

# Research Paper

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## The Strategic Approach to International Chemicals Management: A case study of transnational public-private partnerships in the chemicals sector

**As an international effort to improve practices worldwide, the Strategic Approach to International Chemicals Management (SAICM) is an overarching policy framework intended to complement existing agreements within the global chemicals sector by serving as a platform for the engagement of a wide variety of stakeholders. This work identifies SAICM as a transnational public-private partnership (TPPP), conceptualizing it as part of a wider movement within international environmental governance. The paper proceeds to analyze SAICM utilizing a theory-testing process tracing method to test whether the prevailing theories on the effectiveness of such partnerships are supported in the case of SAICM. In doing so, the researcher offers valuable insight into the strengths and limitations of the TPPP approach in the chemicals sector, which can be of use for stakeholders involved in the negotiations to be held for an agreement on a new SAICM.**

### 1 Introduction

Clearly, the issue of sustainability in the chemicals sector is a pressing one for the economy, human health, and the environment; this reality has been acknowledged by the international community through a host of initiatives, including the creation of the Strategic Approach to International Chemicals Management (SAICM) in 2006. This paper explores the strengths and weaknesses of the transnational public-private partnership (TPPP) approach utilized in SAICM. Through the utilization of a theory-testing process tracing method, the work contributes not only to this field's established research gap in case studies, but also illuminates theoretical considerations for policy-makers and other stakeholders to consider during future negotiations for a new SAICM.

### 2 Background

The multi-stakeholder, cooperative approach to transnational environmental problems can be seen as a distinct movement within international environmental governance. According to Jänicke and Jörgens (2006, p. 172): "the first phase of environmental policy in the late 1960's and 1970's was dominated by the traditional dipole of the state as the originator of policy and industry on the receiving end". Intergovernmental regimes remained the focus throughout the 1980's, while transnational actors and networks were largely dismissed as "epiphenomenal" (Bulkeley et al., 2009, p. 54). However, the global governance sphere began to move in a different direction in the following decade and beyond.

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The 1992 Earth Summit constituted a pivotal moment for international environmental governance. This meeting produced Agenda 21, a comprehensive plan of action for all policy levels that was agreed upon by 178 national governments (United Nations [UN], n.d.). Jänicke and Jörgens (2006, p. 176) refer to Agenda 21 as the “most ambitious approach to environmental governance”, with key elements being identified as:

1. **Strategic approach** – consensual, generalized targets and long-term strategy formulation
2. **Integration** – incorporation of environmental issues in other policy areas
3. **Participation** – significant participation of NGOs and citizens
4. **Cooperation** – between private and public actors in decision-making and enforcement
5. **Monitoring** – monitoring success with a variety of reporting obligations and indicators

Agenda 21 disperses responsibilities to different sectors beyond government and “aims overall to replace reactive, additive, case-by-case policy decision-making to protect the environment with broad-based global, national, and local efforts” (Jänicke and Jörgens, 2006, p. 177). According to Dodds (2015), this kind of decentralized and participatory approach came to be known as Type II partnerships.

These types of partnerships have become “a cornerstone of the current global environmental order, both in discursive and material terms” (Pattberg, 2010, p. 280). As a result of this development, “environmental governance is therefore caught up in a complex web of state and non-state actors operating and interacting at different policy levels” (Jänicke and Jörgens, 2006, p. 173). This sort of convoluted and mixed governance structure, in which a variety of actors are interacting with each other at different levels in the same sector, is where SAICM operates. Jänick depicts this phenomenon in Figure 1 as the dimensions of modern environmental governance.

The underlying idea is that different partners at different levels in different sectors bring their unique resources and strengths to the targeted issue, while the weaknesses or gaps of individual stakeholders are supplemented or complemented by the other partners. Detomasi (2007) gives us a graphic representation (Figure 2) of what strengths and weaknesses each different type of stakeholder typically brings to problem solving in transnational issues. This further reflects the underlying logic of Type II partnerships that would come to be so influential on SAICM.

