



# COPING WITH THE LAND GAME: A NETWORK ANALYSIS OF COMMUNITY RESILIENCE IN HUE'S PERI-URBAN AREAS, VIETNAM

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**Abstract:** In Vietnam, urban expansion and its effects have appeared as a contentious issue among journalists, civil society organizations, academics, and NGOs in recent years. Along with the rapid urbanization, farmers in peri-urban areas are increasingly confronted with a loss of land as well as a change in livelihood strategies as the consequence of government policies. Using data from household surveys in the peri-urban village of Hue – Dạ Lê Chánh, the author attempts to answer the question “How do mobility practices reflect community resilience in the face of developmental processes of change?” The result indicates that as a peri-urban area, the proximity to Hue City, offers many employment opportunities. However, a focus on mobility shows that social and family networks are utilised for extended movement throughout the country and beyond. Mobility is shown to be a vital feature in the formation and maintenance of livelihood trajectories, allowing community access to human, information, financial and trade networks. In the face of these different demands on land in Vietnam, what is the future for a locality such as Dạ Lê Chánh? Caught in a web of future trade-offs, we find it foolhardy to speak of sustainable development when the appropriate line of development is unclear. However, within the push and pull of the land game, the voices of local residents to formulate their own futures will be lost. Therefore, government policy must find a way to acknowledge such voices whilst taking the best sustainable steps forward.

**Keywords:** livelihoods, mobility, peri-urban areas, Hue, Vietnam

## 1 Introduction

During the last twenty-five years, the economic revolution and social transformation that took place in Vietnam have won many international plaudits. The middle-income status of Vietnam recognized by World Bank measurements would have been unthinkable to those who witnessed the economic turmoil of the mid-1980s [2, 4]. However, with an eye for sustainable development, an obsession with economic growth must be queried in light of its impact on the social transformation so far afforded to Vietnam, and a growing concern for climate change. Yet, such motivations must be questionable in the face of a prolonged global economic downturn. Rather than pressing forward, it seems that ‘the current growth model is rapidly extinguishing its potential’ [6, 3].

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Such a view forms the background for a study of local livelihoods in the village of Dạ Lê Chánh, Thủy Vân commune in Central Vietnam. Using the sustainable livelihoods approach, the author assesses the presence, maintenance, and creation of different forms of capital within the village community, which reflects successes of economic and social development in Vietnam. In an adaptation to the traditional types of assets that are considered as a human, natural, financial, physical and social form of capital, in this study, mobility capital or *motility* is added as a sixth category. Kauffman first introduced this concept, defined as the capacity of entities (e.g. goods, information or persons) to be mobile in the social and geographic space, or as the way in which entities access and appropriate the capacity for socio-spatial mobility according to their circumstances [1]. Incorporating *motility* allows for the close observation of how mobility mechanisms interact with other forms of capital, and how they may contribute to the formation of livelihood approaches and the adaptation of these approaches to peri-urban development. Indeed, despite all progress in Dạ Lê Chánh, the very system of economic growth and modernisation now threatens to undermine the very success it has bred. The concerted urban growth from this peri-urban area, neighbouring Hue City, may undermine traditional livelihoods and seriously affect the social and cultural fabric of the village. Drawing on an example from the peri-urban village of Hue – Dạ Lê Chánh, this article attempts to answer the question of how mobility practices reflect community resilience in the face of developmental processes of change.

## 2 Da Le Chanh village: An overview

The rural commune of Thủy Vân with the village of Dạ Lê Chánh is an administrative subdivision of Hương Thủy district-level town (Figure 1). It is situated northeast of the city of Hue, covering an area of 492.5 hectares. Four villages spread along a road lining the waterways that act as a natural border to the commune (Figure 2). The central area is traditionally maintained as farmland for rice cultivation. Dạ Lê Chánh forms the north-eastern area of the commune. A residential area takes up 109 hectares, next to 85 hectares of farmland. The village is comprised of 516 households with a total population of 1,980 people.

