COLLABORATIVE GOVERNANCE CASE DATABASE

Purpose of database

This database provides a collective repository for collaborative governance case studies from around the world. The mission of the repository is to foster rich but systematic medium and large-N analysis of the conditions, processes, and outcomes of collaborative governance. Researchers who contribute a case to the database may use the entire dataset for their own research purposes. Moreover, contributed cases will be cited by other researchers in their analyses.

Key definitions and scope conditions

- *All types of collaborative governance cases from all policy domains are welcome*: Cases may involve only government entities, only non-government entities, or a mix of the two. Cases may represent successes or failures or something in between.
- *Definition of collaboration:* When two or more actors aim to constructively manage their differences in order to produce joint solutions to common challenges.
- *Definition of governance:* The arrangements and processes through which interdependent but operationally autonomous actors aim to formulate and achieve common goals through collective decision making.
- *Definition of collaborative governance:* A collective decision-making process based on more or less institutionalized interactions between two or more actors that aims to establish common ground for joint problem solving and value creation.
- *Definition of a case:* A set of actors collaborating on a shared issue over a specified time period within a given geographical space. The database allows contributors to chart the evolution of a collaboration over time. However, if the set of actors, the focal issue, or the geographical scope change drastically, the data may also be entered as separate but related cases.

Instructions to contributors

The survey consists of eight thematic sections, each starting with a series of closed questions and ending with an open text question that allows you to add your qualitative insights. Please provide as much information as you feel confident in providing on the basis of your knowledge of the case.. You can select 'Don't Know' if you do not have the answer. A confidence measure at the end of each section asks you to make a self-assessment of your level of confidence in the validity and reliability of the data you have entered. The survey takes about four hours to complete one case.

Before your survey is accepted into the database, a peer researcher will review your case description to make sure it is clear and consistent. You will also be asked to check at least one case submitted by a fellow contributor. Please contact the database editors at s.c.douglas@uu.nl to discuss any queries you may have about the database and about potential case contributions.

Content of survey

1. General case information

1. Please provide a unique name for the case you are describing.

Reforestation Partnership in North China

2. Please provide your name, institutional affiliation, and email address.

Case author(s)	Yu-Rong Liu (Joy)
Institution / University	University of Arizona
Email address first author	joyliu@email.arizona.edu

3. Please specify the start and termination date of this collaboration.

Start of collaboration		End of collaboration	
June	2005	Ongoing	Ongoing

4. Please specify the period of the collaboration covered by your research data. Note: This is not about when you collected the data, but what period your data covers.

Start of period observed		End of period observed	
July	2009	June	2019

5. Please specify the type of data collection methods you used.

Methods	Used
Documents	✔
Interviews	✔
Observations Social	✔
network data	✔
Surveys	
Other, namely:	

6. Please provide up to three weblinks to published reports, articles, or books that document this case (e.g. a peer-reviewed article or an evaluation report).

1. http://greenaction.org.hk/web/wp-content/uploads/2019/05/2018annualreport.pdf
2. https://greenaction.org.hk/?page_id=997
3. https://www.sciencedirect.com/science/article/abs/pii/S0341816218300201

7. At which jurisdictional level did the collaboration occur? Choose more than one if necessary.

Level of collaboration	Start of period observed	Middle of period observed	End of period observed
Local	✔	✔	✔
Regional	✔	✔	
National			
International (across borders)	✔	✔	✔
Supranational (UN, EU, etc.)			
Multi-level (collaboration between levels)	✔	✔	✔

8. In which country or region was the case situated? Pick more than one if necessary

East Asia	Select	China	Select	Select

2. Main case characteristics

9. What was the policy domain of the case? Choose more than one if required.

☒ Agriculture	☒ Environment & Climate	☐ Social/Employment Policy
☐ Culture/Leisure	☐ Infrastructure & Planning	☐ Technology & Transport
☐ Economy & Trade	☐ Public Health	☐ Other, namely …….
☐ Education	☐ Security & Public Safety	

