

Sustainability Transitions Research and the CBD

Discussion note

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Introduction

Biological diversity provides the conditions for human life on Earth but is under pressure for decades. Under the Convention on Biological Diversity (CBD) 196 Parties have come together at the global level with three main aims:

1. The conservation of biological diversity
2. The sustainable use of the components of biological diversity
3. The fair and equitable sharing of the benefits arising out of the utilization of genetic resources

Undoubtedly this global effort has made a significant contribution to introduce instruments and institutions to ensure sustainable use of resources, raise environmental awareness, and counter environmental degradation and resource depletion. Nevertheless, such positive effects has the global state of biodiversity and the environment continued to deteriorate. Most positive effects of the CBD and related efforts seem to have been offset by growing consumption and use of (fossil) resources.

Now approaching a new ten-year period of CBD, it is time to more fundamentally reflect upon the effectiveness and approach followed over the past decades and see how to progress. This short note introduces the sustainability transitions research perspective as a starting point for such a fundamental reflection and repositioning.

Sustainability Transitions Research

Sustainability transition research is a global inter- and transdisciplinary field interested in the patterns and dynamics of non-linear fundamental change in complex adaptive systems in society. It asks the question why periodically sectors or regions go through relatively turbulent periods of rapid and structural change, and what factors cause this.

Of particular interest are the strategies, actions and influence of actors on these processes, either in terms of slowing down such transitions or in terms of influencing their speed and direction. Historical research looks into transitions in sectors of regions (such as from horses and carriages to automobiles, from extensive to industrial food production, from coal to natural gas in households, from neighborhood care to clinical specialized care) and research on transition governance looks more experimentally into issues of power, the role of civil society, new business models and ways to experimentally govern desired transitions under the label of transition management.

The basic starting point in sustainability transition research is the analysis that our current socio-economic structures, both in developed and (in a qualitatively different way) developing countries, are locked-in and

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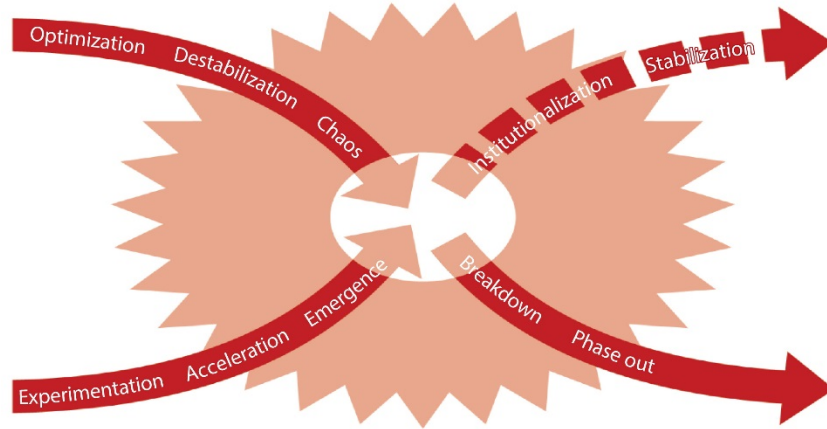
develop path-dependently. We have historically developed specific 'regimes' within sectors and regions: dominant cultures (values, discourses, paradigms), structures (institutions, rules, infrastructures, actor-networks, economic conditions) and practices (routines, ways of working, procedures, actions). Regimes such as centralized fossil energy systems, industrial food systems, fossil automobility and so on are inherently unsustainable: it is impossible to continue along these pathways indefinitely. This is hardly a new insight, it has been the central warning signal coming from environmentalist and environmental researchers for at least 50 years.

From optimization to transition

The first new insight offered by transitions research is that when societies become aware of the negative externalities of such regimes, the initial responses will be to address these externalities and make the system 'less bad'. The way they respond is often in line with the dominant regime: through the institutions, procedures, instruments and actors part of the regimes themselves. This is exactly what the effect has been of most sustainable development policies, innovation programs and, in a way, the CBD: to soften the negative external effects of unsustainable development. But in a way has thereby also helped to sustain this unsustainable development: by making things more efficient and less bad it is possible to continue a bit longer. But by now it is increasingly clear that this approach is not enough: rather than optimizing the existing we need to shift more fundamentally to economic regimes that are inherently good: in balance with nature and rather than having minimal environmental impacts have a positive contribution to the environment and perhaps even regenerate biodiversity and produce environmental quality.

Build-up and break-down

The second new insight coming from transitions research is that as societal regimes keep continuing along this pathway of optimization, inevitably diversity is reduced and the adaptive capacity of such regimes decreases. Inevitably this leads to increasing vulnerability as societal pressures for change mount and more and more people start to look for alternatives. Such 'niches' can be technological, economic or social and represent alternative ways of culture, structure and practice. Such niches by definition start small and vulnerable but through processes of variation, selection and learning develop into competitive alternatives. Combined could such increasing societal pressure, internal tensions and crises in the regime and competitive alternatives lead to an actual transition: a structural reconfiguration of the regime towards a new dynamic equilibrium based on combinations of old and new elements. This pattern is visualized in Figure 1 below.



