Scrutinising community-held knowledge transfer into World Heritage Site management plans: A multidisciplinary method.

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Structured Abstract

Purpose

The UNESCO World Heritage Committee requires management plans for World Heritage Site (WHS) nominations including the evidence of involvement of all stakeholders. Many studies report different engagement methods to ensure the participation of the local communities in these plans. However, this study aims to assess and gauge the community-held knowledge transfer and the quality of their contribution to heritage management plans by proposing an interdisciplinary method.

Design/methodology/approach

The method had been developed to scrutinise community-held knowledge transfer in WHS management plans, combining the domains of Knowledge Representation with Qualitative Social Research.

Findings

- Local knowledge transferred into WHS management plans is poor.
- The proposed method gauged 3 levels of community knowledge transfer to WHS.
- The method enables results to be quantified and the process to be reproducible.
- The method can be used to quality control the design of WHS management plans.
- The method can be used to inform evaluation protocols to be developed by UNESCO.

Originality

The method provides reproducible, quantifiable results from clear premises. Despite being applied to a case study in Turkey, it can be adjusted to any context as WHS management plans tend to follow a standard format. It, therefore, provides a tool to quality control the design of these plans.

Practical implications

The proposed method can be used to inform evaluation protocols to be developed by ICOMOS and IUCN, which safeguard holistic aspects of heritage in WHS management plans.

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Keywords: knowledge transfer, heritage management, WHS management plans, knowledge representation, community involvement.

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1. Introduction

World Heritage Sites contain Outstanding Universal Value (OUV), exceptional and highly representative heritage values of cultural or natural significance for all humanity, making them essential to the present and future generations (Jokilehto *et al.*, 2008). Many heritage sites are urban areas or cultural landscapes: 37% of WHS host local communities; hence the preservation of these sites depends on their users and inhabitants (UNESCO, 2021). Therefore, to safeguard the OUV of these WHS, site management plans produced with the involvement of local communities are a mandatory requirement for World Heritage List (WHL) nominations and specify the management system of the heritage and the way of preservation of its OUV (UNESCO, 2005, para. 108). These management plans are an essential part of the UNESCO's heritage management system framework, which facilitate the planning, implementation and monitoring of actions applied to a cultural property area "*to deliver results which guarantee the conservation and management of the properties and their associated values in a sustainable way*" (UNESCO, 2013, p. 54).

Since UNESCO (2011) adopted the Historic Urban Landscape (HUL) approach, cultural heritage management is debated in academia about sustainable development processes (Pereira Roders and van Oers, 2011, 2014). However, the recent work of Rey-Pérez and Pereira Roders (2020), a review of 80 HUL cities, concludes that local participation in urban heritage management is not achieved or incorporated in those case studies and Jokilehto (2017) draws attention to the necessity of more efficient knowledge sharing in conservation to embrace heritage as a driver for sustainable development. Ji Li et al. (2020, p. 4) proposed a public participation spectrum for cultural heritage management, suggesting working directly with the WHS

communities in the entire management process to understand and consider their opinions and desires genuinely.

Recognition and appreciation of community-held knowledge as part of the heritage enrich it and increase the inclusiveness of the management process (MacKay and Johnston, 2010). It bridges an important gap between the community involved and the planning professionals and management team developing WHS management plans. The Convention (UNESCO, 1972) and its Operational Guidelines (UNESCO, 2019) stress the foremost priority of management systems should be the protection of the outstanding universal value of sites together with their authenticity and integrity, stating local stakeholders should be involved in conservation practices in many ways at different stages to ensure effective and active safeguarding of world heritage properties. The inclusion of stakeholders in managing cultural heritage attempts to acknowledge traditional management practices, distributes responsibility, and respects the existing community's structure and hierarchies. It also involves recognising and promoting local knowledge as part of world heritage, a knowledge which might come in many forms: experiences, memories, intimate moments, etc. (Carter and Grimwade, 1997, p. 3).

The hidden reality that people can sense but cannot explain is people's implicit knowledge and their need to discover it. Therefore, knowledge transfer is another dimension of communication to debate on problems. However, most of the recommendations related to participation and capturing local knowledge in WHS management plans refer to the methods of engaging with communities (EX.PO AUS, 2013; Hayrynen, 2018) *rather than effectively gauging how local knowledge is transferred into planning actions.* Even though the importance of local communities is highlighted in UNESCO documents, community engagement is not evaluated or assessed as a part of management systems as UNESCO offers no guidelines to determine how the intangible contribution of communities living and being part of WHS are taken on board by professionals in management systems.

2. Research aims

This paper proposes a qualitative method to scrutinise community-held knowledge transfer into WHS management plans by assessing how information collected from focus group meetings with WHS communities is translated into WHS management plan actions, considering their outputs and the diversity of stakeholders involved in their implementation. This work expands from a pilot study developed by the authors (Aydin *et al.*, 2019) in which a proof of concept to assess transitions from traditional to participatory heritage management was proposed to the specific context of Turkey. It formalises the initial idea proposed into a qualitative method that can be applied to assess community knowledge transfer in management plans of WHS in Turkey with the potential to be transferred to other WHS management contexts.

Starting by acknowledging the importance of community involvement in the preparation process of WHS management plans, discussing how they were adopted in Turkey through a case study in the eastern part of the country, the paper presents a method to assess community-held knowledge transfer to WHS management systems. The method contains a knowledge base plus a series of inference mechanisms to gauge community knowledge transfer in WHS management plans. Its applications are illustrated using the case study of Diyarbakir Fortress and Hevsel Gardens Cultural Landscape, and results quantify the knowledge transfer for the whole site. Results and conclusions infer broader issues that might have affected knowledge transfer and highlight how the management plan addressed them. Future studies propose applying the method in different contexts and suggest a route towards automating its implementation.

3. World Heritage Site management plans in Turkey: A case study

World Heritage Site management plans differ depending on country and context, as UNESCO leaves detailed specifications for those to be dealt with at the country level. Turkey regulates the development and content of site management plans, stating they should be structured based on themes and contain objectives, strategies, and actions (*Regulation on the Substance and Procedures of the Establishment and Duties of the Site Management and the Monument Council and Identification of Management Sites*, 2005). Themes are defined according to the site's needs, interests, and contextual situation by the planning team during the process. Each planning theme has a set of objectives, which have a set of strategies with a subsequent set of related actions, structuring guidelines for implementing and monitoring the management plan. Each action should be defined together with its responsible actors (from implementers to consultants) and financial resources and contain a clear set of outputs with deadlines for implementation.

