficient. The other concepts at the heart of this methodology are capital maturity and materiality.

The next section describes the method step by step, where each step finishes with a set of questions to ask about the specific advocacy issue you are dealing with. You can work on your issue step by step in this way, or read the manual and then return to your issue.

The appendix offers a one-page briefing template, for you to use to summarize your advocacy issue. We have found that one page is about right when informing the public and comes with a lower printing cost.

The appendix also gives worked example of a issue to demonstrate the steps in action, and how to use the template tool.

What is Real Capital?

Real capital refers to resources used in producing goods and services without being entirely consumed. It encompasses natural, built, social, and human capital. Mature real capital has the capability to provide necessary services to the intended population. Evaluating the maturity level of capital can guide policy decisions and determine the interplay of different capital types, investment needs, and development goals.For advocacy, real capital provides activists with tangible, measurable and ultimately investable specifics to base their campaigning upon.

Real capital defined

Real capital is defined as:

Something that is used in the production ofgoods and services to society, but not used up.

Note that capital is necessary but not sufficient to provide services. The capital is utilised in the production system. There are several categorisation methods, but I prefer the following as described in the table below:

Natural Capital: The living layer we all rely on as well as the layer beneath our feet with the minerals and other substances from the lithosphere, natural systems like the climate and water cycle.

Built Capital: All man-made things that are used to provide our basic needs: houses, roads, factories, equipment, tools etc. This includes systems like telecoms, payments, etc.

Social Capital: Our organisations and institutions including the knowledge and capability that is in these organisations.

Human Capital: What we as humans command in terms of strength, knowledge, insights, attitude, capabilities etc.

Real Capital Maturity

Maturity is what happens after growth. If we are to entertain the idea of economic growth, surely we should entertain the motion of economic maturity – i.e. what does something look like when it is fully grown.

If capital is something used but not used up, then mature real capital is when it is developed to a stage that it can provide the services needed by the population it is intended to serve. For natural capital, especially ecosystems, this may sound anthropocentric. However, as we shall see as the discussion develops, humans are in the unique position of being able to be ecosystem stewards. This means stewarding natural capital for its own sake, as well as stewarding parts of that capital for the services needed to survive.

Real Capital Maturity: three ways of arriving at a maturity level

1) The level at which the capital can provide the services needed by the human population.

2) The ecological maturity of biological real capital defined by Odum et al.

3) The level of maturity aimed for by policy arrived at democratically – which may or may not correspond to ecological maturity or that which is sufficient to provide services.

It is necessary, therefore, to identify which parts of the ecosystem are needed to be utilised for services to human populations, and which are left to develop more naturally. Note that we split natural capital into two categories: that which is the living layer of the Earth, part of the biosphere, and the material available from the lithosphere, metals and minerals etc.

The table below gives a vision of what characterises the real capitals at maturity.

Natural	Built	Social	Human
Living layer and mineral layer beneath our feet	*Man-made things*	*Organisations and their capability*	*People*
Functioning • natural cycles • eco-systems Productive and biodiverse forests Healthy soils Available • Minerals • Metals	Infrastructure providing safe, efficient and comfortable: • Housing • Transport • Energy • Food production and distribution • Health and education	Organisations offering: • Gainful, productive employment • Social good	Healthy, productive, skilled, strong, happy generous, peace-loving & balanced people

Environmental capital maintenance (embracing sustainable cost accounting)

Environmental capital maintenance holds that capital is maintained only if natural systems are preserved at levels consistent with their regenerative capacity.

Under this approach:

- The environment is treated as a capital stock, not a free input
- Environmental degradation constitutes capital consumption
- The sustainable cost of restoring ecosystems to safe operating limits must be recognised

It follows from this that each of the real capital types needs looking after if they are to be relevant to the economy. And it is here that activists can find levers to open up serious dialogue about the state of the capital and what would happen to the economy if it were to deteriorate. Remember, this capital is a stock, whereas economists advising policy often concentrate just on the flows.

One stock is the health of the population. Despite scientific evidence to the contrary (Starrin, 2009) economists continue to ignore the negative effects of economic stress. Austerity, often called for as a remedy for an ailing economy, adds to the stress and makes things worse.

The table below looks at the stewardship needed for each type of capital and its consequences if ignored.

Natural	Built	Social	Human
Stewardship preserves natural systems at levels consistent with their regenerative capacity. **The environment is treated as a capital stock, not a free input.**	**Stewardship preserves productive capacity.** **Income exists only after depreciation, maintenance and renewal are fully provided for.** **Asset price inflation alone does not constitute income.** **Infrastructure, skills and organisational capacity must be sustained.**	**Stewardship preserves and strengthens the institutions, relationships and norms that enable cooperation, trust and democratic participation.**	**Stewardship ensures people's physical, mental, educational and creative capacities are sustained and renewed over time.**
Environmental degradation constitutes capital consumption	**Income will fall from depreciation, if maintenance and renewal are not fully provided for.**	**Social capital is depleted by corruption, inequality, exclusion, privatisation of public purpose and the erosion of democratic accountability.**	**When wages, working conditions, public services or social protections are insufficient to sustain human capacity, apparent profits represent the extraction of value from people rather than genuine income**
The *sustainable cost* of restoring ecosystems to safe operating limits must be recognised		**Apparent economic efficiency achieved through weakened regulation, degraded public institutions or suppressed democratic voice is therefore a form of capital liquidation. It transfers value from collective future capacity to present private gain**	**Failure to maintain human capital results in declining productivity, rising healthcare costs, social fragmentation and political instability. These outcomes are not externalities: they are the predictable consequences of treating people as expendable inputs rather than as capital requiring care and renewal.**

A commons approach

Corporate operations, and indeed public sector-owned operations use resources and services that come from a finite amount of real capital that is common to the community. For example, all burning of fossil fuel uses oxygen which is in the community. Other examples include industries which take water from rivers, or which use the water to cool their installations, and use the water as a recipient of heat. A huge stress on biological real capital is the release of phosphorus into surface water.

These finite common-pool resources within a community are called commons (Ostrom, 1990).

The commons is real capital that is common-pool and used as a resource within a community. Biological real capital is used to harvest resources or as a recipient for waste

Prepare to circumvent mainstream economists

Policy makers like to listen to sensible voices, and economists appear sensible compared to activist groups demonstrating outside their offices. When it comes to understanding real capital, economists tend to stick to that which is measurable in money, and the flows of money at that. They will not put a price on that which your advocacy group values - like pristine forest, clear lakes, well-fed children, etc.