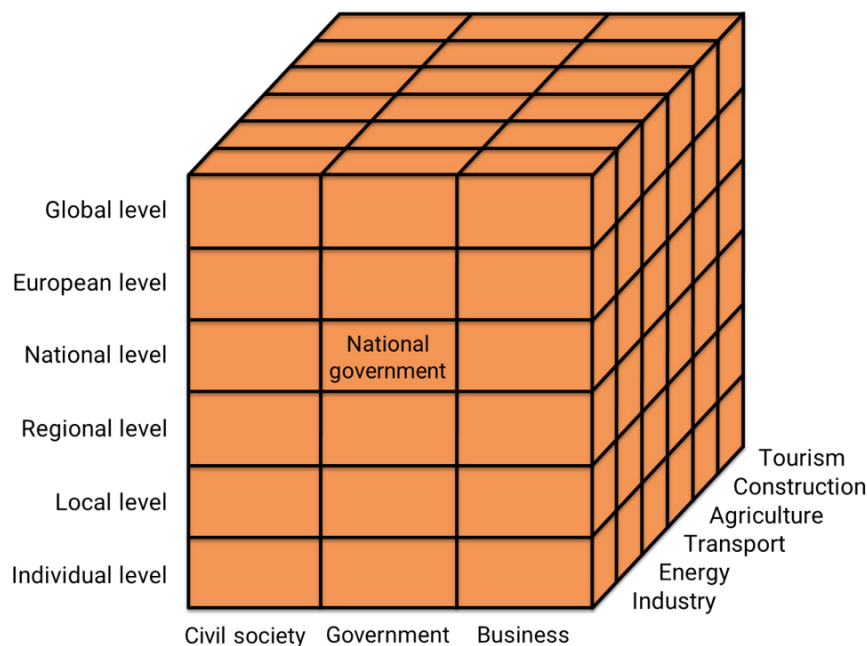


Figure 1 Dimensions of Modern Environmental Governance (source: Jänicke 2006).

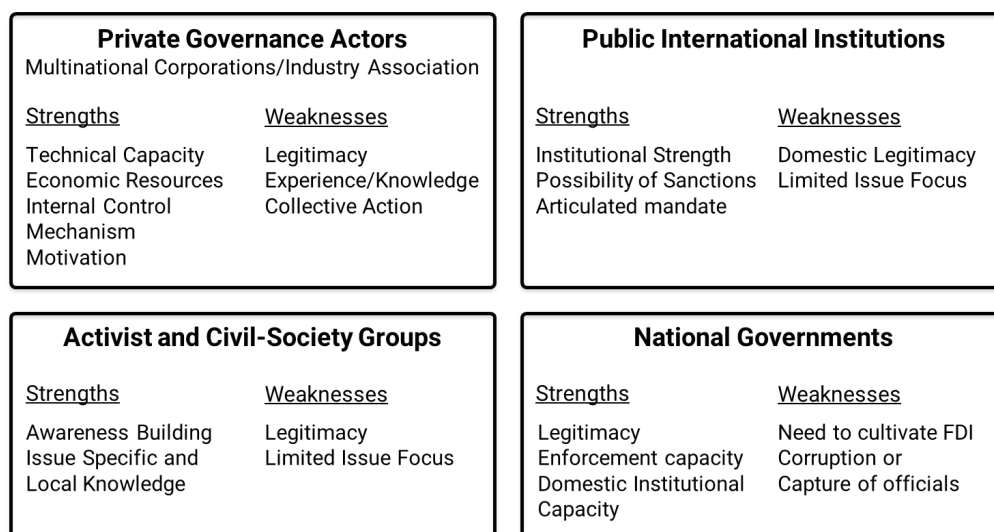


Figure 2 Global governance and corporate social responsibility participating actors (source: Detomasi 2007).