Turkey has currently 16 cultural properties inscribed on the World Heritage List (Figure 1) and, since 2005, community participation is required in the development of site management plans (*Regulation on the Substance and Procedures of the Establishment and Duties of the Site Management and the Monument Council and Identification of Management Sites*, 2005). Four of them are historical urban areas and their management plans were developed with local communities, including the Diyarbakir Fortress and Hevsel Gardens Cultural Landscape WHS, used as a case study in this paper. In addition to community involvement, the site manager of these WHS is not only a technician but should also have local knowledge of the area as defined by the site management regulation (*Regulation on the Substance and Procedures of the Establishment and Duties of the Site Management and the Monument Council and Identification of Management Sites*, 2005) i.e., the site manager needs to be a member of the community as well as a professional in conservation practice. Two stages of community engagement were organised: Community focus group meetings were run at the beginning of the process, followed by a

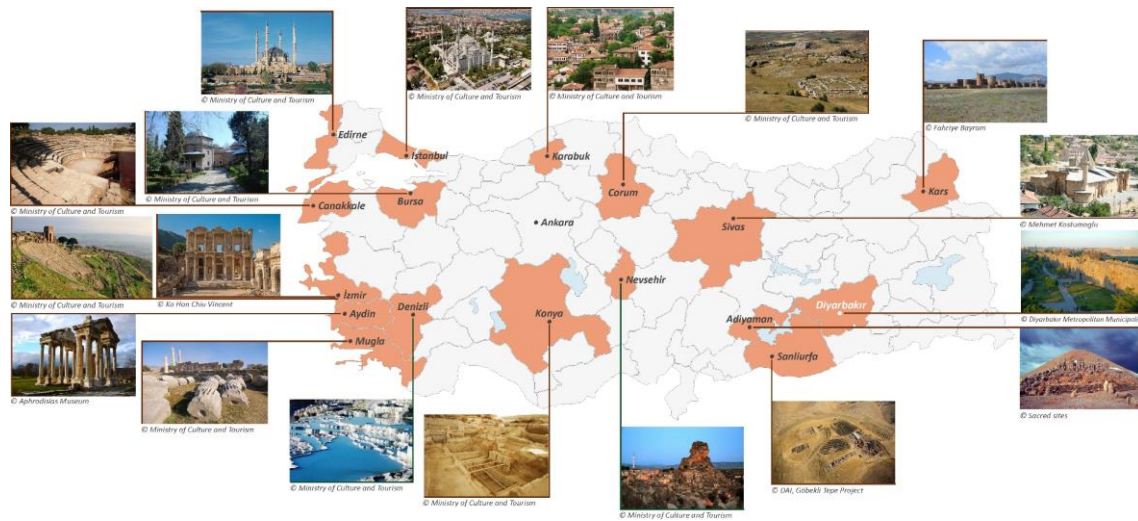consultation with community representatives at a later stage of the site management plan preparation process.

Figure 1: World Heritage Sites in Turkey (produced by Gizem Parlak)

The Diyarbakir Fortress and the Hevsel Gardens Cultural Landscape[1], including the fortified city with its adjacent and surrounding landscape, are part of the South-eastern Anatolia Region, the capital of many civilisations in history due to its position on the Silk Road. Its 7000 years history can be read on the city walls, which are the longest ones in the world after the Great Wall of China. In addition, the Hevsel Gardens and the Tigris River played a vital role in the region's history by virtue of the natural resources and capacity of providing food and water for civilisations throughout the different historical periods (Turkey (State Party), 2014). The nominated property has six components: Amida Mound, City Walls, Hevsel Gardens, Ten-Eyed Bridge, Tigris Valley, and natural resources (Figure 2). The area is nominated as a "site" and "cultural landscape" due to its OUV, respectively defined as works of man and combined works of nature and man in the UNESCO World Heritage Convention (2008, para. 1).

