Supplementary Materials

Manuscript ID: sustainability-4431064

Manuscript title: From Project Outputs to Governance Capacity: A Multi-Scale Reflective Case Study of SDG-Oriented Peri-Urban Rural Regeneration in Hsinchu City, Taiwan

Purpose: These supplementary materials improve transparency by documenting the community-status table, evidence-use protocol, coding example, functional-cluster profiles, and researcher positionality protocol. They also clarify that the review-passage rate is calculated as 9/25 = 36.0% among Bacon Program participants and 9/36 = 25.0% among all eligible communities. Supplementary Table S1 provides the final community-status table for the nine approved or plan-review-passed communities used in the manuscript dataset and Dongxiang Community as an under-review case. The table reports plan-year or approval-date information according to the available source records and avoids using exact approval dates not visible in the current public extracts.

Table S1. Approved and Under-Review Rural Regeneration Communities in Hsinchu City

The table below records the status used in the final manuscript. It treats the nine listed communities as the approved or plan-review-passed community set used for analysis and lists Dongxiang Community separately as an under-review case. Where exact approval dates are not visible in the currently available public extracts, the table reports plan-year or public-record information and identifies the source-note category; exact official-date precision can be further refined if the raw official export is supplied.

Community	District	Status used in the final manuscript	Plan-year / approval-date information used in the final manuscript	Source note / evidence boundary
Gangbei Community	North District	Approved / plan-review-passed rural regeneration community	ROC 105 / 2016-12-28 indicated in municipal/community public record; exact official CSV date to be cross-checked	Public record identifies Gangbei as Hsinchu City's first approved rural regeneration community; original MOA export should be used for final date.
Haibin Community	North District	Approved / plan-review-passed rural regeneration community	ROC 110 / 2021 plan-year information identifiable from MOA open-data search result; exact approval date not publicly extracted in this revision	MOA open-data search result identifies the plan title and plan year; exact date should be finalized from original CSV/JSON export.
Xinya Community	North District	Approved / plan-review-passed rural regeneration community	ROC 110 / 2021 public plan-file date identifiable; exact approval date not publicly extracted in this revision	Publicly indexed Rural Regeneration Plan file indicates 2021/ROC 110 plan record; exact date may be refined if raw official export is supplied.

Community	District	Status used in the final manuscript	Plan-year / approval-date information used in the final manuscript	Source note / evidence boundary
Shuiyuan Community	East District	Approved / plan-review-passed rural regeneration community	ROC 111 / 2022 municipal notice / public plan-file date identifiable; exact approval date not publicly extracted in this revision	Publicly indexed notice and plan file indicate 2022/ROC 111 record; exact date may be refined if raw official export is supplied.
Jiadong Community	Xiangshan District	Approved / plan-review-passed rural regeneration community	ROC 108 / 2019-04-09 identifiable from MOA open-data search result	MOA open-data search result identifies Jiadong Community plan record with ROC 108 date fields.
Xiangcun Community	Xiangshan District	Approved / plan-review-passed rural regeneration community	ROC 109 / 2020 identified in Hsinchu City municipal news as the third rural regeneration community	Municipal news confirms Xiangcun became Hsinchu City's third rural regeneration community in ROC 109; exact date may be refined if raw official export is supplied.
Haishan Community	Xiangshan District	Approved / plan-review-passed rural regeneration community	ROC 112-116 plan period identifiable from MOA open-data search result; exact approval date not publicly extracted in this revision	MOA open-data search result identifies Haishan Community plan period and plan title; exact date should use original export.
Zhongai Community	Xiangshan District	Approved / plan-review-passed rural regeneration community in updated working dataset	ROC 114-118 plan period identifiable from MOA open-data search result; exact approval date not publicly extracted in this revision	MOA open-data search result identifies Zhongai Community plan period and plan title; exact date should use original export.
Meishan Community	Xiangshan District	Approved / plan-review-passed rural regeneration community in updated working dataset	ROC 114-118 plan period identifiable from MOA open-data search result; exact approval date not publicly extracted in this revision	MOA open-data search result identifies Meishan Community plan period and plan title; exact date should use original export.
Dongxiang Community	Xiangshan District	Under review-comment revision, 2026	Not coded as approved in the final manuscript	Used only as a bounded example of review-comment revision and institutional learning under constraint.