On the official SAICM website, its approach is described as such (SAICM, n.d.):

*SAICM provides a valuable multi-stakeholder forum to discuss and address the many challenges facing the adoption and implementation of national policies to safely manage chemicals. SAICM is an ambitious initiative and is unique in its set-up as an inclusive, voluntary, global policy framework on the sound management of chemicals across the lifecycle.*

Three core documents initially comprised SAICM: the Dubai Declaration on International Chemicals Management, the Overarching Policy Strategy, and the Global Plan of Action. First, the Dubai Declaration serves essentially as recognition of the existing efforts that have taken place in chemicals and waste management and an affirmation of SAICM's commitment to the sort of partnerships outlined in Agenda 21 (United Nations Environment Programme [UNEP], n.d). Second, the Overarching Policy Strategy (OPS) explicitly identifies the five main policy objectives of SAICM, which are as follows (UNEP, n.d.):

1. Risk reduction
2. Knowledge and information
3. Governance
4. Capacity building and technical cooperation
5. Illegal international traffic

Additionally, some notable financial features call for (UNEP, n.d.):

- Actions by national or sub-level governments for financing of objectives
- Enhancing industry partnerships and financial and participation in implementation
- Integration of objectives into multilateral and bilateral development assistance cooperation
- The establishment of a Quick Start Programme (QSP) to facilitate implementation and achievement of objectives
- Appointing of National Focus Points (NFPs)
- Periodic reviews during International Conferences on Chemical Management (ICCMs) held every four years and conducting of regional and other meetings between these ICCM gatherings
- Establishment of a SAICM Secretariat that is responsible for facilitating meetings, disseminating information/guidance, maintaining partnerships, and more

Finally, the Global Plan of Action (GPA) "lists possible work areas and 299 associated activities, as well as actors, targets/ time-frames, indicators of progress, and implementation aspects" (UNEP, 2019, p. 225). These include: occupational and children's health and safety, cleaner production, waste management and minimization, hazard data generation and availability, and more (UNEP, n.d.). Furthermore, it is also noted that the GPA should be considered an "evolving tool" (UNEP, n.d., p. 27).

The next meeting of the ICCM, ICCM 5, was set to take place in Bonn, Germany, in October 2020, but has been postponed due to the global pandemic caused by COVID-19 (International Institute for Sustainable Development [IISD], 2020). A new framework will need to be negotiated eventually, as the mandate of the current SAICM framework expired in 2020. This new framework is often referred to as the SAICM Beyond 2020 Framework. A wide range of stakeholders are expected to take part in the discussions, as many expressed satisfaction with SAICM's inclusive approach, regarding it as an ideal platform for advancing sustainability in the chemicals sector (IISD Reporting Services, 2015). This paper can contribute to discussions at ICCM 5 through a critical evaluation of the strengths and weaknesses of SAICM through the framework of TPPPs. These findings can help better inform decision-makers and stakeholders during the negotiation process for a SAICM Beyond 2020 framework.

### 3 Literature Review

Börzel and Risse (2005, p. 4) define TPPPs as a unique form of governance, specifically: "institutionalized cooperative relationships between public actors (both government and international government organizations) and private actors beyond the nation-state for governance purposes". Although the academic debate over definitions of TPPPs is lively, overall, Schäferhoff, Kampe, and Caan (2009, p. 453) offer a succinct summary of this litany of definitions, stating: "the bottom line of all definitions is that transnational public-private partnerships are continuing and relatively institutionalized transboundary interactions, which include public actors, such as government and international organizations, and private actors".

It is nevertheless important to describe some of the key characteristics of TPPPs. First, Jänicke and Jörgens (2006) argue that such partnerships are more easily reached in industries with only a few main actors, which characterizes global basic chemical and pharmaceutical production (UNEP, 2019). Additionally, Pattberg, Biermann, Chan, and Mert (2012) identified important shared characteristics found in the literature of TPPPs: cross-border and non-state relations, public policy objectives, and a network structure, appearing in different sectors and entailing different scopes of geography. More recently, Sun (2015) has identified two main features of TPPPs – first, as they are created through a system of voluntary cooperation, their governance authority is obtained through both public and private spheres, as

opposed to deriving from delegation, market mechanisms, or moral authority; second, they are a form of governance based on networks of public and private actors, which interact in decentralized or adaptable ways.