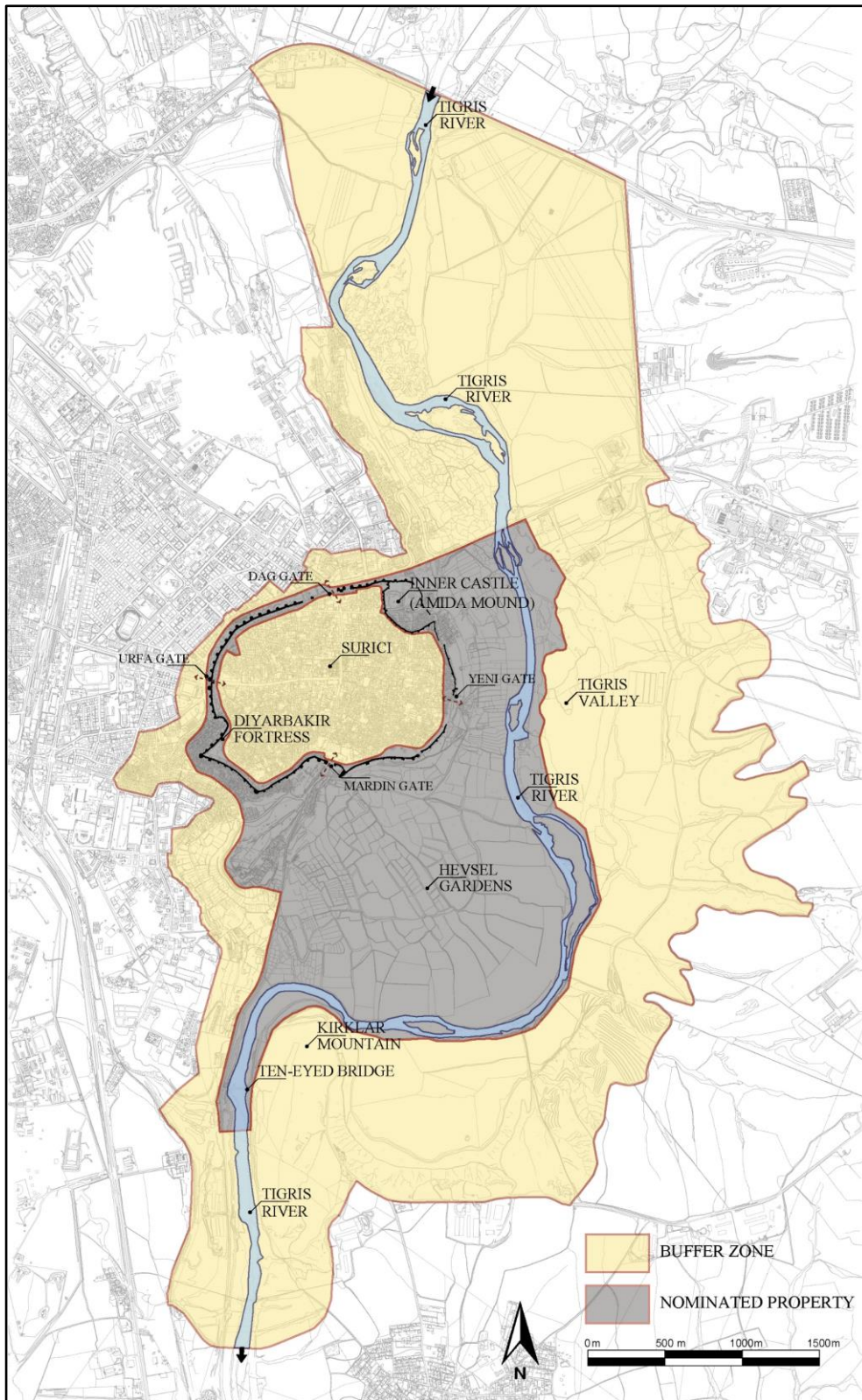[1] https://whc.unesco.org/en/list/1488/

Figure 2: Nominated property and its buffer zone (adapted map from Nomination Dossier)
(Turkey (State Party), 2014, p. 641)

Composed of predominantly low-income communities, with high unemployment rates and strongly dependent on the informal economy, the town has a special relationship with the

surrounding agricultural land, acting as a host for local and typical regional products, such as the sand watermelons are grown on the temporary, seasonal island of the Tigris River (Özcanli *et al.*, 2018). Situated in the southeast part of Turkey closer to the northern borders of Syria and Iraq, approximately 73% of the population speaks non-Turkish languages at home, around 33% of the people have no education, and income of 73.5% of the people are under the minimum income standards (Sosyo Politik Saha Araştırmaları Merkezi, 2020). This combination of manufactured heritage, natural landscape, and complex socio-economic and cultural urban context, together with the fact that the management plan was developed based on two stages of consultation with the community, make the area a suitable case to assess the role of public participation in the shaping of its management plan.

Diyarbakir Fortress and Hevsel Gardens Cultural Landscape was included in the UNESCO's temporary nomination list in 2000. The preparation of both the site management plan and WHL nomination dossier started in January 2012. The nomination dossier for the inscription on the WHL was officially presented to the UNESCO WHC by the Turkish Ministry of Culture and Tourism in February 2014 (Turkey (State Party), 2014). As part of the preparation of this management plan, eight focus group meetings, 400 questionnaires, consultations to 19 mukhtars[2] of the area, and two search meetings with the public were organised throughout the process. To ensure community representation, focus groups comprised women, children, youth, people with disabilities, and Hevsel Gardens' users (Ulusan, 2016, p. 384).

4. Materials and methods

The assessment on how the management plan addressed community issues and aspirations is undertaken through a qualitative analysis of; (i) issues raised in community focus group meetings (*input from the participatory process*), and (ii) management plan actions and their outputs (*outputs from the product of this process*)[3]. The former, being the most important record of community participation in the heritage management process, summarises issues raised by the different stakeholders involved in the project, expressing insiders' knowledge of the site and its context. The latter is the official document, prepared by the project team coordinated by the site manager and should contain, in theory, community knowledge embedded in it as it was designed based on a Strength, Weaknesses, Opportunities and Threats (SWOT) analysis which merged a technical assessment of the site with information coming from community focus groups.

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[2] Elected representative of a neighbourhood and responsible to conduct the legislative works of that neighbourhood. Duties of mukhtars are defined by Law No 4541.

[3] Management plans are public documents published on UNESCO World Heritage List website (2014) whereas community meeting reports are published as a public document called 'Diyarbakir Surici Socio-economic Analysis Report' by Karacadag Development Agency (2013).

The qualitative analysis is based on a knowledge representation method (Davis *et al.*, 1993; Musen, 2014) used in combination with a framework method (Ritchie and Spencer, 1994), from which a knowledge base, which associates issue assertions with management plan actions, is created and used to draw inferences about how community aspirations and needs were transferred from focus group meetings to the management plan (Figure 3).

The first stage of the framework method (Ritchie and Spencer, 1994) comprises familiarisation with the documents to understand their content. In the second stage, an analytical framework is proposed to enable coding and the transformation of the database of documents into a knowledge base. This analytical framework is composed of rules that explain how to code, categorise and map the data into a knowledge base (Spencer *et al.*, 2014). The third step is to index the data as sections corresponding to a theme based on the analytical framework. Charting means organising the indexed data into charts of themes which finally enable one to map and interpret the data (Ritchie and Spencer, 1994).
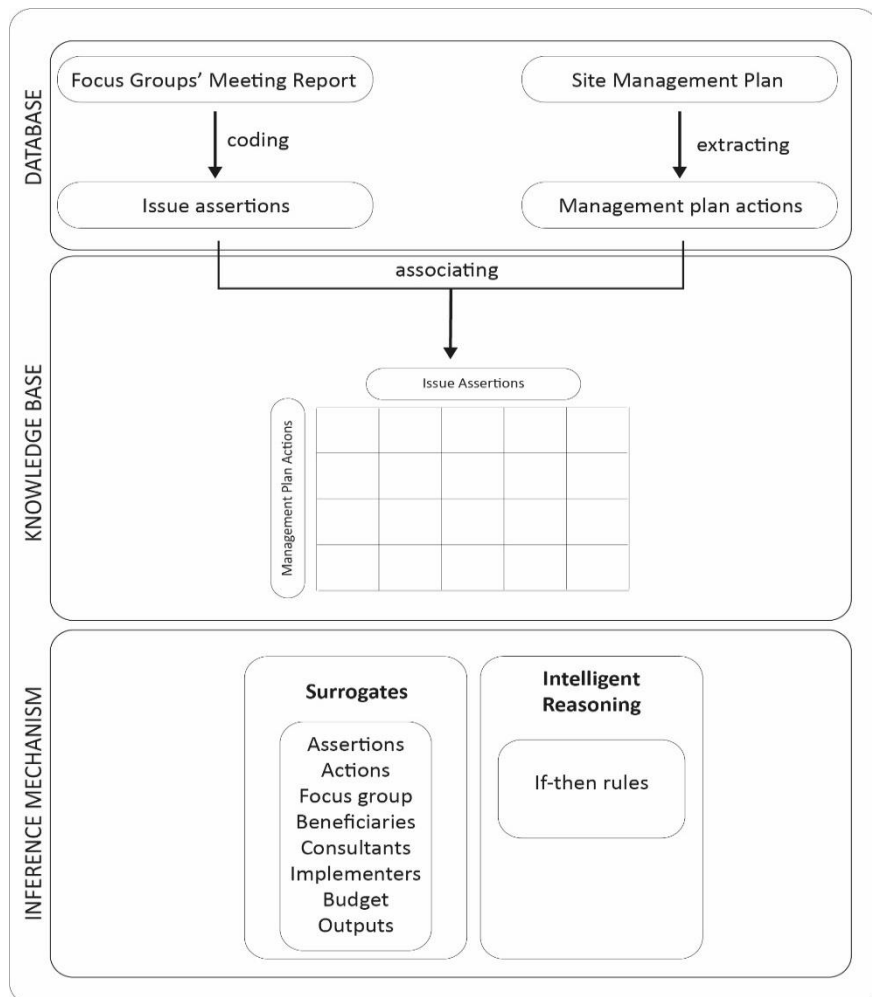