The Swedish Riksbanken gave the prize in Economics to William Nordhaus for his logical analysis of the threat of climate change on GDP. He looked at the differences in productivity in different parts of the world that have different temperatures and came to the conclusion that three degrees of warming would affect GDP by a few percentage points. This analysis was very narrow, given that climate scientists mean there will be no civilisation as we know it at three degrees warming. What advocacy needs to do, therefore, is to circumvent the narrow logic of economists, but present the facts in an objective, measurable and actionable way.

The next sections go through the steps to producing a brief.

Step 1. Setting the scene.

You will need to identify the scope of the issues for your intervention. This may widen or narrow as you go through the steps, but it is good in the beginning to start with a scope. By scope we mean answers to questions below.

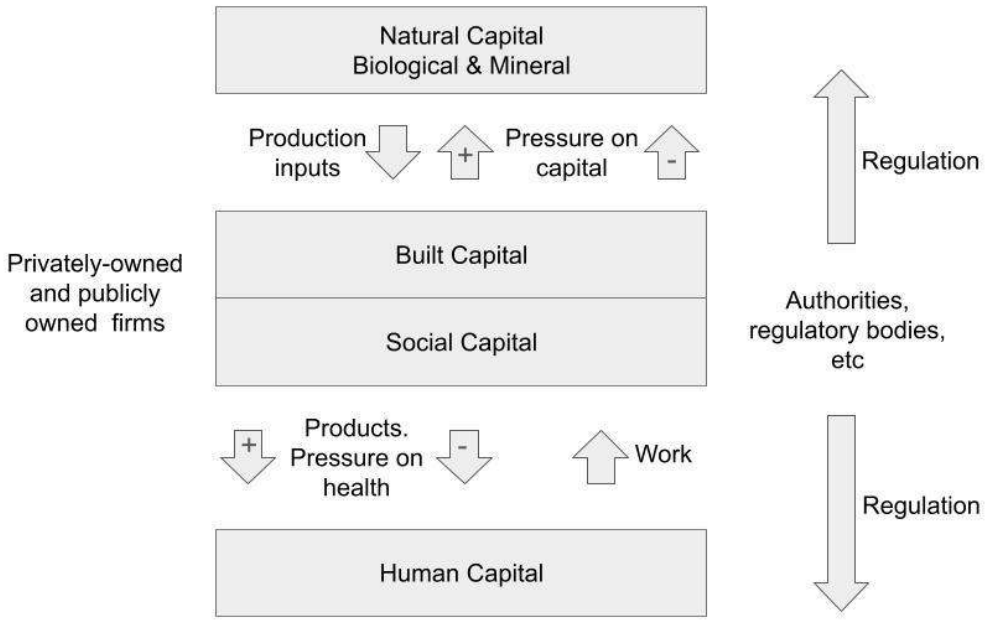
Some questions to explore:

- What is it that makes you angry?
- What can you see happening, and what will happen if the situation goes on?
- How would you describe the situation?
- Which geographic area is involved?
- What is problematic about this situation?
- What will happen if there is no change?
- What initially do you feel needs to change or to be done?item #3

When you have the answers to these questions, make a note of the answers. You are ready to proceed to the next section.

Step 2. Identify the Threatened Real Capital and other Real Capital related to your concerns.

This can often be a two step procedure: you might identify the natural capital impacted first, (for example threatened natural forests), then the other kinds of capital involved. The diagram below explains.



The production system (social capital, operating built capital) puts pressure on natural capital. In turn, the production system benefits human capital with products and work, but both these also pressure human capital negatively (for example, the negative effects on health of tobacco consumption). Authorities are part of social capital, and have the role of overseeing and regulating the whole set of processes.

Mapping in this way can help identify what to demand from which organisations.

2.1 Identify the Threatened Real Capital

(What's being destroyed?)

- What specific natural resource/ecosystem is at risk? (e.g., old-growth forests, wetlands)
- What measurable functions does it provide? (clean water, carbon storage, biodiversity)
- Why is this loss irreversible or long-term?
- Who directly depends on this resource? (wildlife, local communities, industries)
- What's making you angry about this issue?
- How does this degradation harm broader society?

2.1 Identify other Real Capital involved

(What capital is involved?)

- What machinery/Tools - built capital - are being used in the degradation of the threatened Real Capital?
- Are there other built capital involved, like transport systems or IT infrastructure?
- Which firms- social capital - are operating the built capital?
- Which organisations - social capital - are responsible for overseeing and regulating these firms?
- What are the impacts of the threatened real capital on humans - human capital? (examples include health impact, stress impact)

In the example below, we take a broad brush approach to food. We identify agricultural land and surface water as threatened, picking up that chemical fertilisers use phosphorus mined from rock, to the machinery to apply the fertilizer, to the various firms and authorities involved. Finally, we identify the impact on health of the food system and the economic stress of its price.

Concern: Food production impact on environment				
NATURAL		BUILT	HUMAN	SOCIAL
Mineral (technical)	Bio			
Mineral phosphorus	Agricultural land Surface water bodies as recipients	Agricultural machinery	Health challenges from food Economic stress from food prices	Agricultural firms Environmental protection agencies Nature Protection NGOs.

Connect your concerns to what the science says. Download where possible scientific reports, reports from authorities about the state of the capital. and make a list of them in scientific reference form. Scholar.google.com is a good resource for references.

Step 3. Identify how to measure the status of the threatened capital

(Prove the damage is happening)

For this step you will probably need help from the scientific literature. Concentrate at this stage in getting the data (and recording which scientific reports you used). In later steps we will visualise it in a way that supports our arguments, but the first step is to gather the data.

The following questions may be helpful

- What data shows the decline? (satellite images, species counts, water tests)
- What are the commonly used units?
- Where is it worst in our local area?
- Are there official reports admitting the problem? (e.g., government studies)
- What's the trend over the past 10/20 years?
- What data is there on the causes of the damage*? (specific industries, practices)*

Step 4. Having identified what is, you now need to identify what should be.

This step asks you to work normatively, that is, to say what the status of the real capital should be. This is not to be confused with being prescriptive, which is telling an organisation how to do something. You will need to phrase your normative in value-based terms, like the pattern below.

If society values X then the status of the Real Capital Y that (produces it, receives waste) should be Z

Some examples:

- If we value the biodiversity of our forests, then to be sure of retaining all endangered species 30% of old growth forest should be protected.
- If we value stability of weather systems, then the heat lost every year from the earth should equal the heat trapped.