The theorized advantages and disadvantages offered by TPPPs are also present in existing literature. Hale and Mauzerall (2004) express the perceived strengths of this approach as being trifold: pooling together of partners into an optimal coalition, focusing resources and activities from a broad commitment towards specific projects, and improved coherence of sustainable development efforts. Furthermore, Biermann, Chan, Mert, and Pattberg (2012) identify the creation, implementation, and inclusivity of norms as popular arguments made for TPPPs. On the other hand, the multi-stakeholder approach embraced by TPPPs is also handicapped by a series of limitations. Börzel and Risse (2005, p. 15) argue that these TPPPs are liable to lead to "lowest common denominator" solutions, i.e. business interests, as those who would likely have to bear the economic cost of changes in standards of the chemicals industry, have a role in the international rules setting and do their best to make any results as minor or negligible as possible. This can also exclude other civil society stakeholders by nullifying the importance of their input during negotiations. This sentiment is echoed by Hale and Mauzerall (2004), who express concern that these TPPPs can serve as a vehicle for 'blue-washing', or the hiding of environmentally problematic behavior behind a sort of façade, usurping international reputation and validity. On the other hand, Chan and Müller (2012), taking an institutional perspective, argue that this sort of capitulation can originate from the side of the public sector, as policy makers with limited time and/or resources may revert to sub-optimal solutions rather than pursue more effective, but possibly more difficult, changes.

### 4. Research questions and methodology

The researcher further draws from the comprehensive review of TPPP literature developed by Pattberg and Widerberg (2015). Based on existing academic literature, the authors identify nine conditions, which are subsequently grouped into three themes:

**Actors**

1. Optimal partner mix
2. Effective leadership

**Processes**

3. Stringent goal-setting
4. Sustained funding
5. Professional process management
6. Regular monitoring, reporting, and evaluation to support organizational learning

**Context**

7. Active meta-governance
8. Favorable political and social context
9. Fit to problem structure

The research questions pursued draws on these conditions, as well as the contextual and theoretical elements discussed above, and are articulated as follows:

1. *What have been the strengths and weaknesses in the approach utilized in the Strategic Approach to International Chemicals Management (SAICM)?*
2. *Do these findings support the existing theory on conditional factors articulated by Pattberg and Widerberg (2015)?*

The first question is an exploratory one; it will be answered in a factual manner from the data sources. The second question is a theory-testing question, which requires theory-testing process tracing method as described by Beach and Pederson (2013). SAICM is unique within the chemicals sector because it differs from other existing agreements in chemicals management for its non-binding nature, its broad scope of activities, and the fact that non-government actors are allowed to participate in the main decision-making body, the ICCM (Persson et al., 2014). These characteristics, as well as its ongoing renewal process, establish SAICM as an ideal case study for the use of method.

The researcher largely employed a literature review to collect the relevant data. Data is derived from a variety of sources, including SAICM resolutions, texts, reports, and other official documents produced from and related to the ICCMs and other SAICM meetings. In their method, Beach and Pederson (2013) refer to triangulation, or the collecting of multiple independent evaluations, as a way to increase the veracity of the hypothesis, which the researcher has also done with these different sources. The high quality and diversity of this data qualifies it as evidence, which is important because it will allow the researcher to draw observations on whether the case of SAICM supports confirmation or disconfirmation of the nine conditions. Additionally, public policy literature presents three critical ways to understand results: outputs, outcomes, and impacts, which are defined as (Köppel and Sprinz, 2019, p. 1862):

- **Outputs** – “the norms, principles, and rules that states adopt when implementing a regime”
- **Outcomes** – “regime-induced changes in human behavior”
- **Impacts** – “changes in environmental quality – the biophysical environment itself”

These concepts will be important to understanding and interpreting the results.

The development of an analytical model based on the method of Beach and Pederson (2013) will allow for the interpretation of evidence and the addressing of the second research question. First, the independent variable (X) and the dependent variable (Y) of the experiment need to be conceptualized. The independent variable is SAICM itself; conversely, the dependent variable is identified as the results of SAICM. Seeing as a causal mechanism is often composed of various components, and explains the causal relationship between X and Y (Beach and Pederson, 2013), the causal mechanism in this case is conceptualized as the nine conditions (and their respective three overarching groups)