Figure 3: Methodology Diagram

The database (top of Figure 3) is composed of (i) the focus groups' meeting report and (ii) the

site management plan, which includes, respectively, the issue assertions and management plan actions. The knowledge base was created using this database by following three main steps. Initially, the familiarisation process took place to understand the types of discussions happening in focus group meetings and the types of actions defined in the management plan. Secondly, recurrent issues or patterns of issues were extracted from focus groups' meeting reports and these issue assertions were coded and associated with their potential corresponding management plan actions. This coding system was used to search for actions in the management plan which would, in theory, respond to issues raised by the different stakeholders. However, this association was not linear and involved a series of iterations between searching and re-coding until a final coding system was produced.

Associating actions in the management plan with issue assertions raised by interactions with all stakeholders involved in focus group meetings was the first step to assess knowledge transfer from community participation to management plan implementation. From these associations, an inference mechanism was later developed to gauge how many issues raised by the community were translated into actions in the management plan.

4.1 Forming the knowledge base

Issues were categorised according to their geographical location and grouped as families regarding their similarity of content to build a knowledge base (middle part of Figure 3). Each family of similar issues was subsequently analysed and cross-referenced with outputs from different actions to extract potential patterns of information transferred from focus group meetings to the management plan. In Table I, issue codes from community focus groups are shown in black, while issue codes from 'non-community' focus groups are shown in red. This study focused on assessing issues coming from community focus groups only (in black).

Table I: Families of issues grouped by geographical locations

Diyarbakir Fortress and Surici Area	Hevsel Gardens and Tigris Valley	Heritage Site
Issue Family 1: Surici Urban Area • Issue Code 1. Accessibility • Issue Code 8. Food market • Issue Code 9. Public Facilities • Issue Code 11. Social Housing • Issue Code 13. Transformation in situ	Issue Family 4: Public Use • Issue Code 19. Public Facilities • Issue Code 24. Unregistered Activities	Issue Family 7: Spatial Planning • Issue Code 26. Accessibility • Issue Code 30. Holistic Planning • Issue Code 31. Kirklar Mountain Project • Issue Code 35. Tourism
Issue Family 2: Social and Economic Problems • Issue Code 3. Child Education • Issue Code 4. Child labour and abuse • Issue Code 6. Employment in situ • Issue Code 10. Safety problems • Issue Code 12. Social Services • Issue Code 14. Women Solidarity	Issue Family 5: Agriculture • Issue Code 16. Ecological Agriculture • Issue Code 17. Irrigation Systems • Issue Code 21. Soil Pollution • Issue Code 22. Support for Producers • Issue Code 25. Water Pollution	Issue Family 8: Heritage Management • Issue Code 27. Awareness raising on heritage • Issue Code 28. Coordination • Issue Code 29. Documentation and Promotion • Issue Code 32. Restoration • Issue Code 33. Risk of Disaster • Issue Code 34. Staff

Issue Family 3: Heritage Management • Issue Code 2. Authenticity of Surici • Issue Code 5. Coordination • Issue Code 7. Funding	Issue Family 6: Management • Issue Code 15. Coordination • Issue Code 18. Migratory birds • Issue Code 20. Risk of Disaster • Issue Code 23. Tigris Valley Project	

4.2. Developing the inference mechanisms

After the knowledge base was created, a set of inference mechanisms (bottom part of Figure 3) were defined to gauge knowledge transfer from community focus groups to the management plan. Inference mechanisms were based on 'If-then' rules applied to surrogates, i.e., the elements of the analysis, which comprised:

- Issue assertions: sayings of the stakeholders in the focus group meetings,

- Actions: management plan actions defined in the site management plan,

- Focus groups: groups of stakeholders who attended community meetings,

- Beneficiaries: the institutions or the individuals defined as the target group of a specific action in the site management plan,

- Consultants: the institutions or the individuals defined as the stakeholders of a specific action in the site management plan,

- Implementers: the institutions or the individuals defined as the responsible actors of a specific action in the site management plan,

- Budget: the suggested amount of money to assign for a specific action or set of actions,

- Outputs: monitoring indicators assigned to a specific management plan action to follow-up its implementation.

The purpose of associating issues with actions was to analyse how the first informed the latter, i.e., how issues in focus group meetings were, in theory, used to inform actions in the management plan. This analysis examined whether stakeholders from focus group meetings were assigned as beneficiaries, implementers, or consultants for the actions listed in the management plan. The analysis was complemented by examining how each issue, as reported in the focus group meeting, was translated, or re-written in the form of action in the management plan, including the corresponding output used to monitor its success, and if they had an associated budget for implementation.