This is the step that most scientists are wary of doing: they will often explain that something is a problem but leave the development of normative statements to other disciplines. You might need to work hard on this section, and put probing questions to scientists.

Notice that the units of measure you used to identify status are the ones to use to identify the normative status.

4.1 Finding sources of value statements.

Now we need to search for what has been said in terms of value statements - ones that are framed as *should*.

This is an important data-gathering exercise and you will need exact quotes and sources. These sources should provide the answer to what we value. You will need to look wide, from what well-known figures say, to statements in political manifestos, to that which is written in law, to connections made by scientists.

Search for:

- Government policies (e.g., EU Water Framework Directive's "good ecological status").
- Scientific consensus (e.g., "Nutrient levels should not exceed X ppm to prevent algal blooms").
- Public pledges (e.g., local municipality's commitment to the Baltic Sea Action Plan

Here are some examples:

- that economic growth must benefit "future as well as present generations everywhere." Margaret Thatcher, in her speech to the United Nations,
- Smoking is a leading preventable killer World Health Organization (WHO)
- The EU sees metal recycling as essential to ensure future supplies.
- Britain's rivers should be clean enough to swim in. Norwich South, UK, MP Clive Lewis.

4.2 Visualising the gap

The normative approach gives you a mathematical basis to present the gap between what is and what should be.

Gap= Status now

Should be.

It's worth spending time and creativity on this step. People are used to thinking in terms of budget deficits, debts, and percentages so it can help you get your message across.

4.2.1 Simple division and percentages.

Take the example of the biodiversity in Swedish Forests, EU call for 30% formal protection against the present 7%//30 = 23% The gap is therefore 77%

4.2.2 Asset-Liabilty and Equity (ALE)tables.

Assets	Liabilities	Equity	Checksum
A	L	E=A-L	A-L-E=0

The take above shows a typical ALE table, often used in accounting. These tables can be of use in presenting figures pertaining to the status of various Real Assets, or Real Capital.

One way is to present the “should be” as a budget. As in the example below.

Assets	Liabilities	Equity	Checksum
Budget	Shortfall	Actual Status	0

Let us say that a municipality has an “everyone housed” policy

A table could look like this:

	Assets	Liabilities	Equity	Checksum
Proportion housed in percent	**100**	**20**	**80**	**A-L-E=0**

Another example comes from the Swedish Forestry

	Assets Should be	Liabilities Shortfall	Equity Actual Status
% protected forest	**30**	**23**	**7**
Dead wood on forest floor (m3/ha)	**20-100**	**10-80**	**10**
% deciduous trees	**30**	**11**	**~19**

Table: Normative levels for healthy Swedish forests and their current status.

This approach has several benefits. Firstly, it looks like the sort of information politicians are used to seeing, and secondly, it puts clear, measurable dimensions (they may not all use the same units) onto the situation which means they are actionable. The above table calls for legislation for protection and changes to cutting and stewardship practices.

Here is an ALE treatment of the atmosphere, in Gigatons of carbon.

Atmosphere, carbon "account"			
	ASSETS	LIABILITIES	EQUITY
	Carbon take-up	Emissions	Balance
Plants	123	60	63
Soil (net)		60	-60
Fossil fuels		9	-9
Ocean surface	92	90	2
TOTALS	215	219	-4

4.2.3 Visualising allocation

You could explore allocation, especially when dealing with built capital. Let us take the housing example. You could find out how many dwellings there are, and how many families in need of accommodation. It could be, as in the fictive example below, that there are many dwellings in the capital base, but not serving the population equally.

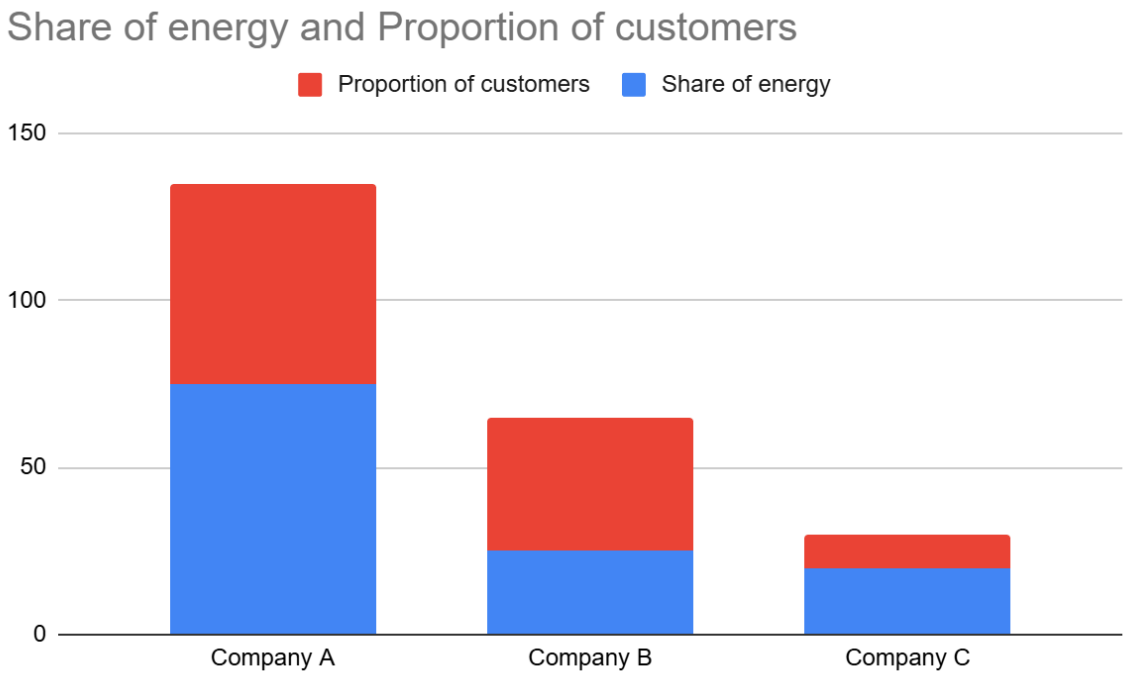
The ALE tables can be used to explore the allocative status of a concern. A simple example is given below:

	ASSETS		LIABILITIES		EQUITY
	Goal	House stock	Shortfall against goal	Stock per family	
Housing stock	110%	120%	0		120%
Families housed	100		10		90
Dwellings per housed		1.333333333			1.3

Use of the commons.