10. To what extent was the collaboration driven by any of the following ambitions? (1 = not at all an ambition, 5 = this was the core ambition)

Ambitions of collaboration	Start of period observed					Middle of period observed					End of period observed					Don't know
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
Develop a plan or policy for a shared problem or societal issue	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐
Develop a regulatory framework for a policy domain or industry	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	☐
Create innovative solutions in existing policies, programs, practices	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐
Increase efficiency by lowering costs or boosting benefits	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐
Increase effectiveness by increasing impact of interventions	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐
Increase legitimacy and support among different constituents	☐	●	☐	☐	☐	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐
Organize crisis and emergency planning, response and/or recovery	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	☐
Create holding environment to contain conflict among stakeholders	●	☐	☐	☐	☐	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐
Other, namely:	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

11. To what extent did the collaboration aim to include any of the following forms of collaborative governance? (1 = not at all an aim, 5 = this was the core aim)

Purpose of collaboration	Start of period observed					Middle of period observed					End of period observed					Don't know
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
Co-initiation: Jointly identify required policies, services, or regulation	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐
Co-develop: Jointly create and arrange policies, services, or regulation	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐
Co-production: Implement policies, deliver services, or provide regulation	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐
Co-assessment: Jointly monitor and evaluate impact of policies, services, or regulation	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐

12. **How confident do you feel the answers you provided to the questions in this section are valid, reliable, and rooted in data and observation?**

Highly confident

13. **Please describe in max. 600 words the (a) societal challenges and organizational issues the collaboration sought to address, (b) the stated ambitions and desired outputs and outcomes, (c) how these challenges, issues and ambitions evolved during the period observed.**

The Non-profit organization Green Action Charity Foundation (GACF) based in Hong Kong seeks to alleviate poverty in rural China through reforestation and providing medical and educational resources. Since 2005, GACF invested their resources in areas where they could have the most impact. In short, they consulted first with forestry officials and researchers at the regional level to identify local villages that they could work with, especially those that are the poorest. Rural China and its local government at the township and county level exhibit different governance patterns, local ecology, influence from provincial government's financial capacity, and social dynamics, and thus is difficult to generalize. However, the government structure remained similar across regions and the necessary information flow among different levels within the government represent a common challenge to policy implementation. Most importantly, county governments have become the center of resource allocation and policy implementation since early 2010s and township government became less important in the collective decision-making process among local officials and the communist party cadres. Village level decision-making largely relies on village council, which constitute of three to a dozen people depending on the population size of the village.

GACF focused on reforestation as their highest priority in western rural Shanxi province in this reforestation partnership between the Shilou county government, the county forestry bureau, and Si village. This cross-sector collaboration was formed since the beginning and remained the key stakeholders throughout the observation period by this author from 2009 to 2019. All four stakeholders remained important decision-makers due to the present of strong collaborative leadership. The goals were to find an appropriate way to reforest on the challenging Loess Plateau landscape that is effective in terms of acceptable tree survival rate and growth. Before the initiation of this partnership in 2005, the central government of China designed the Returning Farmland to Forest policy in 1999 in response to the flooding events occurred in the lower reach of the Yellow and Yangtze River. Shanxi province is located at the middle reach of the Yellow river and on the eastern part of the Loess Plateau, which make reforestation a relatively important policy among others. On the other hand, Shanxi province is the second largest coal producing province, second only to Inner Mongolia, and thus reforestation is politically significant in terms of its role in reducing carbon emissions and air pollution.

The implementation of the Returning Farmland to Forest policy provided an important financial incentive and resources and legitimacy for reforestation for the local governments in rural areas. However, the implementation process was poorly designed and became a source of conflict in some rural communities. The performance on the part of local government created barriers for building trust between local villagers and therefore influence the process of the reforestation partnership between GACF and local villagers. The other reason GACF also had difficulty building trust with local villagers was because of previous failed working relationships with villagers and officials in other reforestation projects in Guangdong and Shanxi province. In sum, local institutions in terms of policy implementation and social dynamics between officials and villagers played an important role in resolving conflicts and the success of reforestation.

