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Implementing Transition Design for Sustainable Poverty Alleviation in Rural Iran: A Case Study of Aram Village, Andika County

***Farzaneh Eftekhari*[1*], *Zeinab Gheisarieh*[2], *Vahid Choopankareh*[3], *Maryam Khalili*[4], *Alireza Ajdari*[5]**

[1] Department of Industrial Design, College of Fine Arts, University of Tehran, Tehran, Iran. Email: feftekhari@ut.ac.ir
[2] Department of Industrial Design, College of Fine Arts, University of Tehran, Tehran, Iran. Email: zeinab.gheisarieh@ut.ac.ir
[3] Department of Industrial Design, College of Fine Arts, University of Tehran, Tehran, Iran. Email: choopankareh@ut.ac.ir
[4] Department of Industrial Design, College of Fine Arts, University of Tehran, Tehran, Iran. Email: maryamkhalili@ut.ac.ir
[5] Department of Industrial Design, College of Fine Arts, University of Tehran, Tehran, Iran. Email: alireza.azhdari@ut.ac.ir

[*]**Corresponding author:** Farzaneh Eftekhari

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Abstract

Systemic strategies to address complex social challenges, emphasizing inclusivity, adaptability, and interdisciplinary collaboration. Transition Design promotes long-term systemic change by integrating both historical and future-oriented perspectives, thereby expanding the depth and scope of problem-solving. In contrast, Design for Policy emphasizes the formulation and near-term implementation of strategic interventions within existing policy frameworks, ensuring that solutions remain both practical and forward-thinking. This study employed a qualitative, ethnographic methodology combining semi-structured interviews, field observations, and participatory workshops with local stakeholders. The collected data was analyzed and operationalized using four core Transition Design tools: Wicked Problem Mapping, Multi-Level Perspective (MLP), Back casting, and Designing System Interventions. These tools facilitated not only the identification of the structural root causes of poverty in the region but also the collaborative envisioning of long-term, locally grounded solutions informed by socio-cultural context and indigenous knowledge. The findings demonstrate that Transition Design's holistic and future-oriented approach significantly enhances the understanding of complex issues while providing a robust framework for sustainable change. Ultimately, this study proposes a comprehensive model for poverty alleviation in Andika that can be adapted and applied to similar contexts globally.

Keywords

Sustainable Poverty Alleviation, Plurality, Policy Design, Societal Change, Knowledge Integration.

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Introduction

Transition Design is a comprehensive and systemic approach aimed at addressing complex issues, particularly *wicked problems* that require long-term systemic improvements (Irwin, 2015). It takes a bottom-up perspective, focusing on human and community-centered issues, and addresses concerns related to culture, human relationships, and the needs of the target community (Irwin et al., 2022). This approach contrasts with government-centric, top-down models that typically limit analysis to government evaluations (Roberts, 2012). As societies face increasingly complex challenges, the demand for innovative and holistic design approaches to tackle systemic issues is growing rapidly. Transition designers view themselves as agents of change, aiming to alter political and social patterns, envision long-term futures, and prepare communities to embrace new ideas through a different approach to current problems (Irwin et al., 2022).

Terry Irwin's research outlines the evolution of design approaches and maps the path to Transition Design. In this framework, service design is positioned on the left, involving short-term, multi-stakeholder projects primarily in business and consumer markets. Social innovation sits in the middle, encompassing longer-term collaborations aimed at challenging existing social, economic, and political systems. Transition Design is placed on the far right, focusing on long-term visions of sustainable lifestyles (Irwin, 2015). While social innovation critiques current patterns, Transition Design addresses various aspects of problems over the long term and systematically charts the steps toward achieving the desired society.

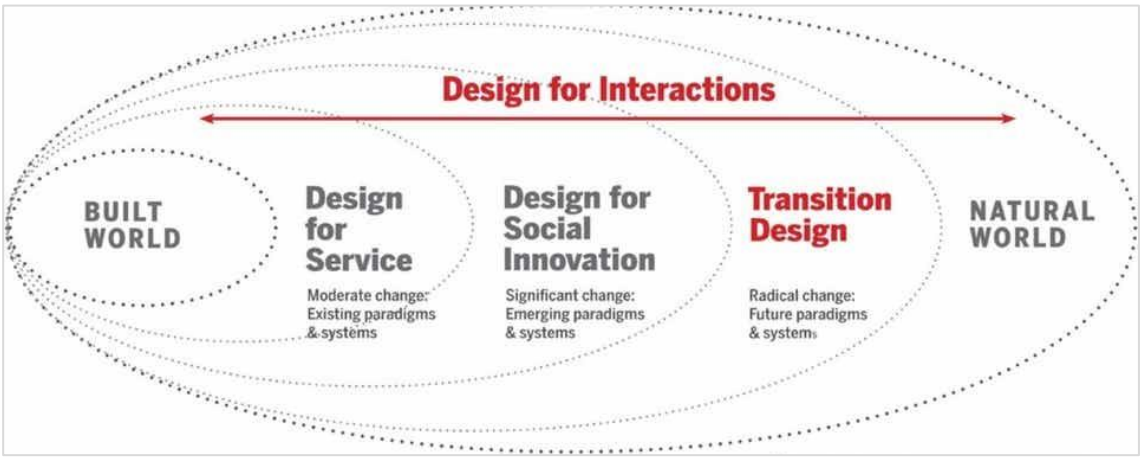

Figure 1: *Evolution of Design Approaches (Irwin, 2015).*

Transition Design is a comprehensive approach that addresses wicked problems by facilitating transitions to more sustainable societal systems (Irwin, 2015; Geels, 2019). It involves interdisciplinary collaboration and deep community involvement, examining the cultural, social, political, and economic dimensions of challenges (Kimbell et al., 2022; Junginger, 2017). This approach intersects with Design for Policy, offering innovative frameworks for policy development that address complex and interconnected issues (Bason, 2014; Robinson, 2003). Transition Design utilizes tools such as the Wicked Problem Map, Multi-Level Evolution of the Problem, Backcasting, and Designing System Interventions to enable structured yet adaptable responses to multifaceted challenges (Holmberg & Robèrt, 2000; Geels, 2019). These methods are particularly useful in contexts like rural poverty in Iran, where traditional approaches have often failed to create lasting change. This study applies Transition Design tools to explore sustainable poverty alleviation strategies in Aram, a deprived village in Khuzestan province. Drawing on social transformation theories and principles of design for sustainable change, this approach emphasizes long-term, systemic interventions over short-term fixes (Jarrell et al., 2024; Goss et al., 2024). By mapping wicked problems and applying a multi-level perspective, the research identifies root causes of poverty and codesigns durable solutions with the active participation of local stakeholders.

