COMMUNICATION

Four shareworthy SEPR scenario ideas

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Abstract

In this communication article, we share our scenario ideas at the request of the journal editor. These are (1) a scenario for
building sustainable suburbs; (2) a counterfactual scenario for coping with the super wicked COVID problem; (3) envisioning
alternative futures of cultural ecosystem services supplies in Southwestern Ghana; and (4) a path toward writing successful
scenarios. The ideas will be fully developed in due course into scholarly articles for the journal.

Keywords Scenarios · Counterfactual scenarios · Sustainable suburbs · Creative thinking · Super wicked problem ·
Adroitness · Cultural ecosystem services (CES) · Southwestern Ghana

1 Prologue *by* the editor

Between September 15 and October 15, 2020, the editor in
chief of *Socio-Ecological Practice Research* (SEPR) Wei-
Ning Xiang selected five prospectuses out of the twelve sub-
mitted for the special theme issue, *Our alternative futures in
the 2020s and beyond: Scenarios of socio-ecological prac-
tice in an uncertain world.*

The selection is both a recognition and an admiration. It
recognizes the painstaking attentiveness the authors gave
to the dual ambition outlined in the *Call for prospectus*

for scenario composition (Xiang 2020, p.297): (1) to fore-
see alternative futures of socio-ecological practice in the
2020s and beyond; and (2) to envision, under each alterna-
tive future, the correspondingly coping strategies for socio-
ecological practitioners and scholars. It admires the *triple-
I* qualities the authors creatively built into these scenario
ideas: informative, inspirational, and interesting.

Considering the amount of time the article development
and editorial process will take, the editor in chief publishes
four of these ideas in this communication article so that,
in a timely fashion, these gemstones of creative, forward
thinking can reach out to the journal community of inter-
national scholars and practitioners. Publishing these ideas
also serves two other purposes: to recognize their scholarly
values and to register and thus protect authors' intellectual
property rights of their scenario ideas before the full papers
are developed.

These scenario ideas are presented respectively and
independently by their authors in the following four sec-
tions (Sects. 2–5). The authors are as such solely and
only responsible for the content accuracy in their own
sections. All the authors, however, approved the theme
and layout of the article and green-light the publication
of this communication article. The orders in which sec-
tions are arranged and authors listed are determined by
the editor in chief, so is designation of the corresponding
author of the article.

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2 A scenario for building sustainable suburbs *by* Tom Daniels[1]

In response to the COVID-19 pandemic, some urban inhabitants in the USA are moving to suburbs to avoid densely settled places, to find lower cost housing now that much work is being done remotely, and to have better access to green space (see, for example, Bortz 2020; Capps et al. 2020; Lerner 2020; Matsuda 2020).

If this wave of migration continues, US cities are unlikely to add more population than suburbs in the decade of the 2020s and perhaps beyond. For planners, developers, elected officials, businesspeople, environmentalists, and concerned citizens, this presents a unique challenge and one-off opportunity to make the suburbs more environmentally, socially, and economically sustainable while accommodating the influx of new settlers. To facilitate their strategic thinking for implementing greater sustainability, I envision two alternative suburban futures.

2.1 A business-as-usual scenario

Under a business-as-usual scenario of the typical American suburban settlement pattern, sprawling low-density development and the separation of land uses would continue. With more people moving to suburbs or even exurbs, the USA would see greater reliance on cars, more upward pressure on greenhouse gas emissions, higher infrastructure and health costs, accelerated loss of open space, and general environmental degradation along with more social isolation.

2.2 A more resilient, vibrant, equitable suburb scenario

Under a sustainable suburb scenario, in sharp contrast to the business-as-usual scenario, American suburbs could become ecologically more resilient, economically more vibrant, and socially more equitable through creative planning, design, and redevelopment while embracing new inhabitants. Such a scenario would feature higher density development, a greater use of public transit, less driving, more walking, and more people living in mixed-use, multifamily developments.

2.3 What would it take to pursue a brighter future?

Envisioning an alternative future of sustainable suburbs is uplifting. But it also prompts a deep appreciation of the challenges people would face and the opportunities that exist.

The obstacles include, but are not limited to, (1) the high cost of new infrastructure, especially transit; (2) the Not-In-My-Backyard (NIMBY) sentiment against development of what could be perceived as LULU (Locally Unwanted Land Uses)[2]; and (3) densifying existing development. Opportunities reflect taking advantage of trends in more people working remotely, more on-line shopping, a greater desire for green space, and the nation's growing social diversity.