3. Starting conditions

14. To what extent did the configuration of actors that made up the core of the collaborative process have a pre-history of mutual engagement? (1 = Very little history, 5 = Very extensive history)

Score					Don't know
1	2	3	4	5	
●	☐	☐	☐	☐	☐

15. To what extent was there trust between core participants at the start of the collaboration? (1 = Very low trust 5 = Very high trust)

Score					Don't know
1	2	3	4	5	
☐	☐	●	☐	☐	☐

16. How was the collaboration first initiated? Please select one option.

Self-initiated by participants

17. To what extent did the participants have more or less equal levels of resources, (e.g. knowledge, influence, skills) to bring to the collaborative process? (1 = Highly unequal, 5 = Highly equal)

Start of period observed					Middle of period observed					End of period observed					Don't know
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
☐	●	☐	☐	☐	☐	☐	●	☐	☐	☐	☐	☐	●	☐	☐

18. To what extent were there incentives to collaborate for the participants, e.g. financial gain or increased influence? (1 = Very little incentives, 5 = Very strong incentives)

Start of period observed					Middle of period observed					End of period observed					Don't know
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	☐	●	☐

19. To what extent did the participants feel mutually dependent on each other for fulfilling their ambitions? (1 = Very low sense of interdependence, 5 = Very high sense of interdependence)

Start of period observed					Middle of period observed					End of period observed					Don't know
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐

20. How confident do you feel the answers you provided to the questions in this section are valid, reliable, and rooted in data and observation?

Highly confident

21. Please describe in max. 600 words the (a) the prehistory and past interactions of participants, (b) how the collaboration was initiated, (c) the sense of interdependence between participants and the incentives to collaborate, (d) any significant changes over time in the period observed.

The Shanxi Reforestation Partnership case study is initiated through networks of individuals, similar to many bottom-up approaches to collaborative governance. Individuals from GACF started their poverty alleviation work through professional networks and connections. These individuals from GACF, Shilou county government and forestry bureau, Si village council had no prior working relations before this reforestation partnership. However, GACF has on-going reforestation and poverty alleviation projects in Guangdong province and two other villages in Shanxi province. These working experiences heavily affected the operating dynamics and trust building. Navigating rural China also require political skills and knowledge that comes through local facilitators such as local officials or community members. Reforestation in Shanxi province and on the Loess Plateau are challenging due to both logistics, lack of resources, and ecological reasons. The ex-vice deputy of the Shanxi provincial forestry academy introduced GACF to the Wang Village in rural area and started their partnerships in 2004. However, Wang Village's reforestation project eventually was terminated by GACF due to a lack of performance and trust building with local communities. The ex-vice deputy then introduced GACF to Si village in Shilou county. Shilou county government officials were responsive and proactive to engage with GACF and appeared to have strong incentives to collaborative due to their lack of access to resources and being remote from urban areas. The Returning Farmland to Forest policy and on-going poverty alleviation efforts by both the central and provincial government also provided strong incentives and legitimacy for reforestation. In short, the lack of alternative development resources such as coal compared to neighboring counties provided the core incentives to collaborate. The condition demonstrated a strong awareness of interdependence.

The collaboration started with a strong focus on the technical aspect of reforestation, which opened up a space for more collaboration as stakeholders in Shilou county took action to resolve problems and shared the responsibility of implementation and monitoring. GACF gradually increased their financial commitment to the partnership and sought researchers and scientists to evaluate their reforestation effectiveness in 2013. Local villagers' wiliness to participate in the project was based on benefits in the form of rent and labor. Participating villagers wanted to opt out of the collaboration a few times due to the changing socio-economic environment and their perceived benefits and costs by continued participation. These conflicts were mediated by local legitimate leaders at both the county and village level.