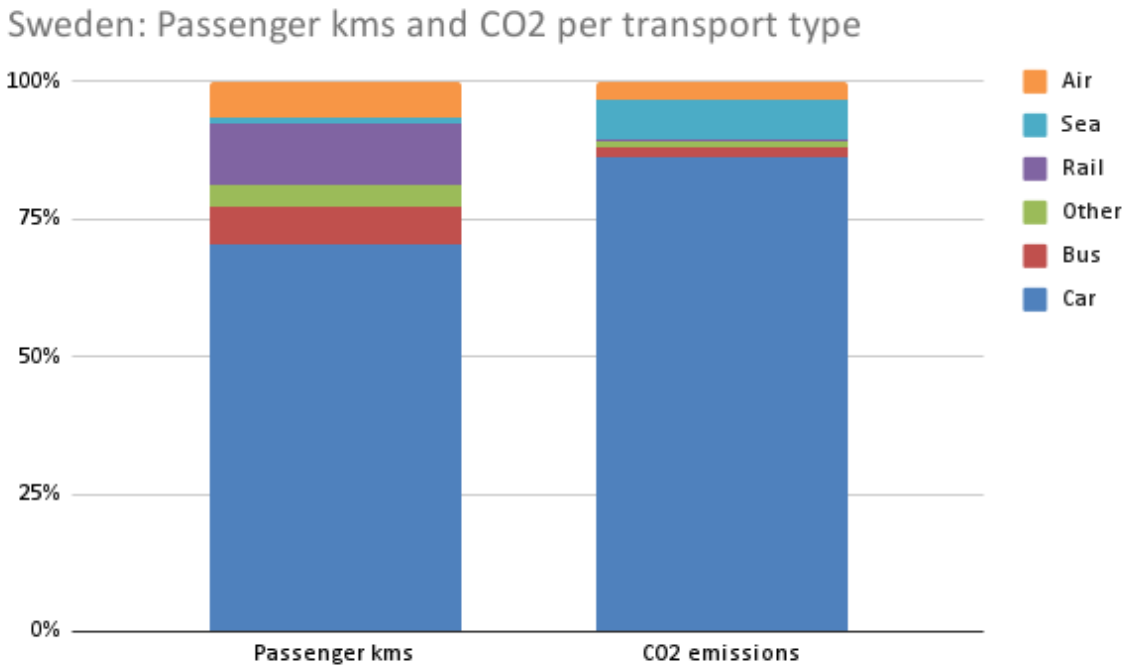
We are in a situation where a large proportion of our common resources, like the atmosphere, the water cycle, arable land, etc benefit a small percentage of people.

We could start to visualise the number of customers served against the proportion of common assets, like fossil fuel. The fictive example below shows the principles



As you can see, the companies use different amounts of energy per customer. This kind of visualisation can be the basis for narratives around efficiency and even equity. The dialogue is greatly helped by visualisation.

A more detailed example is that of Swedish transport. Here the allocation is to different resources.



As you can see, the private car has a large proportion of passenger kms travelled in Sweden. However, it has a much larger proportion of CO2 totally. This is in contrast to rail, which is the second largest people mover but emits a tiny proportion of the CO2. Again, the visualisation helps frame the dialogue.

4.2.4 Showing trends against reduction pathways

Here's an example from my municipality, where we just took on a net zero by 2045 commitment. The straight line shows what fossil fuel sales would look like with a steady decline (by the same amount each year - in itself an unusual idea) with the actual sales and the trend lines.

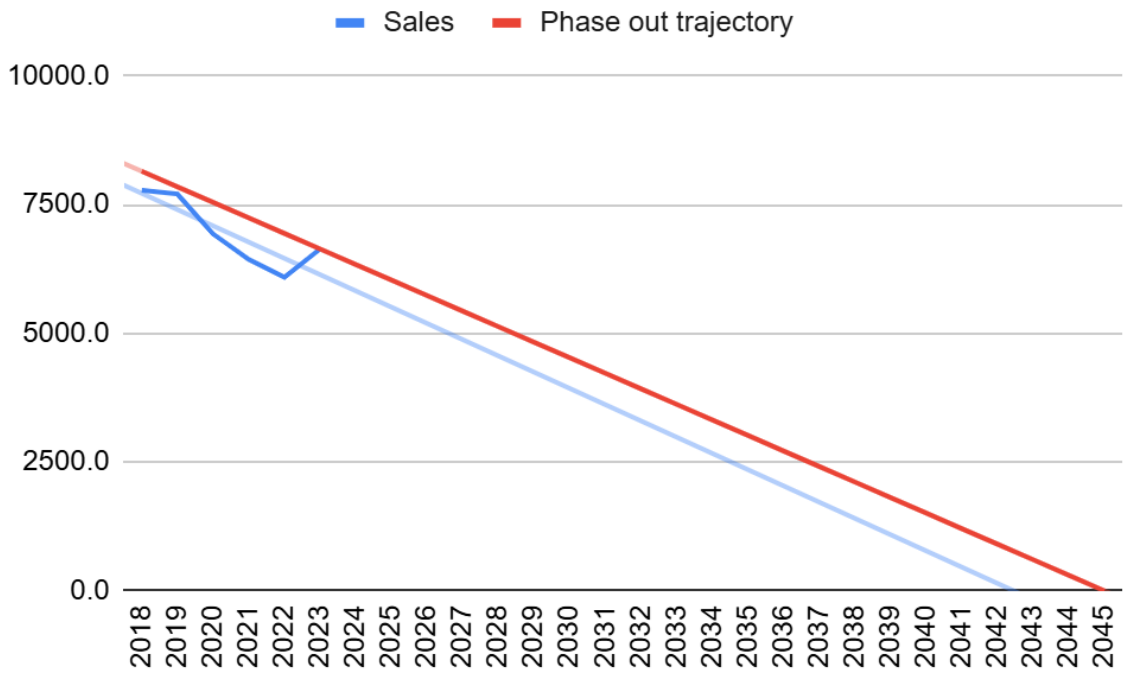


Chart: municipal fuel sales against phase out trajectory. The light blue line shows trend from 2018

Step 5. State the consequences of inaction

(Make the stakes clear)

You will need to formulate what is expected to happen if the real capital you identified as being at a degraded status is not restored.

For example, if substandard houses are not renovated. Or if production forests are clear cut and not protected. Or if carbon dioxide continues to increase in the atmosphere. Or if the rate of fossil oil extraction continues. Or surface water continues to receive sewage effluent. Other examples might cover levels of unemployment, or waiting times for health care.

When thinking about consequences of doing too little, consider hysteresis.