Qualitative gauging was defined at three different levels; (i) Actions which were a direct translation from issues raised by different stakeholders, (ii) Actions that were partially or indirectly translated from issues raised by different stakeholders and (iii) Absence of actions to address issues raised by different stakeholders. The gauging for actions that were directly, indirectly, or partially translated from issues raised by stakeholders was undertaken according to the following assessment criteria:

- Verifying whether stakeholders from focus group meetings are transformed into actors responsible for implementing the action, beneficiaries of the action or consultants on the action being implemented
- Verifying if there is a designated budget for the action being implemented, specifically if management plan action has a project sheet with a detailed budget associated with each stage of implementation for the given action
- Discussing each given issue raised in the focus group report with regards to how it is translated into action in the management plan considering the corresponding outputs used to monitor its success

It is reasonable to assume that having actors from focus groups included in the management plan is a key indicator that their requests were pivotal during focus group meetings. Therefore, knowledge is considered transferred when there is correspondence between community stakeholders from focus groups and implementers, beneficiaries, or consultants in the management plan. An action is inferred as implemented if a budget is allocated to it. If there is no budget assigned to an action, then the action is deemed inconclusive regarding its implementation. The degree of success for a given action on the management plan to address a given issue from one of the focus group meetings is qualitatively measured by comparing the action proposed with the issue raised, assessing the degree to which the proposed outputs of the action gauges this proposed response.
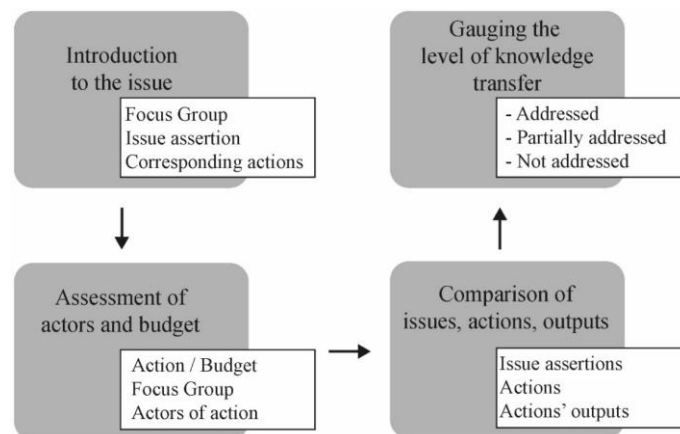
Figure 4: The assessment structure workflow

The workflow presented in Figure 4 is used to analyse the 242 management plan actions from this case study and 35 different types of issues raised in focus group meetings. From the 242 management plan actions, 108 are related to focus group meetings involving community members' participation, and 81 of them address issues raised by non-community stakeholders. In contrast, the remaining ones' mainly refer to the preservation of tangible and intangible cultural values, improvement in the quality of life, and tourism activities with the respective spatial

organisations related to it'(Aydin *et al.*, 2019, p. 29). Within 35 different types of issues expressed as 91 issue assertions, 72 of them are raised by at least one community stakeholder, whereas the remaining ones are raised solely by non-community stakeholders.

5. Illustrating the assessment workflow

The method is illustrated through an example applied to Issue 13, "*Transformation in situ,*" from Issue Family 1, *"Surici Urban Area"* (Table I). The analysis starts by listing issues raised by focus group meetings and their corresponding actions in the management plan, as displayed in Table II. Focus groups raised five issues related to *"Transformation in situ,"* three of which come from the community (Women (W), Youth (Y) and Children (C) focus groups). The other two (Issue 13.1 and Issue 13.3) are from competent authorities (Spatial Management (SM) and Heritage Management (HM) focus groups).

Table II: Issue Code 13. Transformation in situ and associated management plan actions

Focus Group Acronym and Issue Assertions		Management Plan Actions
Issue Code	Issue Code	Action 5.7.2.2: Conduct and complete master planning studies with a holistic approach by evaluating possible transformation areas within the city walls together with existing transformation areas outside the city walls.
Issue Code	Issue Code	Action 5.7.2.3: Revise the transportation system changed by the Surici Master Plan, evaluate the provision of housing stock, examine feedback from previous transformation projects, and analyse similar examples from abroad.
SM	Issue 13.1: Rehabilitation projects of streets should be done through a more participative approach.	Action 5.7.1.1: Prioritise implementations of building reinforcement in the Surici area in the context of risk reduction works.
W Y SM	Issue 13.2: Local people do not want to be relocated during the transformation process due to high transportation costs to food markets and cemetery visits.	Action 5.7.1.2: Prioritise in situ transformation projects within the Surici area and prioritise existing rightsholders to select the location of their new houses.
HM	Issue 13.3: Local people cannot afford relocation even if the living conditions in Surici push for gentrification.	Action 5.7.1.3: Apply policies to avoid the suffering of rightsholders which could result from the transformation processes of risky buildings in the area, evaluate solutions (e.g., reinforcement first) and prioritise implementations, with consent from rightsholders, apply policies which respect property rights.
W C Y SM HM	Issue 13.4: Announcing Surici as an unsafe and dangerous area lead people to disengage from it. This is perceived as defamation to promote evacuation of communities living in it.	Action 5.7.2.1: Provide solutions which protect the rights of rightsholders and apply no-obligation policies for them in renewal, transformation, and rehabilitation projects of irregular residential areas, avoid gentrification by taking a lead role in consultation processes.
W Y SM HM	Issue 13.5: Due to previous evictions in other neighbourhoods under the frame of transformation, local people have a perception of exclusion and fear the future.	Action 5.7.2.4: Evaluate transformation, renewal, and rehabilitation projects together with surrounding public and/or private properties and develop proper financial models without reimbursement, to provide housing for current rightsholders.
		Action 5.7.2.5: Develop a financial model for distribution of rights in renewal, transformation, and rehabilitation projects, enable rightsholders to benefit from becoming partners.

Table II shows that two of the action on the management plan do not refer specifically to any issue raised in focus group meetings (Action 5.7.2.2. and Action 5.7.2.3), whereas other two actions refer to issue raised by non-community focus groups only (Action 5.7.1.1 and Action 5.7.1.3).Table III, therefore, shows only the actions which somehow refer, either entirely or partially, to issues raised by community focus groups. It illustrates stage 2 of the assessment process (Figure 4) by highlighting in blue which stakeholders from focus group meetings were transformed into implementers, beneficiaries, or consultants of the action as well as the type of budget associated with each action.