4. Institutional design

22. How many (institutional/group) actors were involved in the collaborative process?

Start of period observed	Middle of period observed	End of period observed	Don't know
6-10	6-10	6-10	☐

23. What different types of actors took part in the collaboration. Please select the backgrounds of the different participants.

Background of participants	Start of period observed	Middle of period observed	End of period observed	Don't know
Political organizations / politicians	☑	☑	☑	☐
Public organizations / civil servants	☑	☑	☑	☐
Private, for-profit organizations	☑	☑	☐	☐
Private, non-profit organizations	☑	☑	☑	☐
Citizens / informal citizen groups	☑	☑	☑	☐

24. To what extent were the procedural ground rules for the collaboration clearly explicated by and for the participants? (1 = Very little articulation of ground rules, 5 = Very detailed articulation)

Start of period observed					Middle of period observed					End of period observed					Don't know
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
☐	◉	☐	☐	☐	☐	☐	◉	☐	☐	☐	☐	◉	☐	☐	☐

25. To what extent were the procedural ground rules observed and applied? (1 = Very rarely applied, 5 = Almost always applied ground rules)

Start of period observed					Middle of period observed					End of period observed					Don't know
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
☐	◉	☐	☐	☐	☐	◉	☐	☐	☐	☐	◉	☐	☐	☐	☐

26. To what extent was the collaboration inclusive? (1 = Very few of the relevant and affected actors included, 5 = Almost all of the relevant and affected actors included)

Start of period observed					Middle of period observed					End of period observed					Don't know
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
☐	☐	◉	☐	☐	☐	☐	◉	☐	☐	☐	☐	◉	☐	☐	☐

27. To what extent were the decision-making processes in the key collaborative forums transparent? (1 = Rarely clear to participants how decisions were taken, 5 = Almost always clear)

Start of period observed					Middle of period observed					End of period observed					Don't know
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
☐	☐	◉	☐	☐	☐	☐	◉	☐	☐	☐	☐	◉	☐	☐	☐

28. How confident do you feel the answers you provided to the questions in this section are valid, reliable, and rooted in data and observation?

Mostly confident

29. Please describe in max 600 words (a) the ground rules of the collaboration, (b) the inclusiveness of the collaborative forum(s), (c) the transparency of decision making within the collaborative forum(s), (d) any significant changes in the institutional architecture of collaboration over time

Working in rural China require political skills and knowledge that covers both formal and informal institutions and local history. The ground rules of the collaboration in the form of local knowledge are difficult to translate clearly to GACF due to both cultural and language barriers. GACF are formed by people in Hong Kong who operated under different legal and financial system than mainland China. Therefore, there was no institutionalized ground rules and the partnership relied on leadership skills and ad hoc arrangements. Due to the solid leadership skills and a supportive county government, the decision-making process was relatively transparent compared to other rural reforestation projects that GACF has invested in. The highly engaged local officials and village council significantly improved the overall decision-making process. Nevertheless, the information flow and communication were mostly limited to key leaders in the village council, the county forestry bureau and GACF. There was no institutionalized documentation of meetings except for land rental agreements with villagers and reforestation contracts with the forestry bureau.

Participating villagers were recruited by village council and volunteers. In total, 26 out of 60 households in Si village gradually joined the partnership through land rental agreements. Villagers also participated in the capacity of monitoring and protecting the trees from fire hazard, grazing, and other human-induced damages. These collective efforts were organized by village council. The Shilou county forestry bureau was responsible for tree-planting labor and providing seedlings. In this partnership, the forestry bureau also took extra effort to monitor the tree planting outcome as compared to normal policy implementation process under the mandate of Returning Farmland to Forest policy. The local dynamic within Si village and between Si village and the county government appeared relatively cooperative. The Shilou county government was willing to share capacity and credit with the village council and leaders, an important factor in sustaining the partnership overtime. The key stakeholders and leaders remained the same overtime and the institutional structure as well. Nevertheless, the partnerships gradually grew to include county water resource and education bureau through both informal and formal arrangements with the goal of improving rural development.