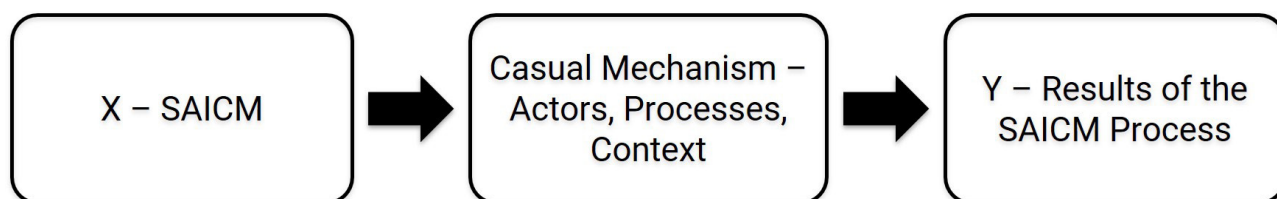


Figure 3 Analytical model (own representation).



identified by Pattberg and Widerberg (2015). Therefore, the developed analytical model for this thesis is demonstrated in Figure 3. This doubles-sided interpretation – that is, of the conditions influencing the effectiveness of the SAICM throughout its the policy life cycle, as well as of its results– will allow the researcher to thoroughly address the second research question, and thus elucidate some policy insight for SAICM Beyond 2020.

## 5 Results

First, an independent evaluation was sanctioned by SAICM to carry out an analysis of its activities from 2006-2015. It was written by Dr. Robert Nurick and cites numerous strengths in SAICM. First, SAICM delivered on some of its outputs through the successful arranging of meetings and conferences, crafting of resolutions, and establishment of the Secretariat (Nurick, 2019). From this, SAICM has also demonstrated some degree of success it delivering its outcomes, particularly regarding the QSP, specifically: successful mainstream of chemicals management on the national policy level, high impact of implemented projects (particularly when involving partnerships between governments and NGOs), the ability to secure external funding to continue their work after conclusion of SAICM funding, and significant improvement in political and technical awareness of the importance of sound chemicals management (Nurick, 2019). Overall, 184 projects were approved and 70 had been completed by 2015, addressing all objectives of the OPS (Nurick, 2019). Additionally, another outcome with which SAICM successfully engaged was the identification of emerging policy issues (EPIs). SAICM succeeded in raising the profile of these issues on the international policy level, especially regarding lead in paint and the subsequent formation of the Global Alliance to End Paint in Lead (Nurick, 2019). Finally, there was some success in strengthening the capacity, commitment, and political will to mainstream SAICM. For example, 18 countries in Africa developed NFPs for this purpose, followed by 13 in the Latin American and the Caribbean Region, 8 in the Asia-Pacific Region, 8 in the Western Europe and Others Group, and 6 in the Central-Eastern European Region; progress was also made in attempts to organize cooperation within geographic regions (Nurick, 2019).

On the other hand, the report also finds some weaknesses demonstrated by SAICM. First, Nurick (2019) argues that the drivers of change, particularly adequate financing, were

severely restrained. An example of this ever-present issue of funding is the SAICM Secretariat, for which funding fell short by at least 43% for six of the 10 years included in this study and which was underfunded for all but 10 months of this entire period (Nurick, 2019). This hampered the ability of the Secretariat to disseminate knowledge and information, further diminishing the outcomes and impacts achieved (Nurick, 2019). Second, it criticizes the indicators chosen for the GPA, as they were based solely on outputs, without complementary outcomes- and impacts-based indicators; this made the processes for monitoring and reviewing progress much more difficult (Nurick, 2019). Third, the presence and participation of several important stakeholder groups was missing or lacking. Academia was largely missing due to a lack of an integrated scientific body and the declining of an offer made by various chemical societies to become official advisory scientific bodies; simultaneously, participation from industry was limited to chemical producers and failed to include downstream users, retailers, and others (Nurick, 2019). Finally, information and knowledge sharing between stakeholders remains a persistent issue for a number of reasons, including reluctance to do so by business actors, limitations of the Secretariat, and weak communication between different levels of governments within some nations (Nurick, 2019).