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Literature Review

Transition Design, originating from the urban transition movement led by environmental activist Rob Hopkins, was foundationally introduced by Gideon Kossoff in 2011 (Kossoff, 2011) and gained wider recognition during a 2013 AIGA conference lecture by Terry Irwin, Cameron Tonkinwise, and Kossoff (Irwin et al., 2013). This design philosophy promotes a design-led approach to societal transitions toward sustainable futures. Recent scholarship has mainly focused on its methodology, with Terry Irwin defining it as a new field for fostering design-led sustainable societal transitions (Irwin, 2015) and Cameron Tonkinwise highlighting *design for transition* as key to Carnegie Mellon's strategy for aligning design with social change (Tonkinwise, 2015). Despite rich theoretical development, few studies have applied Transition Design to real-world cases. Examples include its use in cinematic virtual reality (Lähteenmaki et al., 2023), long-term food system planning (Goss et al., 2024), Copenhagen's Transport System 2050 project (Valderrama Pineda et al., 2024), sustainable transitions in South Korea's National Art Museum involving citizen participation (Lee et al., 2024), and adolescent-to-adulthood transitions (Jarl et al., 2024). However, there is a significant gap in applying Transition Design to complex social challenges such as rural poverty and sustainable employment in developing countries. While extensively explored in developed regions, Transition Design's application in developing countries remains limited. This gap underscores the challenges and opportunities in adapting its principles to culturally, economically, and environmentally distinct contexts. Localized adaptations are essential to address unique challenges effectively, emphasizing the integration of local knowledge and cultural nuances for meaningful societal transitions. One notable example is Transition Design's adaptation in Latin America, which incorporates indigenous knowledge and a decolonial approach to address socio-cultural and environmental complexities, demonstrating its global relevance and capacity to support community-driven change (Juri et al., 2022). This research seeks to fill the gap by applying Transition Design methods and tools to tackle rural poverty in Iran, specifically in Aram village, Andika County, Khuzestan Province. By tailoring Transition Design to local needs, the study aims to showcase the approach's potential for influencing Iran's development through culturally relevant, systemic, and participatory interventions.

Method

Systematic Application of Transition Design Tools for Rural Poverty Alleviation

Tackling the multifaceted nature of poverty necessitates employing a suite of tools and methods capable of delivering sustainable, long-term solutions. Drawing on valuable lessons from previous studies in developing countries, namely in Latin America, this approach integrates indigenous and local knowledge systems, advocating for a decolonial design process that respects and incorporates diverse worldviews and cultural practices. This integration not only enhances the cultural sensitivity of the design process but also introduces significant challenges and complexities. These include navigating the nuanced differences between traditional knowledge and modern design principles, overcoming potential conflicts between local customs and systematic design approaches, and ensuring that these diverse inputs coalesce into cohesive strategies that effectively address the targeted issues (Juri et al., 2022). By acknowledging and addressing these challenges, the method aims to foster solutions that are not only sustainable but also deeply rooted in the cultural and social fabric of the communities it serves, thereby enhancing the efficacy and relevance of the interventions.

This study utilizes four principal Transition Design tools: Wicked Problem Mapping, Multi-Level Evolution of the Problem, Backcasting, and Designing System Interventions. The adoption of a systematic, bottom-up strategy enables policymakers to better plan and address the multifaceted nature of rural poverty. This approach facilitates continuous monitoring, assesses latent systemic factors, and offers the flexibility to revise, reframe, and occasionally alter the trajectory of the vision plan, thereby contributing to more informed and adaptive policy development for rural poverty alleviation.

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A central component of this method is the Wicked Problem Map, an essential tool employed at the inception of Transition Design projects. This tool involves a comprehensive analysis of the problem from five perspectives: technology, environment, politics, society, and economy. By examining these dimensions, the map reveals the root causes of the problem, which is critical for developing effective strategies to address them in later stages. This stage begins with an extensive literature review and stakeholder interviews to gather comprehensive data, emphasizing community involvement and the integration of local perspectives to uncover root causes effectively (Juri et al., 2022). This data is then used in collaborative mapping sessions to visually represent the relationships and root causes of the identified problems. For example, in a project undertaken in a rural community in Latin America, the Wicked Problem Map was utilized to address water scarcity. The process began by engaging local stakeholders, including indigenous communities, local government officials, and environmental experts, to gather diverse insights and understandings of the water crisis.

Through a series of workshops and interviews, these stakeholders identified not only the environmental factors contributing to water scarcity but also the socio-economic and political dynamics exacerbating the situation. By visualizing these interconnected causes on the Wicked Problem Map, the project team was able to pinpoint key intervention points that addressed both the symptoms and root causes of water scarcity. This led to the development of a multi-faceted strategy that included both technological solutions, such as improved water conservation systems, and policy reforms aimed at equitable water distribution. This systematic approach ensures a thorough understanding of the problem's complexity and aids in formulating targeted interventions. By leveraging local knowledge and fostering collaboration at every stage, the Wicked Problem Map helps ensure that the solutions developed are culturally relevant, sustainable, and supported by those most affected by the issue.

Following the Wicked Problem Map, the Multi-Level Evolution of the Problem (MLP) tool offers a detailed view of the complexities of rural poverty across temporal dimensions, past, present, and future. This tool is essential for identifying windows of opportunity and potential points of intervention within socio-economic systems. By examining the historical evolution of a wicked problem, researchers can identify the main factors that have influenced its development over time. This retrospective analysis provides critical insights into how and where interventions can be most effectively implemented.