5. Leadership

30. Characterize the locus of leadership roles in the collaborative process

Locus of leadership	Start of period observed	Middle of period observed	End of period observed	Don't know
One lead actor				
A few lead actors	✔	✔	✔	
Shared collective among all actors				

31. What were the backgrounds of those exercising leadership? Choose more than one if necessary.

Background of participants	Start of period observed	Middle of period observed	End of period observed	Don't know
Political organizations / politicians				
Public organizations / civil servants	✔	✔	✔	
Private, for-profit organizations				
Private non-profit organizations	✔	✔	✔	
Citizens / informal citizen groups	✔	✔	✔	

32. To what extent was the leadership effective in convening / bringing together the relevant and affected actors (1 = Highly ineffective, 5 = Highly effective)

Start of period observed					Middle of period observed					End of period observed					Don't know
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐

33. To what extent was the leadership effective in guarding the focus and integrity of the collaborative process intended in this case? (1 = Highly ineffective, 5 = Highly effective)

Start of period observed					Middle of period observed					End of period observed					Don't know
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐

34. To what extent was the leadership effective in resolving or mitigating conflicts between actors? (1 = Highly ineffective, 5 = Highly effective)

Start of period observed					Middle of period observed					End of period observed					Don't know
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐

35. To what extent was the leadership effective in creating and realizing concrete opportunities for creative problem-solving resolving? (1 = Highly ineffective, 5 = Highly effective)

Start of period observed					Middle of period observed					End of period observed					Don't know
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐

36. How confident do you feel the answers you provided to the questions in this section are valid, reliable, and rooted in data and observation?

Highly confident

37. Please describe in max. 600 words the (a) the form and style of leadership within the collaboration, (b) the dynamics and impact of leadership on the collaborative process (c) changes in the leadership dynamics in the period observed.

The collective leadership grew throughout the collaboration and worked in triadic form. The village leader, the forestry officer, and the GACF executive were responsible for major decision-making. They acted as the problem solver and communicated the needs and concerns from each group and institutional constituents. The county level government official provided administrative and political support for the reforestation partnership and helped build trust with the leaders in GACF. Leadership skills were crucial for building trust among villagers. The village leader was a community member who had credibility with both the government and the village. The village leader convinced and recruited villagers to participate in the partnership since the initiation of the reforestation project and used his personal network to acquire tree planting materials for the partnership, which greatly lower the cost. The forestry officer was a trust-worthy official within the county government as demonstrated by his ability to liaise across government bureaus and established strong working relations with GACF executive.

The reforestation partnership meet face to face twice a year and relied on phone or email for communication. This lack of face-to-face time appeared to place constraints on village leader's ability to fully communicate local concerns and thus put pressure on his leadership and as a result put pressure on local government's legitimacy. GACF relied heavily on the village leader and the forestry officer to coordinate local affairs and lack an understanding of how local institution works. This gap in local knowledge on the part of GACF created challenge for resolving local conflicts. Nevertheless, the leadership skills and a cooperative local dynamic between villagers and the local officials in Shilou county appeared to provide effective conflict resolution. Finally, Shilou county lack access to resources that could only be provided through a partnership through GACF, such as learning opportunities about advance forestry science, prestige, and connections through GACF's network. The local officials especially perceived the partnership as an opportunity to improve their reforestation efforts and participate in modern development approaches such as those brought about by GACF.