Second, a report commissioned by the Finish Ministry of the Environment and carried out by the Center for Governance and Sustainability also found many shortcomings. Urho (2018, p. 6) largely contributes these to governance structure, stating: “this is explained by the fact that SAICM was designed to work differently than conventional approaches by mobilizing support from other actors, rather than actively participating in their delivery through internal structures”. Specifically, Urho (2018, p. 36) criticizes this formulation of SAICM’s goal, stating: “the overall objective may fall short, since it is heavily qualified”. Second, Urho criticizes the effectiveness of National Action Plans (NAPs), stating: “the lack of a strategically prioritized NAP mechanism has resulted in an ad hoc and sporadic approach to development of NAPs with different names and approaches, making it challenging to assess collective progress” (Urho, 2018, p. 45). Third, Urho (2018) points out that reporting for the indicators of the 273 GPA activities are often not reported or followed-up on, and that the indicators are under-developed and overly broad to ensure effective reporting. Fourth, regarding reviewing and monitoring, Urho (2018) criticizes the lack of a review mechanism for individual reports, arguing that it could help

countries with useful advice for progress. Fifth and finally, Urho (2018) offers a positive assessment of the process for identifying of EPIs and the productions of the Global Chemical Outlook series of reports, but criticizes SAICM's lack of any permanent internal mechanism to serve as a science-policy nexus, particularly an over-reliance on IOMC institutions that suffer a lack of resources and funding to handle this extra responsibility heaped upon them.

Finally, in a 2018 conference paper, Simon and Schulte note some weaknesses in SAICM's approach. They discuss SAICM's measurable goals and objectives, pointing out that: "the OPS neither sets priorities among these objectives, nor does it call on stakeholders to reach certain goals or targets by a defined deadline" (Simon and Schulte, 2018, p. 2). Despite attempts towards effective assessment at ICCM 2, Simon and Schulte (2018) argue that numerous shortcomings remained in the utilized measurement tools, specifically that the indicators adopted missed key regulatory developments, such as the development of the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) regulation in Europe. To further this point, Simon and Schulte criticize the loose terminology, where terms such as 'vision', 'targets', 'objectives', 'indicators', and more are seemingly used in an interchangeable manner. Simon and Schulte (2018) also noted the low level of reporting by stakeholders, even when compared to MEAs generally. Finally, Simon and Schulte (2018) offer some criticism on the meaningfulness of discussion, pointing out that, despite delegates expressing an interesting in developing a proposal on the inclusion into SAICM of the 2030 Agenda for Sustainable Development, a working group was never created due to a lack of funding. Overall, these sources paint a relatively dim picture of SAICM's successes, which were notable but limited, while also identifying key shortcomings. This is reflected by the general consensus amongst SAICM stakeholders by the end of ICCM 4 that that the goals of SAICM would not be reached and that, accordingly, most of the focus by had been adjusted to laying the groundwork for a successful ICCM 5 and to a SAICM Beyond 2020 agreement (IISD Reporting Services, 2015).

## 6 Interpretation

According to the methodology already described, the causal mechanism identified is the nine conditions for the effectiveness of TPPPs articulated by Pattberg and Widerberg (2015). The remaining steps will be to assess

each individual aspect of the causal mechanism and use the theory-testing process tracing method to weigh evidence and make causal inferences in testing the second research question. This will enable the testing of the hypotheses and elucidate policy insights for SAICM stakeholders.

### Actors

#### 1. Optimal partner mix

The omission of prominent stakeholder groups can lead to lower performance (Pattberg and Widerberg, 2015). Nurick (2019) identifies the lack of involvement and participation from academic actors as a significant weakness, as well as the lack of integration of a wider range of downstream business and industry actors beyond chemical producers. Furthermore, there was no concerted effort to involve women or other marginalized groups in QSP activities (Nurick and Touni, 2015). Finally, SAICM resolutions itself calls for greater involvement of the health sector (UNEP, n.d.). This evidence supports the validity of the nine conditions, as it has served as an expected limitation.