I envision and juxtapose these two alternative suburban scenarios with the hope that together they provide a way to engage suburban communities across the USA about their futures and to analyze uncertainties within the planning and design process. In particular, I hope that the sustainable suburb scenario will help planners, developers, elected officials, businesspeople, environmentalists, and concerned citizens to determine whether a proposed development or infrastructure project adds to or detracts from progress toward greater environmental, social, and economic sustainability.

3 A counterfactual scenario for coping with the super wicked COVID problem *by* Jeffrey Chan[3]

3.1 A super wicked problem triggered by COVID

In the face of the COVID-19 pandemic, large-scale blanket responses have become the status quo. Entire cities (and regions) have been locked down in many places. This has been described as a form of "overkill" even by their own proponents (Cadell 2020)—tantamount to detonating "a social nuclear weapon" (Christakis 2020, p. 10). Responses of this kind offer a temporary halt to disease transmission but at the expense of incurring a devastating fallout on, *inter alia*, businesses, jobs, education, and mental health. Indeed, the crisis the COVID-19 pandemic created is a super wicked problem (Xiang 2021).[4] As a super wicked problem (Lazarus 2009, p. 1160) of unprecedented global proportions, the longer

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[2] For a review of the concepts of NIMBY and LULU in the context of human services and land-use planning, see Dear (1992).

[4] Wicked problems are a class of intractable and unsolvable socio-ecological problems collectively identified by American scholars Horst Rittel, Melvin Webber, and West Churchman in late 1960s (see Churchman 1967; Rittel and Webber 1973; for recent reviews, see Batty 2014, pp. 29–33; Chan 2016, p. 124; Coyne 2005; Xiang 2013, 2019, p. 8). Wicked problems are widely recognized to be present in almost all pressing issue areas that matter to the human society today, especially those that are directly related to socio-ecological practice (Xiang 2019, p. 8).

the COVID-19 pandemic drags on, the harder it becomes to address the many undesirable impacts of this problem.

3.2 An alternative Tai-Chi response

In sharp contrast to the prevalent blanket approach, herein I envision an *adroit* alternative, a counterfactual scenario,[5] of coping with the super wicked COVID problem. Adroitness in this context is the practical artfulness and tactical resourcefulness of achieving goals in the face of a calamity-induced wicked problem.

"Four ounces (are used) to deflect a thousand pounds" (四两拨千斤) is a Chinese idiom and an aphorism that underlies the philosophy of Tai-Chi. In a head-to-head fashion, a mass of four ounces would literally be overwhelmed by the force of a thousand pounds. But as the Tai-Chi master Cheng Man-ch'ing [郑曼青 (1902–1975)] points out sagely, one can offset a buffalo of thousand pounds with a rope of four ounces—when tied to a nose ring, the rope allows one to lead and control the buffalo at will and with ease (Cheng 1985, p.93). This is possible because, in the words of American environmental scientist Donella Meadows (1941–2001) (2008, p. 145), the rope is strategically placed at a leverage point in this disproportionate situation: where a small change in one point can lead to a large shift in the behavior of the entire system.

In composing an *adroit* scenario of coping with the super wicked COVID problem, I am guided by the following four possibility questions:

1. Are we able to find the leverage point(s) in the super wicked problem the pandemic triggered?
2. If so, then what is the metaphorical four-ounce rope that can be tied to the nose ring of this thousand-pound beast?[6] In other words, what is the adroitness exemplified?
3. Are we then able to tame—"to better control" (Chan 2016, p. 123)—this monster for our well-being by adroitness throughout the 2020s and beyond?
4. What might the world look like had we achieved all the above possibilities?

3.3 What role could adroitness play?

I will conduct a systematic exposition on adroitness and demonstrate its role in our effort to achieve the first three

possibilities the alternative Tai-Chi response approach offers.

4 Envisioning alternative futures of cultural ecosystem services supplies in Southwestern Ghana *by* Stephen Kankam, Hongmi Koo, Justice Nana Inkoom, and Christine Fürst[7]

4.1 People are concerned

What could the future supplies of cultural ecosystem services (CES) in our region look like in the 2020s and beyond? What would each of the alternative futures mean to us? How could we prepare for them? Asked many concerned farmers, landowners, land-use planners, elected government officials, as well as academics in Southwestern Ghana (Fig. 1).

Their concerns are legitimate. Along with its offshore oil and gas development, the region has been experiencing rapid land-use and land-cover changes and enduring their impacts on CES supplies. In this agricultural and biodiverse region, CES include physical and mental health benefits, aesthetic enjoyment, recreation, and spiritual experiences. These services also evoke a strong sense of attachment among the local people to their land and their rich cultural heritage. As such, sustainable CES supplies are essential to the well-being of the people in the region.