6. Collaborative process

38. To what extent did the participants engage in face-to-face dialogue through holding regular meetings with good attendance? (1 = Very infrequently, 5 = Very frequently)

Start of period observed					Middle of period observed					End of period observed					Don't know
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	☐

39. To what extent was the collaborative process concentrated in a single forum/arena/group? (1 = Very low concentration; 5 = Very high centralization in a single forum/arena/group)

Start of period observed					Middle of period observed					End of period observed					Don't know
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐

40. To what extent did the participants in the collaborative process invest in joint fact finding? (1 = Very little investment, 5 = Very high investment)

Start of period observed					Middle of period observed					End of period observed					Don't know
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐

41. To what extent did the participants in the collaborative process invest in knowledge sharing? (1 = Very little investment, 5 = Very high investments)

Start of period observed					Middle of period observed					End of period observed					Don't know
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐

42. To what extent did the collaborative process focus on the alignment of interests and values among all actors? (1 = Very weak focus, 5 = Very strong focus)

Start of period observed					Middle of period observed					End of period observed					Don't know
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	☐	●	☐	☐

43. To what extent did the collaborative process focus on joint problem-solving (e.g. joint problem framing, co-designing solutions)? (1 = Very weak focus, 5 = Very strong focus)

Start of period observed					Middle of period observed					End of period observed					Don't know
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
☐	☐	●	☐	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐

44. To what extent did the collaborative process explicitly focus on producing tangible intermediate outputs (quick wins)? (1 = Very weak focus, 5 = Very strong focus)

Start of period observed					Middle of period observed					End of period observed					Don't know
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐

45. To what extent did the collaborative process explicitly focus on producing tangible strategic outcomes? (1 = Very weak focus, 5 = Very strong focus)

Start of period observed					Middle of period observed					End of period observed					Don't know
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
☐	☐	●	☐	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐

46. How confident do you feel the answers you provided to the questions in this section are valid, reliable, and rooted in data and observation?

Mostly confident

47. Please describe in max. 600 words (a) the collaborative process in terms of how the actors interacted with each other, (b) how they formulated and achieved shared outcomes, (c) how the process changed over the period observed.

The interactions between all stakeholders were mostly informal except for the land rental agreements and tree-planting contracts. The interaction between local villagers and GACF was less clear due to lack of data collection and lack of a structured deliberation process from the beginning. Face-to-face meetings were limited to twice a year and GACF often used the time to do outreach for fund-raising purpose rather than setting formal ground rules or understanding local concerns. The somewhat top-down approach of GACF was sustained because of effective leadership skills by the village leader and the forestry officer. The GACF operated under the assumption that a nature-based reforestation program would not need investment in management and monitoring. However, the local institutions and the inconsistent policy implementation history in rural China meant that active management on the part of local communities is crucial. This understanding was communicated first in 2013 by the village leader but due to a lack of trust in local management capacity, GACF did not respond directly. In 2017, the village leader lobbied GACF to directly invest in monitoring through hiring local villagers as a way to increase local ownership, participation by and benefits for villagers.

The long-term goal of this partnership is to improve rural development and poverty alleviation. Through reforestation, GACF aim to restore local ecosystem function and support agriculture development. GACF's reforestation approach had proven to be effective in terms of high tree survival rate and change in local micro-climate. These visible outcomes were critical for sustaining collaboration. GACF continued to invest in the partnership while local officials sought to increase the impact of the collaboration through side supportive infrastructure projects such as building water storage facility and irrigation system for farming. As the forest continued to mature and formed canopy, the successful reforestation served as a shared asset among local government, owned by local village, and managed by both local government and the village.

7. Accountability

48. To what extent were explicit joint goals articulated through statements of intent, memoranda, strategic plans, etc.? (1 = Very little explication of goals; 5 = Very highly explicated goals)

Start of period observed					Middle of period observed					End of period observed					Don't know
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐

49. How were the joint goals operationalized? (1 = Very little operationalization of goals, 5 = Very highly operationalized goals)

Start of period observed					Middle of period observed					End of period observed					Don't know
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐

50. To what extent was there active monitoring of goal attainment? (1 = Very little monitoring of goal achievement, 5 = Very active monitoring of goal achievement)

Start of period observed					Middle of period observed					End of period observed					Don't know
1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐

51. To what extent did the participants render account of the collaboration to the following actors? (1 = Very little account-giving, 5 = Very active account-giving)

Actors	Start of period observed					Middle of period observed					End of period observed					Don't know
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
Elected politicians	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐
Oversight bodies (e.g. auditors, courts)	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐
Civil society organizations	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐
Affected and/or concerned citizens	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐

52. To what extent did the following external actors have influence over collaboration (1 = Very little influence, 5 = Very large influence)

Actors	Start of period observed					Middle of period observed					End of period observed					Don't know
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
Elected politicians	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐
Oversight bodies (e.g. auditors, courts)	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐
Civil society organizations	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐
Affected and/or concerned citizens	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐

53. How confident do you feel the answers you provided to the questions in this section are valid, reliable, and rooted in data and observation?