The MLP map encompasses three main stages: Niche Level, Regime Level, and Landscape Level. At the Niche Level, innovations arise in protected environments, enabling experimentation free from the constraints of dominant socio-technical systems. These nascent innovations are often unstable and characterized by diverse designs and approaches. This stage is crucial for addressing wicked problems, as it allows for the exploration of unconventional solutions that can challenge entrenched practices. The Regime Level represents established socio-technical systems that dictate current practices, rules, and norms. Innovations introduced at this stage begin to gain traction within small markets and gradually influence the existing regime by establishing new technical trajectories and regulatory frameworks. However, these innovations may encounter significant resistance from established norms and practices. Understanding the dynamics at this level is essential for identifying how and where systemic change can be initiated to tackle wicked problems effectively.

The Landscape Level encompasses broader exogenous factors such as economic shifts, cultural changes, environmental factors, and political developments that impact both niches and regimes. Innovations at this stage achieve widespread acceptance and integration, leading to the transformation of the dominant regime with the support of powerful actors and substantial investments. Addressing wicked problems requires consideration of these macro-level influences to ensure that solutions are sustainable and resilient against broader systemic pressures.

By delineating these three levels, the MLP map provides a nuanced framework for understanding how innovations evolve and interact within socio-technical systems.

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This multi-level analysis is crucial for identifying strategic intervention points and understanding the dynamics of system transitions, particularly in addressing complex and multifaceted wicked problems like rural poverty. Integrating the MLP map with other Transition Design tools, such as Wicked Problem Mapping, facilitates the development of targeted, sustainable solutions that are responsive to both historical contexts and future challenges. The MLP map helps researchers identify *windows of opportunity* where interventions can be most effective, moments when shifts at the niche, regime, or landscape levels create favorable conditions for transformative change. These windows are critical for implementing strategic interventions for rural poverty alleviation.

Once windows of opportunity have been identified, the next step is to create a narrative to map out the journey from the present to the desired future. Backcasting is a suitable tool for creating this narrative. It is a foresight method used to plan a long-term future and is an important technique in sustainability. Backcasting connects a desired long-term future to the current situation through a participatory process. If we categorize the future into possible, probable, and preferable futures, backcasting falls under the third category. This method has been less commonly used in foresight, but its popularity has increased in recent years due to its application in sustainable development discussions.

Another tool that assists transition designers in addressing complex problems is designing system interventions. Designing system interventions is a critical tool employed by transition designers to address complex societal problems through a structured and strategic approach. This process begins with articulating a comprehensive vision for a desirable long-term future in which the identified problem has been substantially mitigated or resolved. This vision is then broken down into three to five key milestones or transformative changes necessary to transition from the current state to the envisioned future. These milestones serve as critical junctures that guide the trajectory of the transition process.

Rather than focusing on isolated improvements, this approach emphasizes the integration and coordination of interventions to create a coherent strategy that aligns with the long-term vision. By doing so, each intervention not only addresses specific aspects of the problem but also contributes to the overarching goal of systemic transformation. An example of an effective intervention includes enhancing an existing project by applying transition design principles, thereby integrating it into a broader systemic framework (Irwin et al., 2022; Manzini, 2015; Meadows, 1999).

In the context of poverty alleviation, system interventions can play a pivotal role in achieving sustainable outcomes. By addressing the root causes of poverty through coordinated actions across various sectors, such interventions can lead to more resilient and equitable communities. For instance, improving access to education and healthcare, fostering economic opportunities, and ensuring environmental sustainability are interlinked interventions that collectively enhance the overall quality of life for impoverished populations.

Comprehensive Demographic and Ethnographic Study

Transitioning to a sustainable society in Iran necessitates innovative design approaches that address the multifaceted social, political, economic, and cultural challenges inherent to the region. Transition Design offers sustainable solutions for rural poverty alleviation through its long-term vision and unique approach to addressing present-day problems (Irwin, 2015). This is particularly relevant in the village of Aram, located in the Andika region. Andika County, located in Khuzestan province, Iran, is the focal area of this field study. The village of Aram, situated centrally within Andika, exemplifies the socio-economic and cultural landscape of the region. The process of converting Andika from a district to a county began in 2007 and was completed in 2009. Andika encompasses 595 scattered villages and settlements, six rural districts, 33 thousand hectares of agricultural land, and 200 historical sites. According to the 2016 census, Andika County has a population of approximately 85,000 (Wikipedia, 2024). The inhabitants predominantly belong to the Lur Bakhtiari ethnicity and communicate using the Lur Bakhtiari dialect. Agriculture and animal husbandry are the primary occupations, with Shirdang weaving recognized as a significant local handicraft, as seen in Figure 2, which shows examples of local handicrafts, agricultural lands, and livestock farming in this region.

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Figure 2: *Animal husbandry, agriculture, and regional handicrafts from Andika, Shirdang weaving (Source: Kimia Stone, 2024; IRNA, 2024).*

Since 2009, efforts to alleviate deprivation in Andika have been spearheaded by the Barakat Foundation, which has initiated various infrastructural and community development projects. These projects include the construction of 47 schools, 94 mosques, and 670 additional projects such as electrification, drinking water pipelines, telecommunications infrastructure, modern agricultural facilities, animal husbandry, watershed management, tourism infrastructure, road construction, tribal centers, police stations, housing for the underprivileged, and charitable initiatives (Wikipedia, 2024). Despite these efforts, poverty and deprivation remain prevalent in many villages, including Aram.



Figure 3: *Ethnographic Study Andik (Source: Authors).*

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In March 2023, a comprehensive demographic and ethnographic study was conducted in the Andika region over a month. This involved 26 semi-structured interviews with rural households, continuing until conceptual saturation was achieved. In addition to interviews, the researcher conducted four site visits, during which 10 days of extensive observational research were performed. This included collecting photographic data from significant sites, holding meetings with local NGOs, the agriculture ministry, and local residents. These diverse methods provided a rich and multifaceted understanding of the socio-economic conditions, cultural practices, and challenges faced by the local population. Some of the images related to the field studies can be seen in Figure 3.

This rigorous field study provides a foundational understanding of the intricate and multifaceted issues in Andika, essential for developing targeted and sustainable poverty alleviation strategies. This study leverages Transition Design tools to enhance methods of sustainable poverty alleviation, aiming not only to improve current conditions but also to explore the untapped potential of Transition Design for future planning and achieving sustainable development goals. The implementation of Transition Design principles in Aram serves as a critical test case for the broader applicability of this approach in similar contexts.