Hysteresis: Standard economics sees systems that tend to return to a pre-determined equilibrium after a shock. **Hysteresis** (from the Greek for "deficiency" or "lagging") challenges this. It proposes that **temporary shocks can cause permanent, or at least highly persistent, damage** to the economic system. The path the economy takes changes its fundamental structure; there is no return to the *status quo ante*.

When things deteriorate they may require more effort to put them right. Unemployment is such an example. Economies and people tend to take a long time to recover from longer periods of unemployment. The effort to bring society back to previous levels of property is much more than the effort required to keep with work employed.

The consequences need to be framed in terms of that which the authority you challenge has responsibility for, or the firms you target influence. That brings us to the next section, understanding various organisations' materiality.

Step 6. Explore the materiality of the situation: where responsibility lies

Materiality: The relevance or significance of the actions of firms or organizations on real capital. Also refers to the impact on decisions-making resulting from the omission of information from a reasonable user.

The Real Capital Framework offers pathways to identify responsibility. Actors who are material are ones that are in some way directly involved in the degradation of real capital. The diagram (1) shows how this works: actors who

- Own the real capital or who have economic relations to the capital through e.g leaseholds or rental contracts.
- By legal responsibility are designated authorities that regulate the use of the real capital.

One avenue to explore is industry classification. Throughout the world, nations classify industries into types (for example the Swedish SNI system starts at a high level with letters. A is agriculture and forestry, B is mining). Types of industries will most certainly be material in degradation of real capital.

For example, in Sweden 41% of phosphorus reaching the sea comes from one industry: sewage treatment.

That which makes questions of materiality difficult are ones of costs for remedying harm vs economic gain. For example, the Forestry Industry in Sweden (SNI A2) is responsible for about 1% of the nation's gross domestic product, and employs about 1% of the workforce. At first sight, it seems ridiculous to demand the industry forgo 30% of its production by protecting what is left of old-growth forest and regenerating some of the rest. The industry would be insolvent.

However, materiality does not stop with the extractor. Consider this: 100% of all businesses and consumers use materials from agriculture and forestry, yet these industries together make up less than 3% of GDP. It is the way the economy is set up that pushes material responsibility to extractors, rather than the rest of the supply chain.

For example, it would cost society very little to add a surcharge to extracted biological material that would pay the extractors to restore the ecosystems they extract from.

Then there is the law. In Sweden for example, the environmental code makes all economic actors responsible to understand the environmental impact of their activities, and by law they should not degrade the environment with their activities.

The law is not always upheld. Activists have been accused of stopping logging when what they have done is to point out a forest owner has sensitive red-listed species on their land which by law cannot be disturbed. It is the law that has stopped clear-cutting, not the activists.

Popular opinion may be more popular than one might imagine. A recent study showed that a majority of people can think of getting behind a wellbeing economy and degrowth strategy Krpan, Dario et al (2025). This is also worth checking.

Step 7. Dive into technology

By now you will probably be seeing how the nature of the built capital (and its owners) is what drives the pressure on natural capital. Technology then, is worth its own section in this manual.

People think that technology is a combination of metals, wires, machines and computer controls. In its basic form, technology means the capability to solve a particular problem.

> The term "technology" comes from the ancient Greek τέχνη, *techne*, meaning "art, skill, craft." To apply this to built capital, we could define it as *the capability to meet needs with a combination of tools, knowledge and skill* where social capital employs built capital.

The current installed base of built capital, the current technology used to meet needs, by its very nature has an "appetite" for, eg., fossil fuel, metals, concrete. And it has a certain pressure on natural biological capital - its pressure on natural cycles like the carbon and water cycle, even the cycle of phosphorus and nitrogen.

This is important for addressing gaps. Does society have the capability (technology) to solve needs and close the gap? If not, what avenues are open to pursue?

7.1 Best available technology

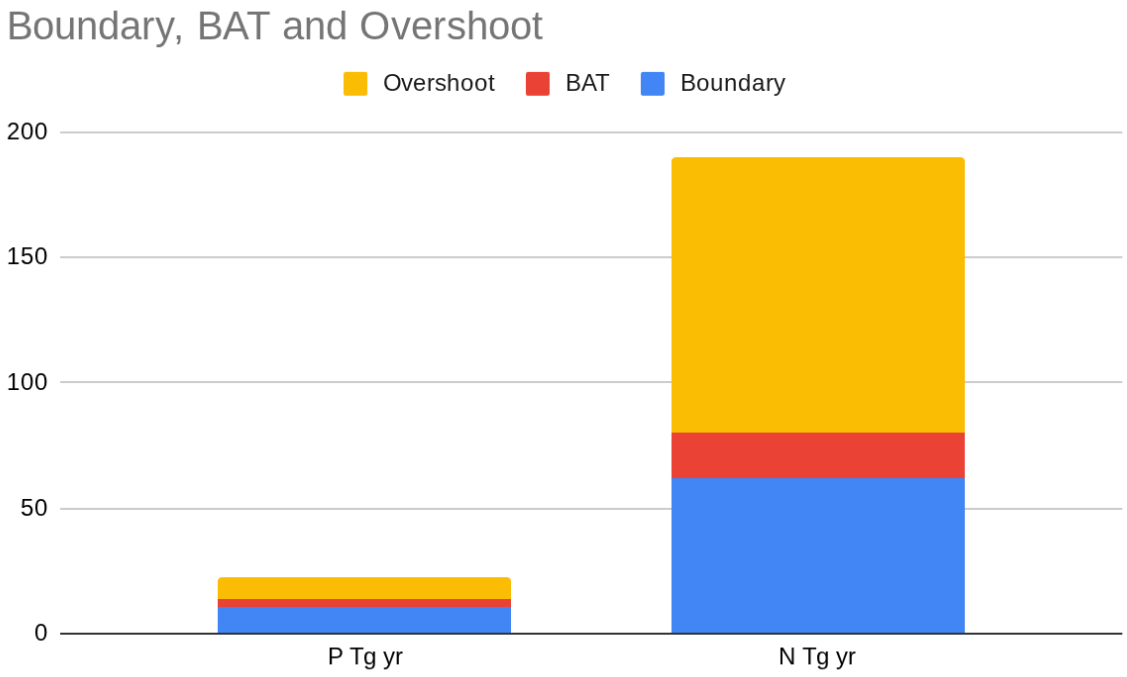
One avenue to explore is that of BAT or best available technology - sometimes called Best Available Techniques.

Best means most effective in achieving a high general level of protection of the environment as a whole whilst meeting needs.