Mostly confident

54. Please describe in max. 600 words (a) how the goals of the collaboration were formulated and monitored, (b) how participants, elected officials, oversight bodies, and citizens held the collaboration to account, (c) how these dynamics changed over the period observed.

The reforestation partnership was driven mostly by GACF's agenda and a relatively uneven concern towards local livelihood and how national reforestation policy influence local dynamics. The collaboration was highly and narrowly focused on reforestation targets. The procedures, protocols, agreements focused on reforestation and GACF invested resources and energy into reforestation goal attainment. There was no investment in direct livelihood planning except for institutionalized a scholarship for local students in 2019.

As stated in the previous section, GACF did not expect to put effort into monitoring and was ignorant of how the responsibility of monitoring and management was on village council rather than the local government. The Returning Farmland to Forest policy was still the main reforestation programs in Shanxi province and how local residents understand reforestation. In this context, there is inconsistency in monitoring and what successful and sustained reforestation meant. According to the county forestry bureau, local reforestation survival rate ranged from 20 to 80% and about 50% of the reforestation on bare land failed.

Due to the strong incentive to collaborate and achieve reforestation goals on the part of Shilou county government, local officials invested in staff and resource to monitoring. The village leader's proactive participation in the partnership was evidenced by his effort in conflict resolution, communicating local concerns during face-to-face meetings, acting as a local host, and lobbying skills. The villagers had been vocal about their view on the opportunity cost of participating in the partnership since 2008 when the crop price fluctuated and when rent increased. The villagers' active participation in this sense was ignored by GACF. Therefore, accountability was achieved in an uneven way. GACF demanded accountability from local government and villagers, but the demand was based on insufficient understanding of local institutions. This situation was slightly improved towards the later period of the partnership when reforestation success had already been demonstrated and when GACF had more space to accommodate to other needs demanded by local villagers.

8. Outputs and outcomes of collaboration

55. To what extent did the collaboration produce the following outputs or outcomes? (1 = Very low, 5 = Very high). Note: This question mirrors the ambitions formulated in question 10.

Produced outputs and outcomes	Start of period observed					Middle of period observed					End of period observed					Don't know
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
Develop a plan or policy for a shared problem or societal issue	●	☐	☐	☐	☐	●	☐	☐	☐	☐	☐	☐	●	☐	☐	☐
Develop a regulatory framework for a policy domain or industry	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	☐
Create innovative solutions in existing policies, programs, practices	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐
Increase efficiency by lowering costs or boosting benefits	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐
Increase effectiveness by increasing impact of interventions	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐
Increase legitimacy and support among different constituents	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐
Organize crisis and emergency planning, response and/or recovery	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	☐
Create holding environment to contain conflict among stakeholders	☐	☐	●	☐	☐	☐	☐	☐	☐	●	☐	☐	☐	●	☐	☐
Other, namely:	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

56. To what extent did the collaboration use any of the following forms of collaborative governance? (1 = Very low extent, 5 = Very high extent) NB: This question mirrors question 11.

Realized collaboration	Start of period observed					Middle of period observed					End of period observed					Don't know
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
Co-initiation: Jointly identify required policies, services, or regulations	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐
Co-develop: Jointly create and arrange policies, services, or regulation	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐
Co-production: Implement policies, deliver services, or provide regulations	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐
Co-assessment: Jointly monitor and evaluate impact of policies, services, or regulations	☐	☐	☐	●	☐	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐

57. To what extent did the collaboration produce innovations, such as novel solutions, systems, and processes? (1 = Very little innovation, 5 = Very highly innovative).