Results and Data Analysis

Wicked Problem Map

In Figure 4, the wicked problem map is presented. The wicked problem map (WPM) of Andika offers a detailed visualization of the complex and intertwined challenges faced by the community, encompassing economic, technological, environmental, social, and policy dimensions. The economic challenges identified include insufficient budget allocation, poor planning for rural employment, and a lack of attention to regional potential. These issues are exacerbated by factors such as migration to cities, inadequate educational and treatment facilities, and entrenched local customs, which collectively hinder economic development. Additionally, the region's potential for tourism remains untapped, representing a significant missed opportunity for economic revitalization.

Technological deficiencies are also prominent, with inadequate infrastructure for internet, gas, electricity, water, telecommunications, and housing construction. The lack of healthcare technology further necessitates villagers to travel long distances on poor roads for treatment, complicating access to essential services. Environmental challenges include the destruction of natural resources for livelihood activities and inadequate infrastructure to support sustainable practices. The neglect of the region's natural potential further undermines efforts towards environmental and economic sustainability.

Social issues such as discrimination, cultural poverty, and the destruction of indigenous culture are compounded by negative social norms and traditions, low self-confidence, and a pervasive negative mood marked by laziness and despair. These social problems are exacerbated by comparisons with urban populations, leading to feelings of inadequacy and exclusion. Policy-related challenges include insufficient priority to regional issues in national planning, inadequate budget allocation for deprived areas, and poor organization among NGOs. The sharp class divide between urban and rural populations further marginalizes rural communities, highlighting systemic issues in policy implementation and resource allocation.

The WPM's holistic visualization of these interconnected issues allows researchers to identify root causes and critical intervention points, facilitating the formulation of integrated strategies. This approach aligns with Juri et al. (2022), who emphasize the need for local knowledge integration and a decolonial approach to design processes. Similarly, Willis and Elbana (2016) stress the importance of understanding local contexts for effective solution design.

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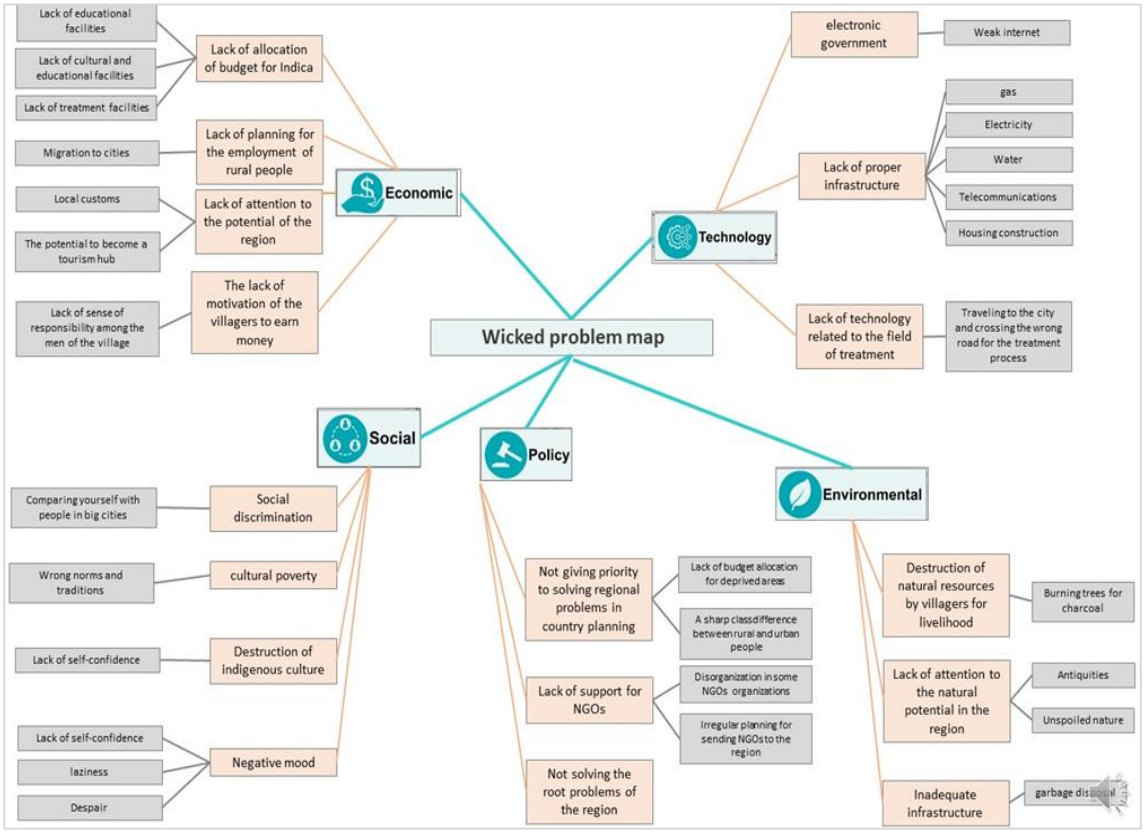

Figure 4: *Wicked Problem Map (Source: Authors).*

Integrating the Multi-Level Perspective (MLP) Framework in Analyzing Andika's Condition

The Multi-Level Perspective (MLP) framework provides a comprehensive tool for analyzing the evolution of rural poverty in Andika, a rural area in Khuzestan, Iran. By examining the complexities of socio-economic systems across three levels, Niche, Regime, and Landscape, researchers can identify strategic intervention points to foster sustainable development and poverty alleviation.