Table III: Verifying connections via stakeholders' involvement and designated budgets

Action	Focus Group	Budget	Beneficiaries	Consultants	Implementers
Action 5.7.1.2: Prioritise in situ transformation projects within the Surici area and prioritise existing rightsholders to select the location of their new houses.	SM W Local Associations **Diyarbakir Metropolitan Municipality (DMM) Departments** Union of South-eastern Anatolia Municipalities (GABB) Multi-purpose Community Centre (CATOM) Y Local Associations DMM Departments	No budget	No beneficiaries	Sur Municipality Construction and Urbanization Directorate Yenisehir Municipality Construction and Urbanization Directorate Union of Chambers of Turkish Engineers and Architects (TMMOB) Diyarbakir Provincial Coordination Board **City Council**	DMM Construction and Urbanization Directorate Diyarbakir Provincial Directorate (DPD) of Environment and Urbanization
Action 5.7.2.1: Provide solutions which protect the rights of rightsholders and apply no-obligation policies for them in renewal, transformation, and rehabilitation projects of irregular residential areas, avoid gentrification by taking a lead role in consultation processes.	SM HM W Local Associations **DMM Departments** **GABB** CATOM Y Local Associations DMM Departments C Local Associations **DMM Departments** **GABB** CATOM	No budget	No beneficiaries	Sur Municipality Construction and Urbanization Directorate Yenisehir Municipality Construction and Urbanization Directorate TMMOB Diyarbakir Provincial Coordination Board **City Council** **GABB**	DMM Construction and Urbanization Directorate DPD of Environment and Urbanization
Action 5.7.2.4: Evaluate	SM HM			Sur Municipality Construction and	DMM Construction

	W	No budget	No beneficiaries	Urbanization Directorate	and Urbanization Directorate
transformation, renewal, and rehabilitation projects together with surrounding public and/or private properties and develop proper financial models without reimbursement, to provide housing for current rightsholders.	Local Associations **DMM Departments** **GABB** CATOM **Y** Local Associations DMM Departments			Yenisehir Municipality Construction and Urbanization Directorate TMMOB Diyarbakir Provincial Coordination Board **City Council** **GABB**	DPD of Environment and Urbanization
Action 5.7.2.5: Develop a financial model for distribution of rights in renewal, transformation, and rehabilitation projects, enable rightsholders to benefit from becoming partners.					

The issue assertions are mainly related to transformation policies planned for the area by the government with communities opposing relocation and technicians alerting for the dangers of gentrification, claiming for communities to be involved in the process. Table III is not informative concerning inferences about action implementation as there are no designated budgets on the management plan to implement any of the proposed actions. It, however, shows implementers of all actions are one municipality department (DMM Construction and Urbanization Directorate) and one local branch of central government (DPD of Environment and Urbanization), i.e., no direct community stakeholder involvement. Consultants include GABB and City Council, respectively a regional municipalities association and the Diyarbakir Metropolitan Municipality department, both participated in the Women and the Children focus group meetings. Could this indicate they might represent community focus groups' interests as consultants? A closer look at the outputs of each action can potentially shed some light concerning this (Table IV).

Table IV: Issue assertions, corresponding actions, and actions' outputs

Issue	Action	Output
Issue 13.1: Rehabilitation projects of streets should be done through a more participative approach.	Action 5.7.1.1: Prioritise implementations of building reinforcement in the Surici area in the context of risk reduction works.	Number of buildings strengthened in Surici area
Issue 13.2: Local people do not want to be relocated during the transformation process due to high transportation costs to food markets and cemetery visits.	Action 5.7.1.2: Prioritise in situ transformation projects within the Surici area and prioritise existing rightsholders to select the location of their new houses.	Number of the rightsholders who remains in place in the transformation areas

Issue 13.3: Local people cannot afford relocation even if the living conditions in Surici push for gentrification.	Action 5.7.1.3: Apply policies to avoid the suffering of rightsholders which could result from the transformation processes of risky buildings in the area, evaluate solutions (e.g., reinforcement first) and prioritise implementations, with consent from rightsholders, apply policies which respect property rights.	Number of risky structures transformed with the consent of the rightsholders
Issue 13.4: Announcing Surici as an unsafe and dangerous area lead people to disengage from it. This is perceived as defamation to promote evacuation of communities living in it.	Action 5.7.2.1: Provide solutions which protect the rights of rightsholders and apply no-obligation policies for them in renewal, transformation, and rehabilitation projects of irregular residential areas, avoid gentrification by taking a lead role in consultation processes.	Number of consultation meetings carried out with the households in the area
Issue 13.5: Due to previous evictions in other neighbourhoods under the frame of transformation, local people have a perception of exclusion and fear the future.	Action 5.7.2.4: Evaluate transformation, renewal, and rehabilitation projects together with surrounding public and/or private properties and develop proper financial models without reimbursement, to provide housing for current rightsholders.	Number of residences provided to rightsholders without reimbursement in transformation areas
	Action 5.7.2.5: Develop a financial model for distribution of rights in renewal, transformation, and rehabilitation projects, enable rightsholders to benefit from becoming partners.	Number of rightsholders who become a partner

Table IV shows issues raised by the community, in grey cells, and issues raised by non-community focus groups, in white cells, with corresponding management plan actions and outputs. It clearly illustrates that Issues 13.2 and 13.5 can be inferred as transferred as the management plan actions proposed for them directly respond to the problems raised by the community, and the outputs planned for the actions quantify and monitor these responses. Issue 13.4 was inferred as partially transferred as, despite having an action that does respond directly to the issue raised displays a vague output to gauge the results of the action to be implemented. Specifically, quantifying the number of consultations undertaken with the community does not indicate solutions to protect the right of the rightsholder are going to be delivered. Issue 13.3 was inferred as partially transferred because its corresponding action does refer to it despite not being directly raised by the community.

Technicians seem to be protecting the interests of the community by raising Issue 13.1, which is related to the gentrification of the area. However, its corresponding action and outputs, do not clearly illustrate how this issue will be addressed with the participation of the community, despite this participation being recognised as important by technicians when raising the issue. Issue 13.1 was, therefore, inferred as not transferred because it does not have an action that responds to it even if it was raised by technicians with community concerns on board. Table V

summarises these results for Issue Code 13, and Table VI integrates results from Table V with results from all other issues raised as part of this family.

Table V: Summary of assessment for Issue Code 13. Transformation in situ

Level of Knowledge Transfer							
	Transferred			Partially Transferred		Not Transferred	
Issue	Issue 13.2	Issue 13.5		Issue 13.4	Issue 13.3	Issue 13.1	
Focus Group	W, Y	W, Y		W, C, Y	HM	SM	
Action	Action 5.7.1.2	Action 5.7.2.4	Action 5.7.2.5	Action 5.7.2.1	Action 5.7.1.3	Action 5.7.1.1	Action 5.7.2.2	Action 5.7.2.3
Budget	Activity	Activity		Activity	Activity	Activity	Activity
Beneficiaries	-	-		-	-	-	-
Consultants	City Council	City Council, GABB		City Council, GABB	City Council	City Council	City Council, GABB
Implementers	-	-		-	-	-	-
Outputs	Quantitative	Quantitative		Quantitative	Quantitative	Quantitative	Qualitative

Once the analysis illustrated above is undertaken for each issue code, results for each Issue Family are counted. Each column in Table V represents an association or no association between issue assertions from community stakeholders and management plan actions. Table VI displays an example of this counting for all issue codes in Issue Family 1: Surici Urban Area.