#### 2. Effective leadership

Effective leadership is necessary for "bringing people to the table, mitigating diverging opinions, and driving the difficult start-up process" (Pattberg and Widerberg, 2015, p. 47). In this regard, the establishment of the Bureau and a Secretariat at ICCM2 represent successful outputs, as do the ability to convene regular meetings, particularly the open-ended working groups (OEWGs) and intersessional meetings. This supports the validity of the nine conditions; the leadership of UNEP and the Inter-Organization Programme for the Sound Management of Chemicals (IOMC) have been key in obtaining the successes SAICM has demonstrated. However, Nurick (2019) argues that the Secretariat was limited in its capacity for various reasons, which will also be touched on in other conditions and limited SAICM's effectiveness by, for example, limiting its ability to communicate best practices.

### Processes

#### 3. Stringent goal-setting

Stringent goal-setting is important, as Pattberg and Widerberg (2015, p. 47) state: "in many cases, rules are so vague and broad that they impede compliance, monitoring, reporting, and evaluation, and consequently

limit accountability and transparency". Here, the evidence paints a bleak picture of the SAICM results, one that support the validity of the nine conditions. Simon and Schulte (2018) criticize the goal-setting featured in the SAICM's OPS, as it does not prioritize objectives nor does it set specific deadlines for specific goals, as well as the loose terminology used, with 'targets', 'goals', and 'objectives' seemingly interchangeable. Urho (2018) also criticizes what he sees as this weighty qualification of SAICM's goals, arguing it may limit the SAICM's ability to achieve its objectives.

#### 4. Sustained funding

Pattberg and Widerberg (2015) argue that the issue of funding is more prominent for TPPPs than for other forms of implementation program. The evidence indicates this was also the case in SAICM, although there was some degree of success. On the positive side, in the period from its inception to August 2015, national governments and the European Commission provided almost 40 million dollars to the QSP Trust Fund (Nurick and Touni, 2015). Additionally, Nurick (2019) notes that many of the QSP projects and programmes were able to secure long-term funding following the conclusion of the SAICM financing. However, there were numerous shortcomings in this area as well. For example, Nurick and Touni (2015) state that the expansion of funding sources envisioned in the QSP business plan was never quite achieved. Additionally, the almost continuous shortage of funding for the SAICM Secretariat severely limited its ability to perform its designated function (Nurick, 2019).

#### 5. Professional process management

Pattberg and Widerberg (2015) note the importance of having a full-time staff. Although this is the case in SAICM (UNEP, n.d.), this condition shows many weaknesses that support validity of the nine conditions. For example, Urho (2018) criticized SAICM's over-reliance on IOMC structures that did not have the capacity or resources to handle the extra responsibility that was being thrust upon them. Nurick (2019, p. 69) identifies a weakness in that many of the NFPs delegated SAICM responsibilities to officials in junior positions, saying their role as the NFP for SAICM was largely "invisible".

#### 6. Regular monitoring, reporting, and evaluation to support organizational learning

Pattberg and Widerberg (2015) argue this condition is important for three reasons: institutional learning, demand for financial accountability, and transparency for the sake of legitimacy. The systems embedded within the SAICM structures for monitoring and reporting were found to be largely lacking. For example, Nurick (2019) found the indicators developed to be a weakness, as they were solely outputs-based, without any complementary outcomes- or impacts-based indicators. This criticism is echoed by Urho (2018), who found them to be insufficient and too general. Furthermore, Simon and Schulte (2018) also point to low reporting rates as a weakness of SAICM; in the period from 2011-2013, only 43% of national governments providing report on their national indicators. In terms of evaluation, Urho (2018) criticizes the lack of a review mechanism for individual reports, which hindered the development of institutional learning. These weaknesses lend support to the nine conditions theory, as they align with what would be predicted in terms of hampering effectiveness.

### Context

#### 7. Active meta-governance

Pattberg and Widerberg (2015, p. 48) argue this condition is evermore important in an increasingly fragmented landscape in international environmental governance, defining meta-governance as the "organization of self-organization or regulation of self-regulation". Some outputs can be interpreted as successful in terms of endorsing of previous MEAs in the global chemicals sector, as articulated in the founding SAICM resolution (UNEP, n.d.). Here, the lack of integration of the 2030 Agenda and Sustainable Development Goals (SDGs) into the SAICM resolution, despite interest shown by stakeholders for doing so (Simon and Schulte, 2018), stands out as a prominent weakness. This weakness aligns with what would be predicted under the conditional factors, providing support for the theory.