Type of innovation	Start of period observed					Middle of period observed					End of period observed					Don't know
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
Develop novel products or services for clients and partners	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐
Develop novel production processes for producing products or services	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐
Novel ways of coordinating between roles and/or services of participants	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐

58. To what extent did the collaboration create outcomes beyond its stated aims? (1 = Very little outcomes going beyond stated aims, 5 = Very high degree of outcomes beyond stated aims)

Type of innovation	Start of period observed					Middle of period observed					End of period observed					Don't know
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
Built support and legitimacy for investing in future collaborations	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐
Built joint operational capacity for solving future problems and challenges	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐
Created positive unintended societal consequences	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐
Created negative unintended societal consequences	☐	●	☐	☐	☐	☐	☐	●	☐	☐	☐	●	☐	☐	☐	☐

59. To what extent did the collaboration achieve support among the different constituents of the collaboration? (1 = Very little support, 5 = Very extensive support)

Constituents	Start of period observed					Middle of period observed					End of period observed					Don't know
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
Participants in the collaboration	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	☐	●	☐	☐
Elected politicians	☐	☐	●	☐	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐
Oversight bodies (e.g. auditors, courts)	☐	☐	●	☐	☐	☐	☐	☐	●	☐	☐	☐	●	☐	☐	☐
Civil society organizations	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐
Affected and/or concerned citizens	☐	☐	●	☐	☐	☐	☐	☐	●	☐	☐	☐	☐	●	☐	☐

60. How confident do you feel the answers you provided to the questions in this section are valid, reliable, and rooted in data and observation?

Mostly confident

61. Please describe in max. 600 words (a) the output of the collaboration in terms of results produced by the collaborative governance process, (b) the outcomes in terms of the impact on problem solving, goal achievement and legitimacy, taking into account any unintended consequences, (c) the changes to collective outputs and social outcomes over time.

The collaboration was aimed at developing novel ways of reforestation approach and not a policy deliberation forum. The Shilou county government successfully built trust with villagers and GACF to gradually gained legitimacy for the partnership. The local officials were aware of the challenge and economic cost involved in reforestation on the Loess Plateau and recognized the benefits and opportunity to collaborate with a non-profit organization. The local government are also aware of the complexity of reforestation in terms of local village dynamics and the uncertainties that embedded within the larger socio-economic environment. The formation and initiation of the partnership was marked by a structured support by the local government and an intentional selection of participating village. Local officials anticipated this challenge and understood the key roles played by leaders. This mentality of sharing capacity sustained the collaboration.

The unintended consequences included the expansion of the collaboration to livelihood, education and agriculture sectors. Social capital increased because of active participation of the collective leadership. The local leaders in Shilou county demonstrated reforestation success to GACF and earned trust through problem-solving, active communication, and conflict mediation. The commitment increased the villagers' willingness to participate, and help showed the value of such partnership when other types of socio-economic outcome was not achieved immediately. In 2016, local villagers lobbied to build a 20 meters long bridge. In 2018, the village leader lobbied both the government and GACF to build a park for the local community.

After the success of reforestation, the stakeholders shifted their focus towards management. This is the process that created most conflict due to lack of knowledge and a structured deliberation process to communicate how local institutions works. The resources needed to implement monitoring and management were not taken into consideration by GACF and despite the active communication on the part of the village leader, this barrier was not resolved until 2017. This reflected a need for a more structured deliberation process.

The reforested landscape had demonstrated a different kind of reforestation outcome than the ones produced under the Returning Farmland to Forest policy. The collaboration built a strong partnership between the county government, the village, and the non-profit organization. GACF increased their intended reforestation output to become a long-term partner for the county government. It is unclear how local villagers perceive future collaboration that could generate lasting impacts because many of the poverty alleviation efforts are embedded in systematic challenges such as infrastructure and insufficient resources.