Table S2. Evidence-Use Protocol and Coding Rules

Evidence status	Allowed sources	Permitted claim	Prohibited claim
Documented output	Program reports, official open-data fields, policy documents, meeting records	Recorded participation, approval/review status, planned or implemented work items	Improved quality of life, income, carbon reduction, or resident satisfaction
Analytical inference	Cross-document comparison plus literature-informed coding	Plausible mechanism of governance-capacity formation	Causal proof of capacity improvement
Reflexive contextualization	First-author practitioner knowledge checked against documents	Contextual explanation of procedural logic or implementation constraints	Standalone evidence or self-confirming success claim
Unverified long-term outcome	Not directly measurable in current dataset	Future research question	Completed sustainability outcome
Policy implication	Synthesis of findings, literature, and limitations	Recommendation for evaluation design or governance practice	Empirical finding already demonstrated by the case

Table S3. Governance Capacity Coding Example: Dongxiang Community

Step	Documentary input	Coding action	Allowed interpretation	Boundary
1	Resident meeting / plan-preparation record	Code as documented participation and plan-preparation activity	Dongxiang entered a formal planning and review trajectory	No claim of plan approval
2	Review-comment revision process	Code as review and revision stage	Review may create institutional learning pressure	No claim of successful governance capacity
3	Revision of local vision into policy-recognizable language	Code as proposal-making and interpretive capacity under development	Possible mechanism of proposal refinement	No resident-perception evidence
4	Need for further administrative approval	Code as incomplete institutional process	Illustrates iterative learning under constraint	Not an outcome case
5	Future implementation not yet observed	Classify as unverified long-term outcome	Future monitoring needed	No claim of maintenance, resilience, or SDG outcome

Table S4. Functional Cluster Profiles

Functional cluster	Main resources	Governance issue	Capacity emphasis	Limitation
Coastal fishing-village cultural cluster	Coastal landscape, fishing-village memory, wetland and marine culture	Balancing local identity, tourism, and coastal ecological stewardship	Interpretive capacity; coordination capacity; partnership capacity	Marine/ecological outcomes require independent monitoring.
Urban garden and green-star cluster	Community farming, food education, local markets, green nodes, urban-rural exchange	Connecting urban residents and rural communities without reducing rurality to leisure consumption	Proposal-making capacity; sustainability-translation capacity; public-space maintenance	Participation and consumer behavior outcomes remain unverified.
Xiangshan green village experience cluster	Agricultural landscapes, hilly terrain, ecological routes, rural cultural landscapes	Managing land-use pressure, ecological sensitivity, and experience-based development	Maintenance capacity; interpretive capacity; resilience capacity	Tourism and landscape effects require long-term observation. Tourism-oriented green experience development may conflict with landscape protection, ecological sensitivity, and long-term maintenance capacity.

Table S5. Researcher Positionality and Limitation Protocol

Issue	**Risk**	Safeguard applied in the final manuscript	**Remaining limitation**
First author as program principal investigator	Circular interpretation and over-positive reporting	Disclose position; use reflexive contextualization only; require documentary triangulation	Independent external evaluation still absent.
Project-generated documents	Output-oriented and administrative bias	Distinguish documented outputs from analytical inferences and unverified outcomes	Conflicts and marginal voices may be under-recorded.
No resident survey or interviews	Cannot verify subjective quality of life or satisfaction	Frame study as process analysis and framework-building	Future resident survey and interviews are needed.
No longitudinal impact data	Cannot verify resilience, maintenance, income, carbon, or ecology	Treat long-term outcomes as future verification needs	Outcome evaluation remains outside current design.
Approval-date precision differs across source records	Some exact official approval dates are not visible in the public extracts used for this revision.	Report plan-year or available approval-date information transparently and distinguish manuscript classification from date precision.	Raw official export can further refine exact approval dates without changing the evidence-use boundary.

End of supplementary materials.