Niche Level Innovations

At this level, innovations arise in protected environments, enabling experimentation with unconventional solutions to tackle rural poverty. These nascent innovations are often unstable but crucial for challenging entrenched practices. At the Niche level, innovations in Andika include experimental agricultural practices and community-based resource management initiatives designed to address water scarcity and enhance agricultural productivity. These nascent innovations require protected environments to develop without the immediate pressures of the dominant socio-technical regime. Knowledge-based companies focusing on social innovation have emerged as crucial drivers of change. Characterized by their adaptability, these companies create sustainable and productive jobs for disadvantaged populations and promote social innovation in the digital space. For instance, Ifa, a non-profit organization established in 2018, combats poverty and deprivation in rural Iran by providing microfinance and resources. It helps rural residents start or expand businesses and create jobs, promoting sustainable development by bridging generous donors with underserved rural areas. The initiatives, such as Ifa, can create some employment opportunities and facilitate the sale of local products through digital platforms, highlighting windows of opportunity for future planning and poverty alleviation strategies in the region (Geels, 2002; Smith et al., 2005).

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Regime-level transitions

This level represents the established socio-technical systems dictating current practices, rules, and norms. Innovations here gain traction within small markets and gradually influence the existing regime, although they may face significant resistance.

In the Andika region, the Regime level transitions reflect some initial adaptations in socio-technical systems, shaping the existing practices, rules, and norms that govern agricultural and socio-economic activities. Regime-level activity includes the establishment of the Jihad Ministry, which later merged with the Ministry of Agriculture in 2001, enhancing agricultural support and infrastructure development. This transition highlights the government's commitment to strengthening agricultural practices and rural development in Andika.

In 2021 earthquake devastated parts of Andika. The Islamic Revolution Housing Foundation and the Red Crescent played critical roles in responding to the disaster. They provided immediate relief to the earthquake victims and also engaged in long-term reconstruction efforts to rebuild homes and infrastructure, and made an attempt to reinforce the resilience of local systems against future crises.

Another important event at the regime level was the Motevaselian initiative established various facilities like schools, mosques, and essential utilities (e.g., electrification, drinking water piping, and telecommunications infrastructure), further enhancing the quality of life and socioeconomic conditions in Andika.

Landscape level transitions

The Landscape Level encompasses broader exogenous factors such as economic shifts, cultural changes, environmental factors, and political developments that impact both niches and regimes. Innovations at this stage achieve widespread acceptance and integration, leading to the transformation of the dominant regime with the support of powerful actors and substantial investments. Addressing wicked problems requires consideration of these macro-level influences to ensure that solutions are sustainable and resilient against broader systemic pressures.

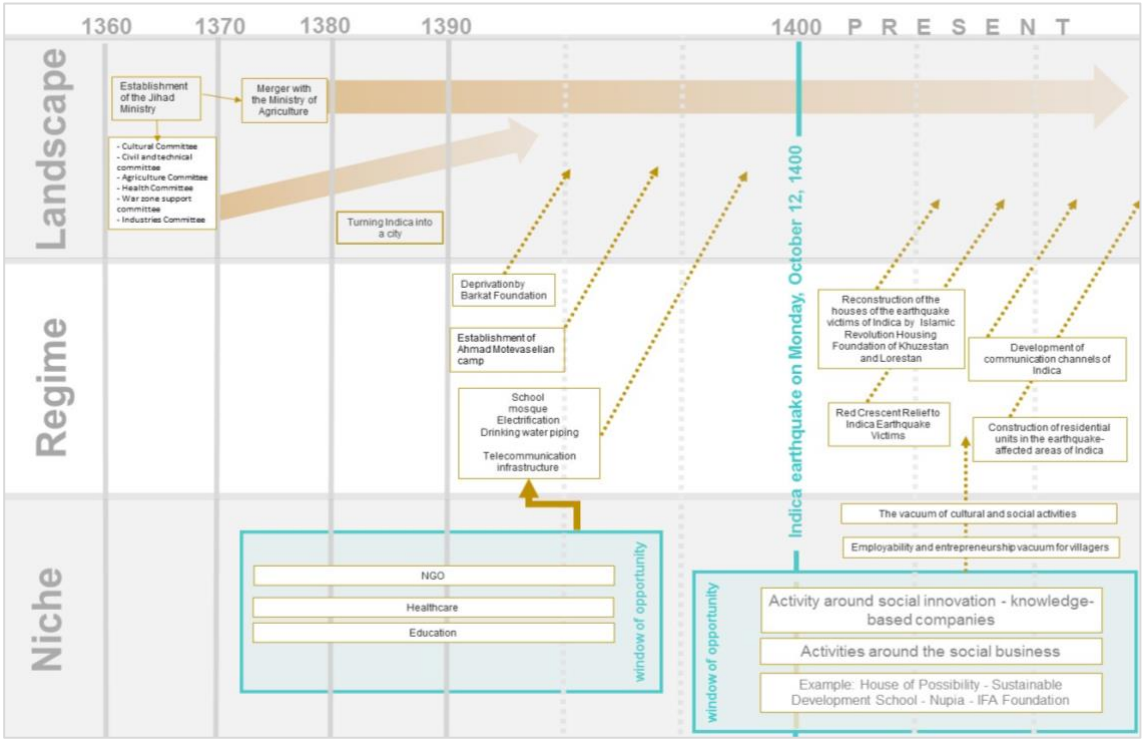

Figure 5: *Multi-Level Evolution of the Problem (Source: Authors).*

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Despite ongoing efforts to build resilient communities and alleviate poverty in Andika, achieving a truly sustainable and resilient society remains challenging. To bridge this gap, it is essential to facilitate policy changes that integrate successful niche innovations into broader practices and strengthen local governance structures to enhance responsiveness and accountability. These strategies can help align local needs with broader development goals, promoting long-term socio-economic stability and environmental sustainability. A thorough description of the Multi-Level Perspective (MLP) Framework Integration in Andika's Condition Analysis is given in Figure 5.

Analysis of Data through Backcasting for Poverty Alleviation in Andika, Iran

Figure 6 illustrates the application of the backcasting method in the context of poverty alleviation and sustainable rural development in Andika. The backcasting visual tools enhance the participatory process by making abstract goals more tangible and accessible, thus fostering a shared vision among community members and policymakers. This clarity helps in prioritizing actions, allocating resources efficiently, and maintaining focus on the overarching objectives throughout the implementation phases. In this study, backcasting is utilized to outline the sequential steps required to eradicate poverty and achieve sustainable development in Andika by 2054. The process begins with the end goal in mind and works backward to the present, detailing the intermediate steps needed over time.