On 25th May 2009, at the 10th National Party Congress, the Politburo drew up Conclusion No. 48-KL/TW calling for Thừa Thiên Huế to transfer its status from a province to a centrally-governed city [5]. Originally scheduled for 2020, it is now hoped that the switch can take place in 2015. Structurally, the aim is for the province to rearrange itself as an urban core (Hue city) surrounded by a specified collection of satellite towns and industrial and economic zones. This links to an active pursuit of urban growth. In 2010, a master plan was drawn up for the expansion of Hue City. Thủy Vân commune was included in Area B of this master plan, involving extensive urban housing and supporting infrastructure. From 2000 to 2016, 99.5 hectares or 20.2% of the total land area were acquired, resulting in a land loss for 651

households (Phuc et al., 2014). Much conversion has acted towards preparatory infrastructure for urban development. It must be assumed that extensive land conversion will take place in the coming years to fulfil the development plans, affecting the population. According to the local authorities, 60% of this population remains involved in agriculture.

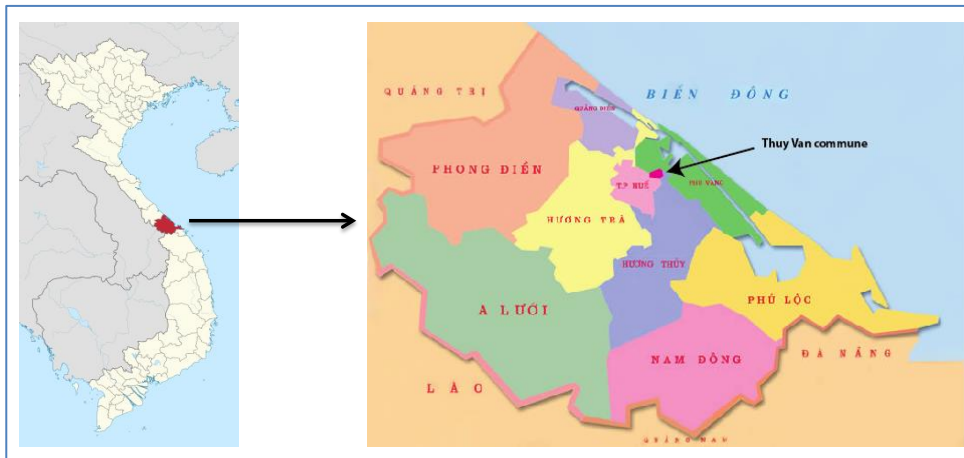


Figure 1. Maps of Thua Thien Hue province and Thuy Van commune

For Dạ Lê Chánh village itself, the situation is not clear-cut. Rather than staring headlong into the abyss of land loss and large-scale urban residential construction, its geographical location in the farthest corner from Hue City brings a status as a back-up area to urban plans. This means that the bulk of the vicinity will remain unaffected by land use change. However, these same authorities fear, indeed expect, that in the long-term, the land will eventually be claimed by city authorities and converted for the purposes of urban development.

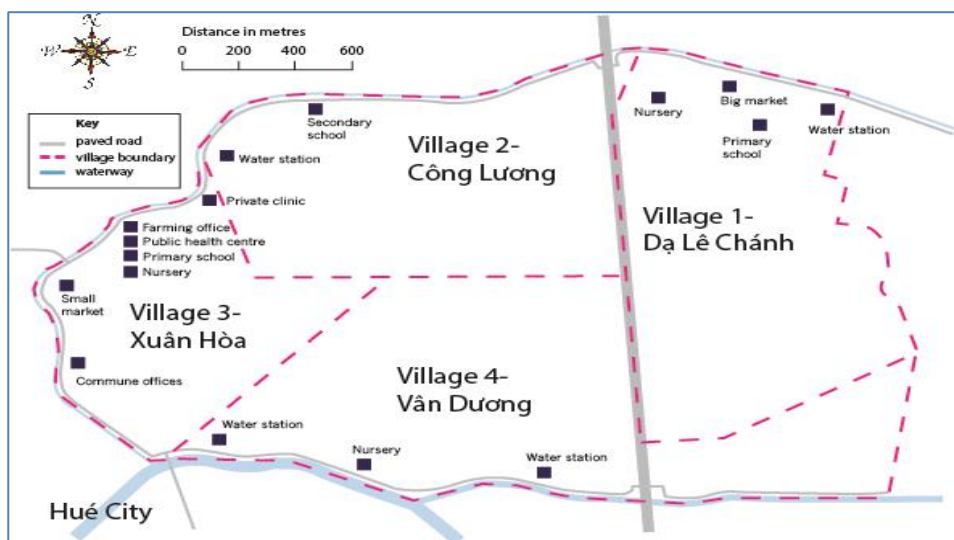


Figure 2. Thuy Van commune (Source: author’s map)