Available means can be purchased at relevant scale without the provider being unable to provide the service economically.

Technology or techniques means both the built capital used and the way in which the installation is designed, built, maintained, operated and decommissioned.

The diagram below illustrates one approach to employing BAT in the scientific basis for advocacy. The blue block is the level of emissions that should be reached, if we apply the planetary boundary approach. Yellow shows current levels and red, the level that could be achieved with BAT. Note in this case that BAT can reduce levels, but not reach the normative level required.



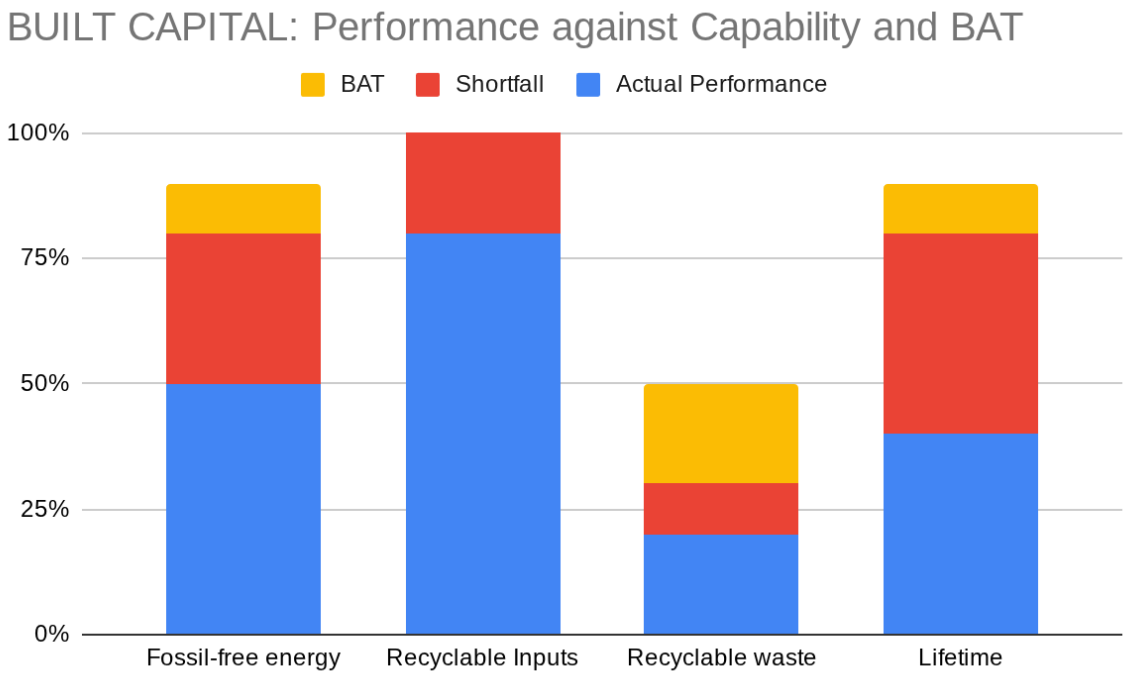
This might inform your advocacy strategy. It shows that firms could perform better if they invested in BAT, but it does not solve the whole problem. R&D would be needed, something that must come from government level if the industry is unable to invest.

Circular Economy

The diagram below uses made-up figures. It shows an analysis of a firm's built infrastructure in terms of its capability to perform in a circular economic way compared to its current performance. In cases like this, where there is capacity without the performance, it shows an opening for advocacy to push for performance without technical change.

In this case 100% is equal to the normative level.

As the diagram illustrates, the firm can use recyclable inputs - something the EU is pursuing putting into law. The largest gap is in producing waste that can be recycled, indicating investment in R&D is needed.



Another BAT consideration is where is the best place to look for potential capability for storing carbon. The tale below shows the potential.

Summary Table: Current vs Potential

Reservoir	Current (GtC)	Potential Capacity (GtC)	Additional Potential
Atmosphere	~870	No physical limit	❌ Not desirable
Oceans	~37,000–40,000	~45,000–60,000	+5,000–20,000
Vegetation	~450–560	~900–1,200	+400–700
Soils	~1,500–3,100	~2,500–5,000	+200–1,000

Both boosting vegetation and boosting the long-term carbon in the soils show promise for tackling climate change.

7.2 Technology and Financial Capital. Investment from firms or government?

We have to take into account that new technology is often that which requires a large capital investment, and one that can be patented. This means new technology is investible. Old technology is less attractive for private investors.

In fact, only built capital that can offer a return in the short term (say 5-10 years) is interesting for investors. Just take for example the idea of building local greenhouses with combined fish and vegetable cultivation, maybe with chicken farming. The measure would possibly solve many issues with food production: it would be local, organic, effective and create jobs. The investment required would probably be large, the risks high, and it might take many years to reach break-even.

This would be a typical investment for government or local government. However, many countries impose fiscal rules that require all investment in infrastructure to be private or a private - public partnership.

Try to map out sensible solutions to the need, and do not be taken in by the need to find new technology. It might be that going back to previous solutions - for example expanding railways instead of working hard to give everyone an electric car - will require less material and put less pressure on resources.

7.3 Built capital's installed base

As the illustration above is attempting to show the total weight of the installed base of infrastructure - the burden of total manufactured objects on the Earth at this time - is very heavy (Elhacham 2020). Heavier, in fact, than the total dry weight of all living things - a significant part of natural capital.

For your science-based brief, this means that we can assume that any damage to natural capital is coming from an installed base that is huge in mass, and therefore has a lot of investment in it. In other words, there are vested interests in keeping the infrastructure going.

Step 8. Find policy statements from material actors (Hold authorities to their own words)

Here we can go back to section 4.1 and complement the search for value statements from firms, branch organisations and authorities.

Here is a list of potential stakeholders to investigate for value statements:

1. Political and Administrative Authorities

These entities are responsible for setting strategic goals and approving land-use or social plans.

• **National Governments and Ministries:** Investigate public documents and laws from ministries (e.g., Housing, Environment, or Energy) to identify high-level policy aims.

• **Local Municipal Councils:** In places like Sweden, local councils have significant agency over the built environment and local services; their strategic plans provide the normative values for a "good place to live".

• **Policy Makers and Advisors:** Those who formulate the decision-bases that prioritize quality of life, equity, and efficiency over purely monetary measures.

2. Scientific and Professional Experts

While politicians set the "values," experts define the technical thresholds required to meet those values.