By 2024, the focus is on empowering rural women, achieving stable and productive employment, and initiating the eradication of various forms of poverty, including economic and social poverty. Key actions include motivating the village population through small-scale job creation initiatives, implementing solutions based on social innovation discussions, and starting cultural activities to foster community engagement and preserve local heritage.

By 2034, the goal is to reverse migration trends and lay the groundwork for economic development through tourism and handicrafts. This involves reversing migration by making the village more attractive for residents, creating a suitable platform for tourism to leverage the region's cultural and natural assets, establishing active handicraft production centers to utilize local skills and generate income, and maximizing regional potentials to ensure inclusive growth.

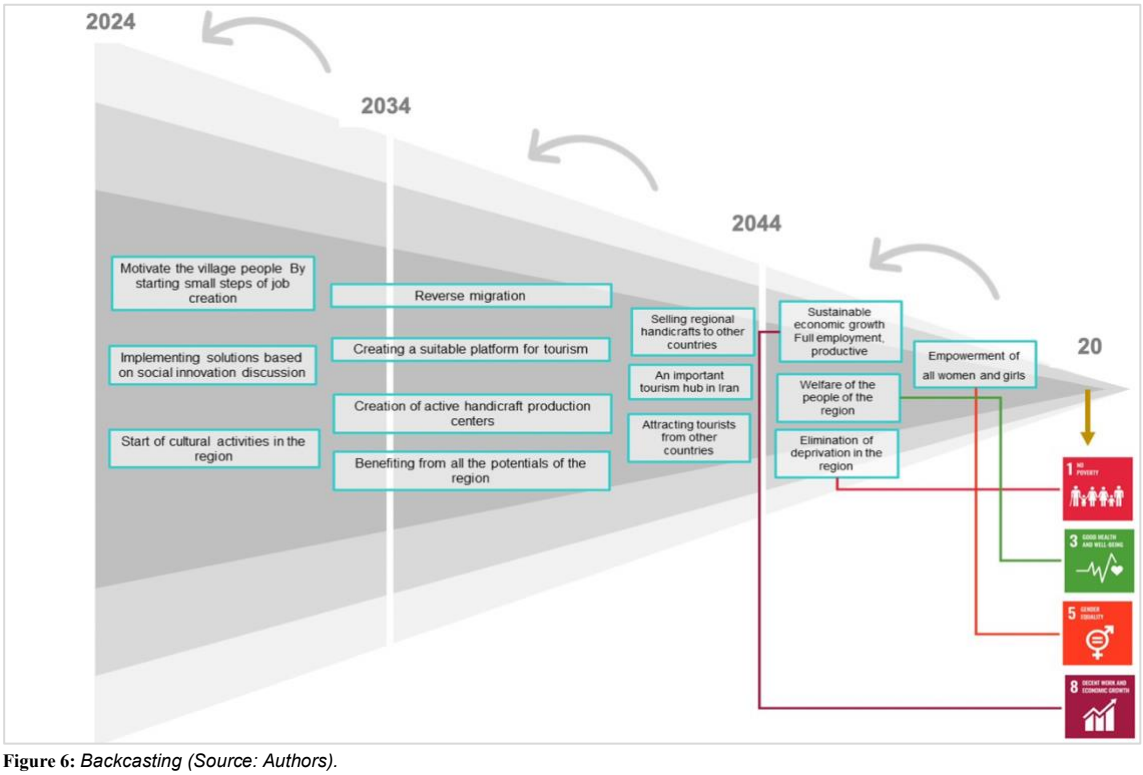

Figure 6: *Backcasting (Source: Authors).*

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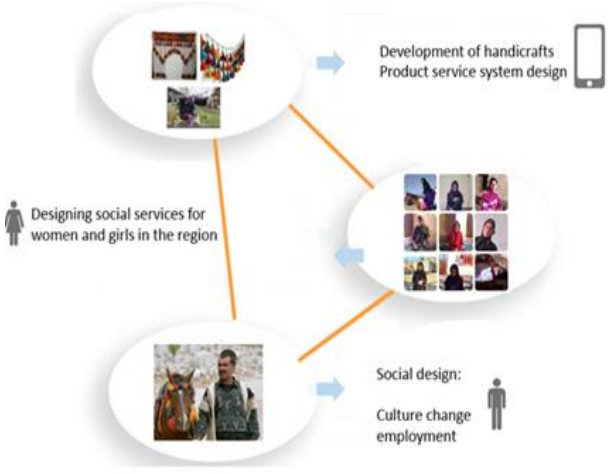
By 2044, the focus shifts to consolidating economic gains and enhancing regional attractiveness. Actions include selling regional handicrafts internationally to open new markets, establishing Andika as a significant tourism hub in Iran to attract both domestic and international tourists, achieving sustainable economic growth with full, productive employment, and ensuring the welfare of the local population by eliminating deprivation through comprehensive development strategies. By 2054, the ultimate goals are to achieve sustainable economic growth, full productive employment, welfare for the people, and the elimination of deprivation. Additionally, there is a strong emphasis on the empowerment of all women and girls, ensuring gender equality and inclusive development.

By breaking down long-term goals into decade-specific milestones, backcasting makes the ambitious vision more manageable and achievable. Moreover, the emphasis on sustainable development ensures that growth is inclusive and beneficial in the long term, avoiding short-term fixes that do not address the root causes of poverty (Dreborg, 1996; Vergragt & Quist, 2011). By engaging local communities and focusing on incremental, achievable milestones, backcasting provides a robust framework for transforming the socio-economic landscape of Andika.

Designing a System Intervention

Table 1 refers to the Designing system intervention stage. In this stage, the focus is on interventions rather than problem-solving. These interventions are interconnected to enable a long-term vision to be realized as a tangible step towards reaching the first milestone on the path to a desired future. This stage consists of three main steps.