4.2 Our scenario building exercise

From 2019 to 2021, we are commissioned by the United States Forest Service (USFS) and Hen Mpoano (a Ghanaian Non-Governmental Organization, www.henmpoano.org) to investigate, *inter alia*, the above three CES questions as part of a collaborative initiative to conserve the Greater Amanzule Wetlands (GAW) in the region (see Fig. 1).

To this end, we explored alternative futures of CES supplies under an array of land-use planning scenarios. The scenario themes range from business-as-usual, mangrove afforestation, to market-driven growth, and green network in which an "eco-corridor" connects upland and coastal forests through native tree planting. The scenario building process is participatory and collaborative, blending scientific knowledge with local, tacit knowledge (Koo et al. 2018, pp. 5–27). We worked closely with a diverse group of local people—regional land-use planners, farmers, landowners, professionals of non-governmental organizations, elected government officials, and academics—throughout the entire

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[5] For a recent account on the use of counterfactual scenarios in support of the COVID policy-making, see Yohe et al. (2020).

[6] West Churchman is the first on record who refers to a wicked problem as a "beast" (Churchman 1967, p. B142).

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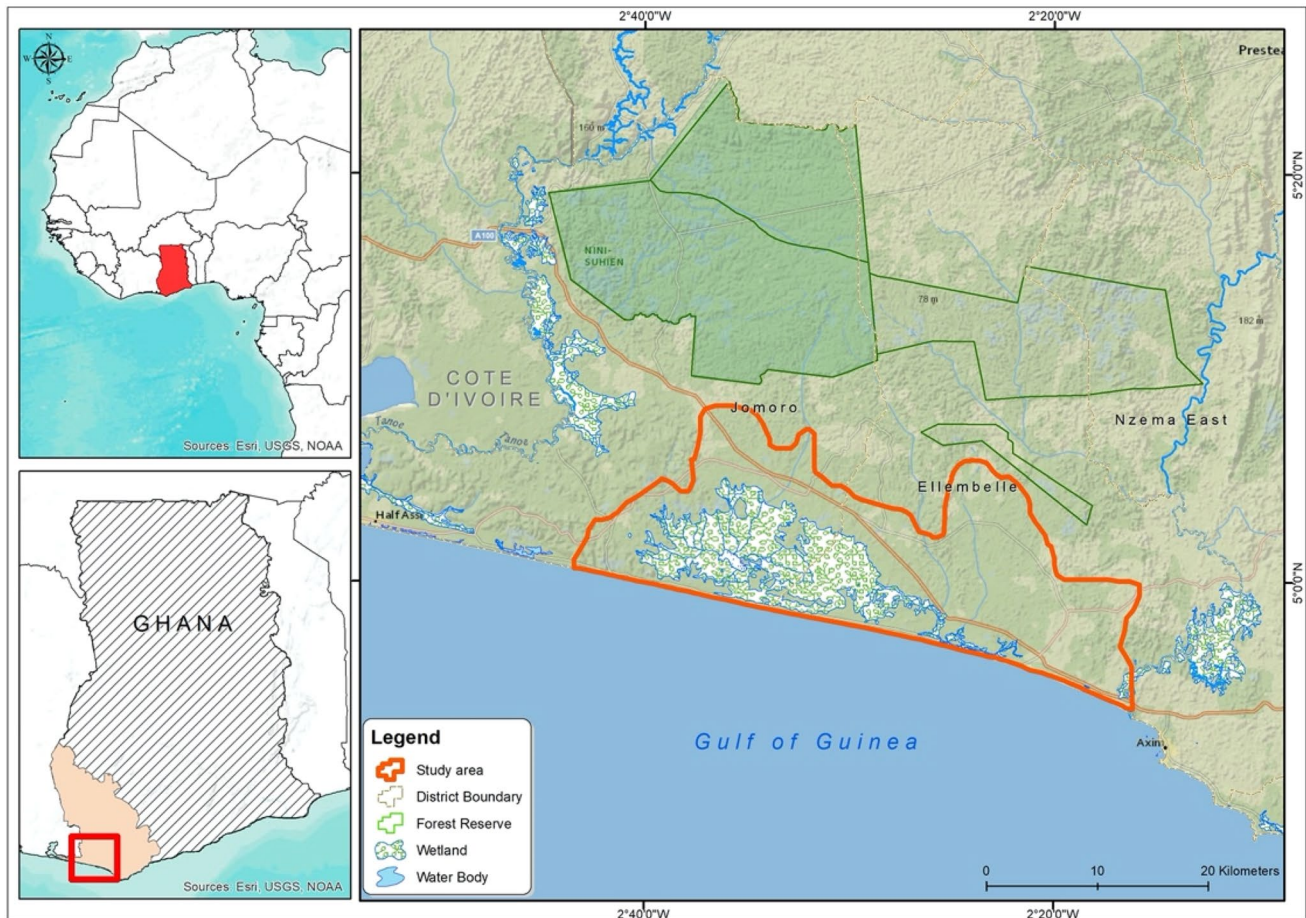
Fig. 1 Southwestern Ghana and our study area [the Greater Amanzule Wetlands (GAW)]