Table VI: Summary of assessment for all issues in Issue Family 1: Surici Urban Area

Issue Code	Fully Transferred	Partially Transferred	Not Transferred
Issue Code 1. Accessibility		3	
Issue Code 8. Food market		2	
Issue Code 9. Public Facilities			3
Issue Code 11. Social Housing		2	1
Issue Code 13. Transformation in situ	3	1	2
Total for Issue Family 1	**33: 17.6%**	**8: 47.1%**	**6: 35.2%**

6. Results and discussion: Gauging knowledge transfer

As previously illustrated, knowledge transfer was categorised at three different levels concerning how comprehensively the management plan addressed issues raised by the community focus groups. At all levels, a community focus group should provide local knowledge as the basis against which knowledge transfer can be gauged. Full knowledge transfer is inferred when an issue raised has an action that directly corresponds to it and an output that clearly measures this response. This full transfer is inferred as confirmed if community groups are directly listed as beneficiaries or consultants of the action. Partial knowledge transfer is inferred when an action partially responds to an issue raised or its outputs do not directly measure this response, regardless of the involvement of community members in the delivery of the action. Implementation can be directly inferred if there is a budget assigned to the action, but its absence can only be flagged as inconclusive. Issues not addressed by any management plan actions or actions in the management

plan that do not respond to community issues are classified as having no knowledge transfer involved.

Figure 5 illustrates the overall knowledge transfer inferred from community focus groups to the management plan of the Diyarbakir Fortress and Hevsel Gardens Cultural Landscape World Heritage Site. Despite the efforts to engage with the community in two different stages throughout the development of the management plan and having around five different community focus groups engaged in the process, only 17.5% of knowledge from these groups was inferred as fully transferred to the management plan. Nevertheless, knowledge was partially transferred in half of the cases. Interestingly, unsuccessful associations were mainly in the family of "*Social and Economic Problems*." This might indicate many of the issues related to this family are beyond the remit of the management plan and call for a closer look at the data, with more granularity for it displayed in Figure 6.
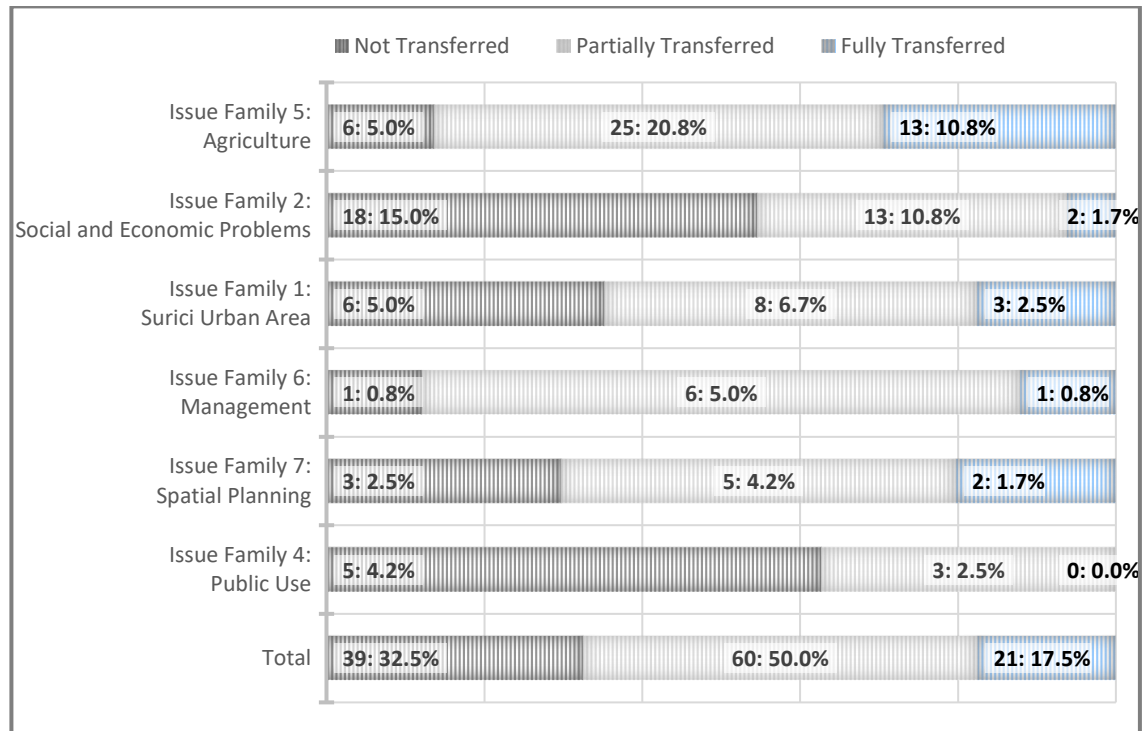