Table 1: *Steps in Designing System Interventions (Source: Authors).*

Designing system intervention for poverty alleviation in the Andika region		
Step	**Description**	**Sub Step**
Step 1	A Brief Overview of the Vision for Poverty Alleviation in the Andika Region	Transforming Andika into one of the major tourist hubs in Iran
		Minimizing economic, cultural, and social poverty in the Andika region
		Rebetterment unemployment by enabling self-sufficiency among villagers and creating sustainable and productive jobs
Step 2	Identifying Milestones to Map the Transition Path from Future Vision to Present	Milestone 1: Changing villagers' mindset and altering norms to improve the living conditions of women and girls in the villages
		Milestone 2: Cultivating a culture that promotes employment and shifting the mindset of villagers in the region
		Milestone 3: Designing service-product systems for job creation in the region, with a focus on producing handicrafts
Step 3	Designing Interventions to Address Present-Day Issues	

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First Step

In the first step, a brief description of a desired future in which the problems of deprivation and poverty in the Andika region have been eliminated is presented. The future vision for poverty alleviation in Andika encompasses several key milestones that collectively aim to transform the socio-economic landscape of the region. These milestones are designed to leverage Andika's unique strengths, address its challenges, and promote sustainable development. The comprehensive vision includes the following elements:

1. *Transforming Andika into a Tourism Hub*

Transforming Andika into a tourism hub aims to leverage its rich cultural heritage and natural beauty to establish it as a prominent destination in Iran. This transformation involves several strategic initiatives. First, cultural and historical promotion will play a crucial role, with the development of cultural festivals, historical tours, and heritage sites to attract tourists. Traditional crafts will be highlighted to enhance cultural tourism. Ecotourism development will capitalize on Andika's natural landscapes, such as mountains, rivers, and forests, to offer eco-friendly accommodations and guided nature tours, appealing to environmentally conscious travelers. Infrastructure improvements, including better roads, transportation services, hospitality facilities, and tourist information centers, will be essential to enhance the visitor experience. Additionally, comprehensive marketing campaigns will be launched both nationally and internationally to promote Andika as a unique and attractive tourist destination, emphasizing its cultural and natural assets. These efforts are expected to increase tourist footfall, leading to higher local income and job creation, while also preserving and promoting local culture and traditions, thereby enhancing the region's recognition and economic stability.

2. *Substantial Reduction of Economic, Cultural, and Social Poverty*

To substantially reduce economic, cultural, and social poverty in Andika, a holistic approach will be implemented, addressing economic hardships, preserving cultural heritage, and enhancing social well-being. This involves several strategies: economic empowerment programs will introduce microfinance schemes, vocational training, and entrepreneurship support to help residents start and grow businesses. Cultural preservation initiatives will support local artisans by providing platforms to showcase and sell their work, and establish cultural centers and museums to promote Andika's heritage. Social support services will enhance access to healthcare, education, and social services, with programs to improve literacy rates, maternal health, and child welfare. Community engagement will be fostered through participatory planning and decision-making processes, encouraging residents to actively participate in development initiatives.

3. *Resolving Unemployment through Sustainable and Productive Employment*

To foster self-sufficiency among villagers and create sustainable employment opportunities in Andika, particularly through the region's rich tradition of handicrafts, several strategies have been identified. Handicraft development programs will provide training and resources to local artisans, improving the quality and marketability of their products, and support the establishment of cooperatives to streamline production and marketing.

Market access initiatives will create platforms for marketing and selling handicrafts both locally and nationally, including developing online marketplaces and forming partnerships with retail chains. Entrepreneurial support will offer business development services, such as financial literacy training, mentorship programs, and access to microloans for new and existing businesses. Promoting sustainable production practices will ensure the long-term viability of local industries, encouraging the use of eco-friendly materials and techniques. These strategies are expected to increase employment and income levels among villagers, develop a vibrant local economy centered around traditional crafts, and establish sustainable business practices that preserve the environment and cultural heritage.

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Second Step

Next, in the second step, the pathway from the future vision to the present time is outlined. This step involves establishing a path for moving from the present to the desired future, and identifies three important milestones along the way. These milestones include: changing norms to improve the conditions of women and girls in the village, promoting a culture of striving for employment, and designing a service-product system for job creation in the Andika region.

Third Step

In the third step, the concept of interventions is developed, focusing on interventions to address the current problems in the region. In the project under consideration, a conceptual design for a product-service system to create employment in the Aram village in the Andika region is presented, considering the region's potential. In general, this tool has facilitated the realization of a long-term vision as a tangible step towards reaching the first milestone on the path to a desired future, which is the improvement of conditions in the village of Andika.

Summary of strategies and expected outcome

This study identified several key strategies to alleviate poverty and promote sustainable development in the Andika region, focusing primarily on *employment creation based on the region's handicrafts*, which emerged as the most feasible immediate action. The research revealed the necessity of a structured approach involving community engagement, capacity building, and strategic partnerships to implement these changes effectively.

To transform Andika into a tourism hub, strategic initiatives will leverage its rich cultural heritage and natural beauty. This includes promoting cultural festivals, historical tours, and ecotourism, alongside infrastructure improvements and comprehensive marketing campaigns. These efforts aim to increase tourist footfall, create local jobs, and boost the regional economy while preserving cultural traditions.

A holistic approach will be implemented to substantially reduce economic, cultural, and social poverty. This involves economic empowerment programs such as microfinance schemes, vocational training, and entrepreneurship support. Cultural preservation initiatives will support local artisans, while social support services will enhance access to healthcare, education, and social services. Community engagement through participatory planning and decision-making will also be emphasized.

To resolve unemployment through sustainable employment, the study highlights the importance of developing the region's handicrafts. This includes providing training and resources to artisans, creating marketing platforms, and offering business development services. Promoting sustainable production practices will ensure the long-term viability of local industries. These strategies are expected to increase employment and income levels, develop a vibrant local economy, and establish sustainable business practices that preserve the environment and cultural heritage.