### 3 Methodology

The on-site research in Dạ Lê Chánh village lasted three months from February until May 2017. Secondary data were supported by interviews, extensive mapping of the area, and a collection of life histories. A core of quantitative data involves the conducting of a household survey. A sample of 120 responses was obtained out of a total of 515 households in the village. Three aspects of life in Dạ Lê Chánh village can be reported on the basis of these data. Firstly, the core quantitative data set from the household survey allows to assess the livelihood through the presence, maintenance, and creation of different forms of capital by residents. The mobility or *motility* capital is added to the traditional human, natural, financial, physical and social capital. Secondly, on the basis of this capital assessment, a general overview can be supplemented by specifying the situation for different village groups with different livelihood trajectories. The term trajectory is preferred here to that of strategy. The latter suggests an active decision by the household, while the former has a broader application to the forced modes of production. Thirdly, this assessment can be placed within the context of future developmental scenarios, viewing the potential for resilience displayed by each livelihood trajectory to the forces of change.

To answer the question of how mobility practices reflect community resilience in the face of developmental changes, the network analysis is applied. This analysis looks at social, financial and physical mobilities operating upon, through and out of a single locality. In this way, local resilience can be assessed in terms of state-inspired economic development and urban and industrial growth. The effect of resulting land conversion is also studied through the ability of the residents to participate in highlighted networks.

### 4 Findings

#### 4.1 Identification of sub-groups with different livelihood trajectories

The data from the household survey, involving 562 out of 1980 residents, were arranged to produce a general assessment of different forms of capital assets in the village. Subsequently, different sub-groups were identified to look for the disparity in livelihood outcomes within the community. These groups were based on the modes of employment as the basic household means of production, specifically that of diversification and stability. Diversification is represented through sectorial variation of employment practices within a household, and it is based on the dichotomy of farming versus non-farming, with non-farming combining work in the industrial and service sectors. The concept of stability is mainly applied to the practice of non-farming modes of employment. A waged full-time job theoretically guarantees a regular financial income, as compared with part-time or casual labour, or self-employed work.

Agriculture is different in this respect, where most farmers are self-employed and work on their own land. Four sub-groups, or livelihood trajectories, were identified and described as follows:

1. *Farming only (FO)*: households only involved in agricultural practices, principally rice cultivation but also including the raising of livestock or vegetable production.
2. *Farming + secure non-farming work (FSN)*: households involved in agriculture but also employed in the industrial and/or service sectors, which include a waged full-time job.
3. *Farming + insecure non-farming work (FIN)*: households involved in agriculture but also employed in the industrial and/or service sectors, which do not include a waged full-time job.
4. *Non-farming only (NO)*: households employed in the industrial and/or service sectors, whatever type of work, but not in agriculture.

**Table 1.** Summary livelihood trajectories in Dạ Lê Chánh village

	FO	FSN	FIN	NO	Retired HH	Total
<b>Number of cases</b>	7	40	43	27	3	120
<b>Percent (%)</b>	5.83	33.33	35.83	22.50	2.50	100

The validity may be questioned due to the small size of the *farming only* group. However, there is a reasonable split among the other three groups with three left-over cases involving households, in which all the occupants are retired. A general capital assessment can be made with specific reference to each sub-group.

#### 4.2 Capital assessment of Dạ Lê Chánh village

In creating a general assessment of the presence, accumulation and maintenance of capital assets, an amalgamation has been made from survey data, secondary sources, interviews, and observations. Using the individual analyses of the previous sections, we collected the markers for each capital form. Then, a ranking based on two counts is given. The first assessment concerns the state of the capital at the present moment with each marker given a score between -2 and 2 (-2 = very negative, -1 = negative, 0 = either negative or positive, 1 = positive, 2 = very positive). Setting the parameters for such scores involves a certain qualitative assessment of data. Score 2 refers to the state that conforms to the higher standards of world society at present. For example, a score of 2 for the component *access to education* would reflect universal, equitable access to the highest level of schooling with no financial restrictions. A score of 1 would highlight a positive situation, for example, succeeding demands set out in the Millennium Development Goals without necessarily reaching the highest standard. A score of 0 would represent a sufficient level without truly demanding praise. A score of -1 fails to deliver

a satisfactory level for the component, and a score of -2 indicates a wholesale systematic problem.

The total scores for each form of capital are compiled in Figure 3. The results in the following analysis structure around each individual capital asset, yet acknowledging that such assets are frequently exchanged.