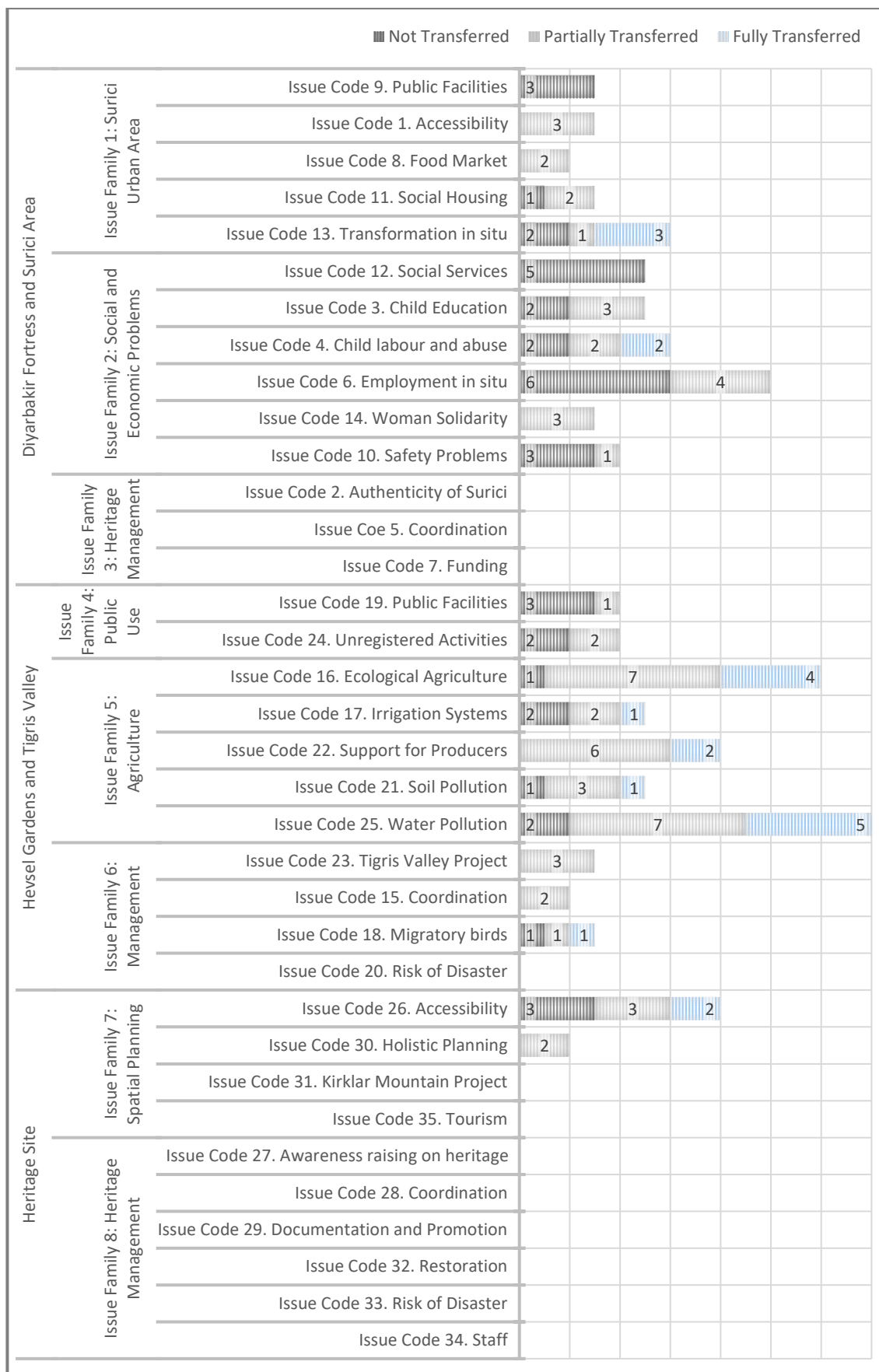Figure 5: Knowledge transfer from focus group meetings to the management plan

Figure 6: Detailed assessment of the community-held knowledge transfer

The issue family of '*Agriculture*' seems to have been where the community was more successful in getting their views heard, even though there was almost twice more knowledge transfer happening at a partial level than in its fulness. The issue family of '*Social and Economic Problems*' was that knowledge transfer seemed to have occurred the least. The table confirmed unaddressed issues, in this case, did fall outside the scope of the management plan, such as '*social services*', '*employment*', whereas the most urgent ones are fully transferred; Issue Code 4: '*Child labour and abuse*'.

Interestingly, the issue of families related to heritage is only raised by non-community stakeholders, meaning no knowledge transfer is offered for the focal point of the WHS nomination process. Actions on communication, education and awareness are therefore offered to better engage the community with the heritage aspects central to the management plan. Some of these actions bridge with issues raised by community focus groups in other families, for instance when '*Employment in situ*' (Issue Code 6) attempts to connect the community with the heritage site by proposing training activities on traditional craftsmanship as a means to potentially rescue cultural values with similar initiative put forward to support producers and the youth to enhance community engagement with the cultural landscape.

However, Figure 6 shows that in the issue families of '*Surici Urban Area*', '*Spatial Planning*' and '*Management*', knowledge transfer happened mainly partially, whereas in issues related to '*Public Use*', knowledge transfer is not present many times since the community aspirations and site management goals happen to be going in different directions. Poor knowledge transfer in these families of issues joined with poor knowledge transfer on social and economic issues could suggest that the implementation of the plan as a whole might not get sufficient community buy-in. This might jeopardise the initiative altogether or push for the gentrification of the area and a shift in its socio-economic demographics, potentially contradicting the original intention of the management plan to promote and support cultural heritage.

7. Conclusions

This study proposes a qualitative method to scrutinise community-held knowledge transfer in world heritage site management plans, displaying overall results for applying the method to a case study in Turkey. The originality of this method lies in its knowledge representation framework since it holds neither a top-down nor a bottom-up approach. It gauges knowledge transfer through the support of a set of inference mechanisms that consider all the actors involved in the process, from the site management team to the local community, from the site's users to the institutions in the area. It, therefore, has the potential to scrutinise not only community-held knowledge transfer but all knowledge transfer happening in the process.

The method enables results to be quantified, and the process, based on clear elements and premises, is reproducible. It is transferable to any management plan in Turkey as they all follow the same prescribed structure, with the possibility to be also used by other countries given a few adjustments, as many WHS management plans are formatted similarly.

Once the matching of issues and actions is established, inference rules can be applied automatically to search for matches in actors, budgets, and keywords on actions and their respective outputs in the management plan. After the search is undertaken, the gauging of knowledge transfer becomes a count of successful, partially successful, and unsuccessful attempts through associated percentage figures to weight them concerning the overall type of knowledge transfer being assessed. Potential areas for more detailed scrutiny can then be highlighted, and a more human-intensive qualitative analysis can be customised to these highlights if needed.

A necessary step for automation is the matching of issues and actions, an inherently human activity; activity that can be justified and undertaken by the project team itself as a monitoring and assessment mechanism. The important step of constantly assessing how proposed actions respond to the community's needs should be embedded in the design of the management plan not only to promote transparency in the process but also to quality control it.

In this sense, this study proposes not only a method to assess community-held knowledge transfer to WHS management plans but also promotes transparency and provides a tool to quality control the design of these plans by proposing a flexible method that can be applied throughout its development as well as to scrutinise its outcomes. It expects to instrument project managers to assess, validate and quality control their decisions and to inform ICOMOS and the IUCN in the development of evaluation protocols to safeguard holistic aspects of cultural heritage in WHS management plans which can contribute to increasing public credibility and trust, enhancing community buy-in towards the preservation of cultural heritage.

Acknowledgements

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