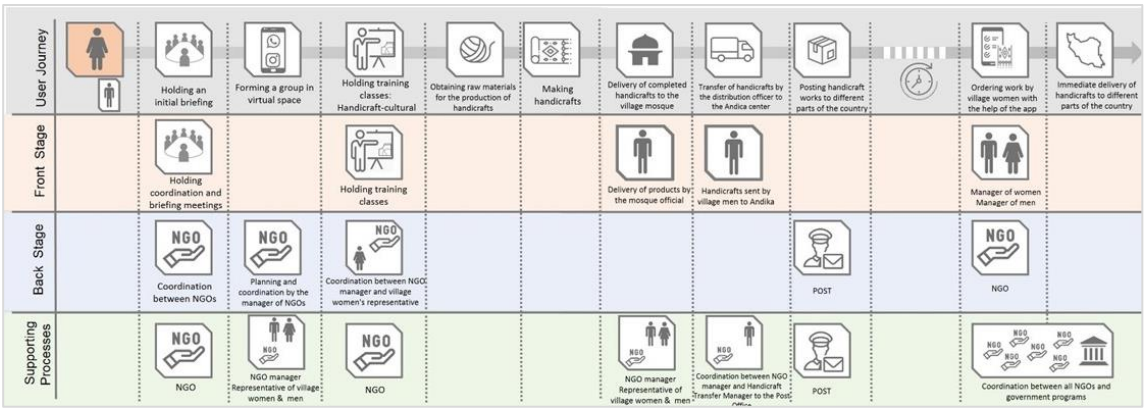

Figure 7: *Conceptual Design of Services (Source: Authors).*

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By implementing these strategies, Andika's socio-economic landscape is expected to transform, reducing poverty and promoting long-term prosperity and sustainability. Figure 7 illustrates the concept design of a product-service system aimed at job creation in the village of Andika. This design enables village women to sell their traditional handicraft, known as Shirdang weaving, through online platforms to other parts of the country. This program is expected to foster job creation by facilitating the sale of regional handicrafts online.

Discussion

Main Discussion

The present study provides a comprehensive examination of the use of the Transition Design method to analyze the issue of deprivation and poverty in rural areas of Iran. This approach not only introduces researchers to the tools and methods of Transition Design but also demonstrates its potential application in betterment complex problems such as deprivation in rural areas. By utilizing Transition Design tools such as the *wicked problem map* and the *Multi-Level Evolution of the Problem*, it identifies and analyzes wicked problems, aiding in a deeper understanding of the roots and causes of these issues. Additionally, it offers a framework for analyzing complex social issues like rural deprivation and contributes to future research in similar fields. This research also plays a key role in enhancing understanding of complex issues in developing rural communities and demonstrates the potential of the Transition Design approach in addressing complex issues in these communities.

Comparing Results

This study aligns with the research by Jarrell et al. (2024). Jarrell and colleagues utilize the Transition Design approach to explore the multifaceted and complex process of transitioning from adolescence to adulthood (Jarrell et al, 2024). Their study involved a one-day workshop with four groups of stakeholders participating in six Transition Design activities. Jarrell and colleagues relied primarily on workshop activities and provided general information on Transition Design tools. In contrast, this study applies four significant Transition Design tools to the social wicked problem of poverty in rural communities in Iran. We explore this issue step by step using this approach, fully and comprehensively implementing each tool on the case study and ultimately presenting a concept for interventions.

Additionally, this study is somewhat aligned with the research by Goss et al. (2024), as their research also analyzes a specific case study through the lens of Transition Design. They examine the role of design expertise in envisioning long-term, desirable futures in transition processes (Goss et al, 2024). Their case study follows a design agency working on creating a future food system for a consortium engaged in food transition. Their research identifies the tensions that arise between the context of transition and design expertise. However, Transition Design tools are not introduced in their study. Conversely, in this study, we thoroughly demonstrate how to apply and implement Transition Design tools on a project, enabling other researchers to learn how to apply Transition Design tools and adapt them to other topics.

Political & Scientific Implications

The systematic analysis of deprivation and poverty in rural areas carries significant policy implications. Utilizing the Transition Design approach allows designers' perspectives to be applied to major social issues and helps provide sustainable improving to wicked social problems such as poverty and deprivation. The results of the research indicate that creating stable and productive job opportunities through product-service systems can improve the economic and social conditions of the region. Employment generation and the empowerment of women contribute to enhancing the social and cultural conditions of rural areas. The research presents innovative improving to address problems of deprivation and poverty in rural areas, which can contribute to sustainable development and better living circumstances there.

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Research Limitations

Despite the promising findings, this study has several limitations. The results are based on a single case study in Andika, which may limit the generalizability of the findings to other regions without significant adaptation. Resource constraints affected the scope and scale of data collection and implementation, highlighting the need for broader financial and logistical support in future research. The study primarily focused on planning and initial steps, with the long-term impacts and sustainability of the proposed interventions requiring further longitudinal studies. The methods needed significant adaptation to fit the unique cultural and socio-economic context of Andika, which may not fully align with their original intents. While community involvement was emphasized, the extent of stakeholder engagement varied, underscoring the importance of ensuring consistent and meaningful participation of all relevant stakeholders for the success of such initiatives.

Conclusion

This study examines and analyzes rural poverty in the Andika region of Iran using Transition Design and Design for Policy methods. The results indicate that these approaches can serve as powerful tools for providing comprehensive and sustainable solutions to address complex social and economic challenges in deprived communities. In addition to systematically introducing the tools of Transition Design and exploring their application to rural poverty, this research provides an operational framework for systemic changes in these communities. A key achievement of this study is the emphasis on integrating local knowledge and culture into the design processes. By utilizing the participation of local stakeholders and applying tools such as Wicked Problem Mapping and the Multi-Level Perspective, the study has gained a deeper understanding of the root causes of poverty in the region. These tools have not only clarified the issues but have also helped in designing long-term solutions grounded in local realities. Furthermore, the Design for Policy approach in this research has proposed practical and immediate intervention strategies for social policies. This approach ensures that the designed solutions are not only innovative but also feasible within existing policy frameworks. One of the proposed solutions is the creation of product-service systems, which can sustainably generate job opportunities and improve the social and economic conditions of the region. The findings of this research can serve as a model for other deprived communities seeking to address similar issues. Suggested interventions, such as women's economic empowerment, tourism development, cultural preservation, and sustainable employment, can lead to fundamental changes in the living conditions of rural inhabitants. These changes not only help reduce poverty but also enhance resilience and self-sufficiency in rural communities. In conclusion, this research not only provides practical results and interventions but also highlights the importance of stakeholder participation and sustainability in the design processes, showing that design can be an effective tool for creating systemic and long-term changes in communities.

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