• **Scientists and Researchers:** They provide the empirical evidence for what is required for "Ecological Maturity" or health standards (e.g., the work of Odum on ecosystems).

• **Economists and Accountants:** Traditional providers of decision-bases, though the RCF encourages scientists to bypass them as "gatekeepers" to ensure scientific understanding isn't "crowded out".

• **International Advisory Boards:** Organizations like the IPCC or the European Scientific Advisory Board on Climate Change that set global or regional benchmarks.

3. Economic and Industrial Actors (Material Entities)

Because real capital is often owned or utilized by **legal persons**, their activities and stated capabilities are crucial for determining current status versus normative goals.

• **Specific Industry Categories:** Sectors like the **transport industry** (largest user of fossil materials) or the **forestry industry** (primary manager of biological capital).

• **Supply Chain Actors:** This includes material extractors (minerals), harvesters (biological), manufacturers, and recyclers who are responsible for the circularity and restoration of resources.

• **Firms and Corporations:** Specifically those that use common-pool resources (like the atmosphere or rivers) and have a "material" impact on their status.

4. Civil Society and Public Interest Groups

Normative values are often rooted in the "democratically arrived-at standards" of the population served.

• **Citizen and Community Groups:** Groups that represent the experience of those being served by the capital, such as those advocating for social inclusion or public health.

• **Non-Profits and Task Forces:** Organizations like Cerise or the Social Performance Task Force (SPTF) that provide frameworks for measuring social performance and the Sustainable Development Goals (SDGs).

5. Regulatory and Certification Bodies

These organizations set formal standards that often act as proxies for normative maturity levels.

• **Standardization Organizations:** Investigating the requirements of **ISO**, **FSC** (Forest Stewardship Council), or other certification bodies helps identify accepted performance levels for industry.

• **National Protection Agencies:** Organizations (like the Swedish Environmental Protection Agency) that provide statistics and frameworks for what constitutes a "safe" or "good" status for resources like air and water.

Think of this analogy for Stakeholder Investigation: Think of setting a "normative status" like a **home renovation project**. The **homeowners** (Politicians/Citizens) decide the *value* (they want a warm, energy-efficient home). The **architect** (Scientists) provides the *normative standard* (to be warm, the insulation must be 10 inches thick). The **contractor** (Industry/Firms) is the *material actor* who must do the work, and the **building inspector** (Regulatory Bodies) ensures the work meets the *legal code*. To understand what the house "should be," you must consult the plans, the owners, the experts, and the laws.

Step 9. Craft Authority Challenges (Demand accountability)

Groups like Extinction Rebellion, Just Stop Oil etc are good at doing this. There is a lot to learn from them.

From a Real Capital perspective the criteria for a challenge might include

- A demand anchored in accepted values
- Related to scientifically defendable normatives
- Within the remit of the authority
- Demonstrably being caused by the specific industry
- Seeming reasonable for people who care about the real capital
- Aligned with law (for example the environmental code)

Step 10. Check out the economics

The question will come, “what will it cost?” The closer you have identified the gap, the easier it will be to find estimates of what it will cost to close it. This would be an expert job, nothing expected of activists, although activists can point out the “what”, the “how” and “how much” can be done by experts

Sooner or later economic questions will arise, either in the team or from outsiders: how will what you ask for be paid for, will it kill economic growth? The trick, I believe, is to put off the economic question as long as possible. For several reasons.

1. Maybe the end of economic growth wouldn’t be a bad thing. You would have a livable planet, and if you chose democratic socialism, at least people would have a roof over their heads and food on the table. And healthcare. This is the viewpoint promoted by Jason Hickle and Giorgis Kallis (Kallis et a 2025l)
2. We should not assume that the national budget is fixed. In recent years, many heterodox economists are becoming aligned with Modern Monetary Theory (MMT). MMT describes how money is brought into existence as government spending and bank loans. In both cases they show that the money does not have to exist, and the act of spending and loaning creates it. This means, to paraphrase British Economist Keynes, if we can do it, we can afford it.
3. Your activism aims to bring the closing of the gap high up on the priority list. Like finding the money for war, there are always ways and people who know how.

Step 11. Summarise your findings in a science based brief to advocacy

Now that you have all of the basic materials, references, urls etc, you need to produce a brief for activists in your group. This is not the same as advocacy pamphlets, etc. Messaging is what we call “above the line” that is to say public. The briefing should be “below the line” that is, for internal use only.

We suggest a one-pager as a rule of thumb, and experience shows the effort to summarise onto one page works, but anything like this is context - specific

The diagram below will give you a flavour of the pattern we use.

One-page advocacy flyer
TITLE

Set the scene
The Issue(1)

Identify Real Capital and its status (2) (3)

What should status be according to science in (1) (4)

Consequences of inaction (5)

Values expressed by official actors (8)

Normative
If we value
"Should be" and gap
Graphics, tables 3,4,

Possible solutions (7)

Challenge to material actors and authorities (6) (9)

Next Local Steps
"Call to Action"

References

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Appendix

Template for Science-based briefing (internal)

Science-Based Advocacy Briefing (Template)

Purpose: This template helps activists translate scientific insight into a clear, credible, and actionable internal briefing, grounded in the Real Capital Framework (RCF). It is designed primarily for ***internal use*** *("below the line") to support advocacy, accountability demands, and strategy.*

What this template is designed to do

- Turn scientific insight into **clear, accountable demands**
- Keep advocacy grounded in **measurable real capital**, not abstract economics
- Help groups identify **where responsibility lies** (firms, authorities, regulators)
- Support production of a **one-page internal brief** after fuller analysis

How groups might typically use it

1. Fill it in collaboratively over several meetings
2. Use it as the factual backbone for:

- Authority challenges
- Campaign strategy
- Public-facing materials (later, simplified)

3. Update it as new data or policy statements emerge

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1. Issue Overview – Setting the Scene

Working title of issue:

Short description (2–3 sentences):

Describe what is happening, where, and why this issue demands attention.

Geographic scope:

(Local / regional / national / ecosystem boundary)

Why this matters now:

What is getting worse, irreversible, or urgent if no action is taken?

Initial intuition (what feels wrong):

(Anger, concern, injustice – capture the motivation clearly.)

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2. Threatened Real Capital (What Is Being Degraded?)