#### 8. Favorable political and social context

The observations show that the SAICM made meaningful progress in promoting a more favorable political and social context for sustainability in the global chemicals sector. For example, the identification of EPIs was noted as an achievement that raised the



profile of these issues of concern chemically (Urho, 2018; Nurick, 2019), reflecting a successful output. Additionally, the QSP demonstrated success in local projects and mainstreaming chemicals management at the national level policy (Nurick, 2019), which would represent a successful outcome, although Urho (2018) criticizes the lack of a clear NAP mechanism. This evidence would lend support to the tested theory as well, as the conditions, when favorable, facilitated effective results.

#### 9. Fit to problem structure

Malign problems, or problems “characterized by high levels of complexity, competing interests, and unclear solutions” (Pattberg and Widerberg, 2015, p. 49), are more difficult to solve. The evidence in the case of SAICM provides support for this theory; international chemicals management certainly qualifies as such a malign problem, and it is a problem certainly not solved. This theoretical condition offers an explanation for SAICM’s shortcomings; Urho (2018, p. 13) criticizes the “minimalist” governance structure of SAICM as being too reliant on stakeholders. This also provides support towards the confirmation of Pattberg and Widerberg’s (2015) work.

Overall, with the evidence interpreted, its inferential value allows the researcher to make causal inference, either supporting the confirmation or disconfirmation of the nine conditions of effectiveness for TPPPs identified by Pattberg and Widerberg (2015). Based on this, the researcher can reasonably infer, based on Bayesian logic of probability and the contextual information and evidence, that the results support confirmation of Pattberg and Widerberg’s theory on the nine conditions of the effectiveness of TPPPs. This is because none of the evidence appears to contradict the expected results; when the theory predicts that a certain element will lead to either a strength or weakness, the interpretation has found the predicted result. Although many of the results of the SAICM process are mixed in terms of their effectiveness in creating outputs, outcomes, and impacts, the direction of causality corresponds to the theory, even in these unsuccessful cases. Thus, the analysis supports the confirmation of the Pattberg and Widerberg’s (2015) theories on the conditions for the effectiveness of TPPPs. The support demonstrated in this case implies utility for policy-makers and stakeholders to consider when making decisions during the SAICM Beyond 2020 process.

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## 7 Conclusion

On a practical level, this article shows that the nine conditions can serve as a sort of roadmap for policy-makers to consider when negotiating the new SAICM Beyond 2020 Framework in 2021. For example, it is established in the theory of Pattberg and Widerberg (2015) that precise goal setting encourages sustained funding. Seeing as these were both identified as significant weaknesses of SAICM, this constitutes an important issue for policy makers to consider in crafting a new agreement, i.e. improving the clarity of goals articulated in the new agreement can facilitate more sustained levels of funding. Another example of a policy recommendation that can be solicited from this work is the need to integrate the SDGs in a SAICM Beyond 2020 agreement in order to develop active meta-governance. In the complicated landscape of global chemicals governance, the SDGs can provide a theoretical foundation and central policy plank on which to build an effective regime, as well as cement the framework as an integral part of the international community’s wider sustainability agenda. This could also facilitate stakeholder inclusion vis-à-vis an increased focus on the inclusion of women and marginalized groups. Indeed, more wide-ranging involvement of actors in the chemicals sector, including downstream users, academics, and potentially many readers of this journal, is paramount, as the current partner mix is sub-optimal and limiting. This work sets forward a path that is ripe for continued study. Future researchers can add to this work and elaborate on the interconnections between the various conditions, particularly how they can facilitate or hinder one another. In terms of utility for SAICM Beyond 2020, this could prove beneficial in promoting improved decision making in policy implementation and design. Ultimately, these conditions can serve as points of reference for policy makers to guide the way forward in the SAICM Beyond 2020 process.

With such an increased understanding and a supported theory for the conditions of success for TPPPs, hopefully stakeholders can reach a successful and effective deal. The international community’s sustainability goals partly rest upon the shoulders of these actors. For these goals, and the sake of the health of the planet and its people, the sound management of chemicals and waste is imperative.

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