process. As such, these participants, acting both as scenarists and as scenario users, became the co-owners of the products of this exercise—the scenarios and the impact assessment results (Adams et al. 2016, p. 16).

4.3 The many benefits the exercise provides

The collective learning experience during the scenario building process provides many benefits to all the participants, including ourselves. It enables a productive exploration of the three CES questions the people in the region care about; it offers a unique opportunity to nurture the mind, challenge ideologies, share ideas, inspire creativity, and re-enforce ecological ethics (Xiang and Clarke 2003, pp. 889–890). All of these, along with the tangible products of the scenario building process, will undoubtedly benefit the socio-ecological practice in the region and beyond.

5 A path toward writing successful scenarios by Michael Murphy and Don Day[8]

Conventional "solutions" do not solve contemporary problems. To be successful in informing or even influencing socio-ecological practice, future scenarios must be creative, bold, and comprehensible. To write such scenarios, profound changes are needed in the way they are conceived and communicated.

5.1 Three virtues of successful scenarios: creative, bold, and comprehensible

A successful scenario must be creative—both informative and visionary. Creative thinking is the key to making novel, insightful knowledge useful—relevant, actionable, and

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efficacious; and to making it useful *systemically*—in a way that is integrative as opposed to disciplinary.

A successful scenario must be bold. It must break from the status quo and overcome the conventions that have become obstacles to societal progress. Being innovative in this way requires the scenarists to accept certain visibility and exposure to criticism, which also creates opportunities for new collaboration and insight if concepts are evaluated from a broad range of disciplinary perspectives.

A successful scenario must also be comprehensible enough (i.e., conveyed in accessible, compelling language) to communicate its message effectively with scenario users and engage their broad support.

5.2 A path to writing virtuous scenarios

We herein outline a path—a scenario—to writing successful scenarios that embodies these virtues. Resolution to problems will depend as much on the path chosen to understand and resolve them as on the actions to be taken. Underlying this path is the idea of a co-writing process. The researchers and practitioners form a joint team of scenarists and engage in a collaborative process of formulating creative, bold, and comprehensible scenarios. In such a process, researchers are encouraged to speculate lucidly from their position of expertise, outside the box of academic conventions; they also are compelled to avoid the less accessible language of science in communicating ideas. Practitioners are likewise inspired to free themselves from the conventions of professional expectations and avoid the often bureaucratic language of practice.

The path we envision is a shared process of formulating and communicating bold, innovative ideas. More specifically, it first (1) enables the creation of an effective collaboration among participants from a diverse array of disciplinary perspectives; then (2) guides an integrated approach to defining the problem areas and their systemically linked relationships; and finally, (3) facilitates the shared learning required for the development of an increasingly integrated understanding of the interrelated components of the system in which the problem lies and how it might be altered to bring about possible resolution(s).

5.3 What would it take to go through such a path?

Admittedly, it is neither a trivial nor easy task to change the way researchers and practitioners approach the creation and communication of scenarios. On the path we propose toward virtuous scenarios, there are obstacles to be overcome. For example, creative thinking often runs counter to prevailing

social norms in the research and practice communities; it may also pose a perceived threat to established credibility in research and to professional expectations in practice. We hope our proposed path or scenario, along with the actions we suggest, will facilitate the real-world socio-ecological researchers and practitioners to overcome these obstacles and bring about positive, sustainable change in the world.

6 Epilogue *by* the editor

The four scenario ideas showcased above are tersely cogent, crystalizing creative yet substantive thoughts that emerged from their authors' experiences, observations, and reflections. The editor in chief, along with our rapidly growing SEPR community of international scholars and practitioners, looks forward in due course to reading articles in which these ideas are fully developed. Until then, let's celebrate these fresh ideas in the very spirit American author Napoleon Hill cherished in 1937 that every human achievement has its beginning in an idea (Hill 1937, p. xi).[9]

Compliance with ethical standards

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

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[9] "[A]ll achievement, all earned riches, have their beginning in an idea!" (Hill 1937, p. xi).

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