2.1 Primary Threatened Real Capital

Types of real capital:

☐ Natural ☐ Built ☐ Social ☐ Human

Specific asset or system at risk:

(e.g. old-growth forest, groundwater body, public housing stock, public trust)

Functions/services it provides:

(e.g. biodiversity habitat, clean water, shelter, health, social cohesion)

Why this degradation is serious:

☐ Long-term ☐ Irreversible ☐ Creates lock-in ☐ Affects future generations

Who depends on this capital:

(humans, ecosystems, communities, sectors)

2.2 Other Real Capital Involved (System Mapping)

Built capital involved:

(Machinery, infrastructure, technologies putting pressure on capital)

Social capital involved:

(Firms, authorities, institutions operating or regulating the system. Organisations negatively impacted)

Human capital impacts:

(Health, stress, livelihoods, skills, security, wellbeing)

Optional: simple system diagram or bullet-point chain showing how capitals interact.

---

3. Evidence of Degradation – Current Status ("What Is")

Key indicators used:

(e.g. % protected, ppm, hectares lost, waiting time, mortality rate)

Current measured status:

(Include numbers, units, and dates)

Trends over time:

(10–20 years if possible – improving, stable, declining)

Local hotspots / worst-affected areas:

Primary causes identified by science:

(Industries, practices, policies)

Key data sources and reports:

(List scientific papers, authority reports, datasets)

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4. Normative Status – What Should Be ("What Ought to Be")

4.1 Normative Value Statement

Use the following structure:

If society values [X], then the status of [Real Capital Y] should be [Z].

Completed statement:

4.2 Sources of Normative Authority (Quotes & Commitments)

Binding laws or directives:

(e.g. EU directives, national law)

Policy goals or political commitments:

(Manifestos, council strategies, government targets)

Scientific thresholds or consensus:

(Safe limits, ecological maturity, health standards)

Public or moral commitments:

(Speeches, public pledges, democratic expectations)

Include exact quotes and sources where possible.

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5. The Gap – Measuring the Shortfall

Indicator:

Current status:

Normative status ("should be"):

Gap (absolute and/or %):

How long this gap has existed:

Optional tools:

☐ Simple % comparison

☐ ALE table

☐ Allocation diagram

☐ Trend vs pathway graph

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6. Consequences of Inaction (Why the Gap Matters)

Expected outcomes if no action is taken:

(Environmental, social, economic, health impacts)

Risk of hysteresis or lock-in:

(Does delay make recovery harder or impossible?)

Who bears the cost:

(Future generations, specific communities, society at large)

---

7. Material Actors – Who Is Responsible to Act

7.1 Economic Actors (Firms / Industries)

Key industries or companies:

How they materially contribute:

Permits, practices, or investments involved:

7.2 Authorities and Regulators

Responsible agencies or political bodies:

Their legal or policy mandate:

Powers they have (but are not using):

(e.g. enforcement, permits, fines, investment decisions)

---

8. Technology and Capability Check

Current technology driving the problem:

Best Available Technology (BAT) exists?

☐ Yes ☐ Partly ☐ No

If BAT were applied, would it close the gap?

☐ Fully ☐ Partly ☐ Not at all

Who would need to invest:

☐ Firms ☐ Government ☐ Both

---

9. Accountability Challenge – Core Advocacy Demand

Target authority or actor:

Demand (clear, specific, and bounded):

Why this demand is legitimate:

☐ Anchored in law

☐ Based on scientific norms

☐ Within authority's remit

☐ Aligned with stated values

What success would look like:

(Measurable change in real capital status)

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10. Economic factors

The "what must be paid for" connected to the "who pays" with a "how much" order of magnitude if the figures are available.

Can be calculated over the whole supply chain, not just the extractors or the recyclers.

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11. One-Paragraph Summary (for Internal Briefing)

A concise synthesis of the issue, the gap, who is responsible, and what must change.

References

(Scientific papers, official reports, laws, policy documents, datasets)

Example using the Template for Issue briefing (external)

It's five to midnight for our forests. We must save them.

Forests are complex, living wholes that took millions of years to establish. They capture sunlight, air, and water and transform them into oxygen and valuable biomass that gives us fiber, fuel, and timber.

Vital functions

- CO_2 They absorb carbon dioxide and give us oxygen.
- Factory: Trees become fuel, fiber, and timber for other living organisms, including ourselves.
- Water filter: The roots clean the water we drink and ensure it seeps into the ground instead of running off to the sea or flooding places we don't want it.
- Homes: More than half of all animals in Sweden live in the forest.
- Resilience: A mixed forest, with many tree species of different ages, withstands storms and diseases better.

Maybe not for much longer

Modern forestry turns the forest into a plantation after large areas have been clear-cut. Today, more than 60% of the area will not become forest again for thousands of years.

Animals disappear
Species that require specific environments, such as the *white-backed* woodpecker, need old trees and dead wood – they cannot survive clear-cuts.

Poorer air purification
Newly planted forests take 10–20 years to start removing carbon dioxide again.

Fewer food sources
Many berries and mushrooms only grow in natural forests.

If we want to keep these species that require old-growth forests, we must change forestry practices. And protect what can still be protected.

What we have	What we need
5% protected forest	30% protected forest
Little dead wood (10 m³/ha)	Lots of dead wood (20–100 m³/ha)
Few deciduous trees (~19%)	More deciduous trees (30%)

The Swedish Environmental Protection Agency and the Swedish Forest Agency must act:

1. Protect more forest
   - At least 30% should be natural, old forests.
2. Stop clear-cutting
   - Continuous-cover forestry increases bird populations by 30%.
3. Leave dead wood and old trees
   - It's like leaving food and homes for animals.

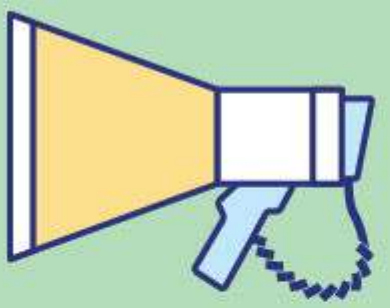
What can you do?

- Support "Let the Forest Live" www.naturskyddsföreningen.se/kampanj/latskogenleva
- Share this information! The more people know, the better.

Sources: SLU, Swedish Forest Agency, WWF

Template sketch for coloured pamphlet

Example of shortened text for the pamphlet



From Anger to Advocacy

"Using the Real Capital Framework for Local Advocacy" equips community advocates, from citizen activists to nature conservationists, with a structured approach to effectively communicate pressing issues to policymakers. By following a simple 11-step procedure, groups can collaboratively develop persuasive materials that for example highlight the importance of preserving local resources. This book shares insights from a test run in Sweden, showcasing the potential of the RCF to clarify complex environmental challenges and inspire actionable solutions.