 Loorbach D, et al. 2017.
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Start from the niches

The third new insight transitions research offers is that in a context of persistent problems that in the end cannot be solved by improving the existing regime, there are always innovations and new practices developed by actors outside these regimes that provide possible building blocks. So rather than to initiate or steer a transition in an institutional context are societal transitions driven by a number of controllable, unmanageable, chaotic, predictable, deliberate and indirect actions. This suggest that we also need to rethink governance in the context of transitions as the speed and direction of transitions are first of all influenced by external pressures and shocks, and emerging alternative visions, business models, technologies, organisations, practices and ideas. If we seek to achieve rapid transitions away from perceived persistent unsustainable regimes towards new sustainable futures, the starting point should thus be to investigate to what extent an existing regime is indeed locked-in and what alternative starting points for accelerating desired transitions should be.

When we apply this perspective to biodiversity and nature conservation, it is clear that the negative effects on the atmosphere, water, air and so on have been partly remedied by successful environmental legislation and technological innovation. But when considering global effects such as climate change, ocean acidification, species extinction, deforestation and resource depletions, it is clear that these are persistent problems. Regulation does not suffice, even on a global scale, and technological innovation is only addressing parts of these problems. Despite all efforts to achieve global agreements, align nations behind ambitious goals, even such ambitions seem to fall short of what is needed from a scientific point of view and it is highly likely that implementation will fail to achieve all the formalized policy goals. Considering the CBD this perspective seems to be not too far off: an ambitious global convention achieved through tough negotiations and a lot of institutional work but so far unable to really change the ways in which the global economy impacts biodiversity. We are thus facing a set of interrelated global ecological crises and institutional systems that are only able to agree on half of what is necessary on the longer term.

Mind the politics

The fourth new insight coming from transitions research is that effective governance of transitions by definition needs to start from such a critical starting point questioning incumbent practices, values and structures in a context of persistent problems. As transitions are regime shifts, they also are inherently political power games. While actors embedded in a regime might argue for transitions, they will often try

to do everything to slow down change and prevent transitions as they have much to lose. Think about oil companies spreading doubt about climate change, car companies frustrating introduction of electric vehicles or big food companies using powers to prevent more stringent legislation. These three examples are not random: these three sectors represent the vast majority of negative environmental and climate impacts and have everything to lose in (sustainability) transitions. Transition governance therefore implies selective participation of actors pursuing transitions to connect, empower, strategize and support these actors towards a broader societal movement able to shift power balance.

CBD in transition?

But besides such rather transparent resistance against transitions also a lot of implicit and indirect resistance lies in established routines, practices and networks of actors in regime contexts. While for decades the way they worked and thought was effective and appreciated, they are gradually confronted with doubt, questions and debate. For long people can ignore such doubts, can dismiss these, can argue they are already changing or feel offended. But as destabilization occurs and alternatives start to break through inevitably alternative visions, discourse and practices will become the new norm. The question now is what this means for CBD. The main issue for debate is whether the 'CBD-regime' has not moved into its own path-dependency trying to remedy end-of-pipe negative externalities but in doing so have become to some extent part of the problem and institutionalized an interest in such end-of-pipe problems. In other words: the CBD has developed into an efficient add-on to unsustainable economies making these a bit less bad.

This is obviously a gross simplification because as we zoom in we can see all sorts of niches: fundamental debates, new concepts, breakthrough technologies, front-running business, civil society initiatives, proactive governmental programs on all levels or shifts in the public debate. Both within the biodiversity debate, the CBD and more broadly the sustainability debate, such signals of transitions could provide the starting point for a new CBD vision. A vision to work in such a way that it supports economic sectors (including production and consumption) to shift from unsustainable to new regimes that lie within planetary boundaries but still provide basic human needs. This would imply to shift focus partially from conserving and protecting nature and pushing for sustainable use of the components of biological diversity (2nd objective of the Convention) - that is sustainability in dealing with biodiversity and ecosystems towards also supporting, guiding and accelerating sustainability transitions to completely different ways to provide food, shelter, energy, mobility (but also health care, education, finance or governance).

This in itself will need a broadening of the CBD repertoire. It will first of all require a much broader understanding of sustainability transitions, their potential indirect (positive) effects on biodiversity, at the ecosystem, species and gene levels, the own desired outcomes and course of transitions, and how to intervene. It will secondly imply a more political and proactive approach starting with those individuals representing countries and parties that are seriously and intrinsically committed to achieving transitions. It will also require a more cooperative and experimental approach seeking to connect across sector, domains and governance levels to and between actors that represent new ways of thinking, doing and working aligned with their own sustainability agenda. And finally will it require a continuous cycle of doing-learning-scaling to keep introducing latest insights, ideas and possibilities.