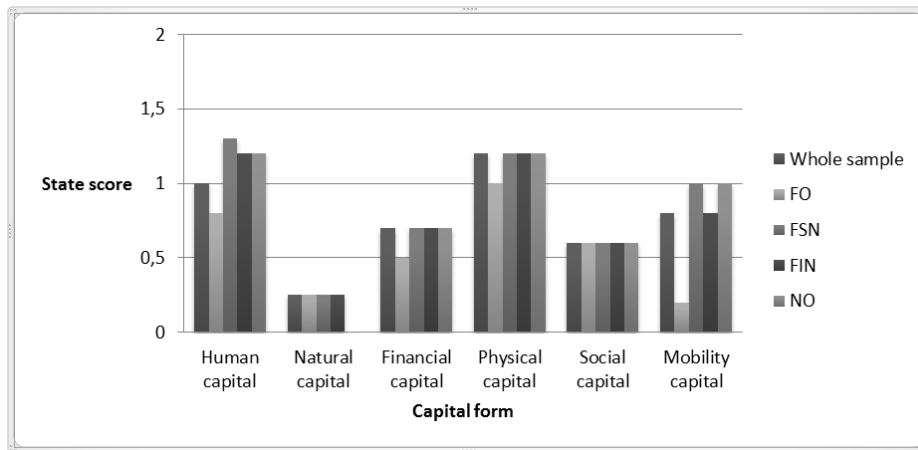


Figure 3. A capital assessment of Dạ Lê Chánh village using different livelihood trajectories

**Human capital**

Provisions towards education and health in Thuy Van commune reflect general improvements in Vietnam. Employment patterns in the village also fall in line with national trends and the structural transformation of Vietnam. They have diversified out of a tradition of rice cultivation and basket-making into new opportunities in the growing industrial and service sectors. As the basis of splitting into sub-groups with different livelihood trajectories, variation is clear to see. *Farming only* reflects poorly here in terms of diversification and job stability.

**Natural capital**

101 out of 120 households have agricultural land at a mean of 4.6 sao (2,300 m<sup>2</sup>) per household. 17 out of 27 non-farming households have land but rent it out. This suggests an active choice not to work in the agricultural sector. Of agricultural households, all but two grow rice. 70.6% of the households sells and retains part of their produce with 17.8% keeping their entire yield. Therefore, although natural capital is frequently used to generate financial capital, food production mostly offers a reliable self-serving physical capital. 39 households lost an average of 2.4 sao (1.200 m<sup>2</sup>) in recent years. Three households lost all their land. The amount of compensation received does not represent a fair exchange into financial capital with one official claiming that prices were set at one quarter the rate of land in Hue City.

### **Financial capital**

Among the different sub-groups, *farming only* households only have lower levels of income with higher levels predominantly found in the FSN and NO groups. *Non-farming* households with higher job security through waged full-time work also have higher levels of income. This suggests that only a basic income can be achieved from farming with higher bands possible through secure full-time employment within the industrial and service sectors. Villager sources of income back this up, placing more importance on non-farming (60.9% of household income) next to farming (31.8%), and other sources (7.3%). Meanwhile, in dealing with a formal financial system, 21.7% of households obtains a loan from a bank during the last ten years, while 40% claims that they have taken a loan from local credit organisations such as the Women's or Farmer's Union. 11.7% of households collects some form of government support, while 21.7% receives a monthly remittance from members living or working in a different place. Overall, this suggests that people gain access to varying financial sources beyond a mere income, particularly from local organisations.

### **Physical capital**

Only one surveyed household does not possess a television, and two without a telephone. 226 motorbikes are owned by 108 households, and only five families have a car or a truck. This seems to fit the mould of a middle-income country. Once again, the *farming only* sub-group performs less well, displaying relatively lower levels of ownership of such possessions. In terms of local infrastructure, it is claimed by the local authorities that all households have access to electricity and water supplies with an efficient local refuse collection system in place. Most of the roads in the village have been tarmacked.

### **Social capital**

Spreading both nationally and internationally, social and family networks provide a vital platform towards framing identity, sourcing employment opportunities, leisure visits, and general lines of information or news. Within the village, involvement in social organisations such as Woman's, Farmer's and Youth Unions conveys status and offers access to financial loans and local news. When asked about the methods of finding work, social networks are deemed of greatest importance (60.8%) with family networks of secondary significance (18.3%). Otherwise, concerning political processes, a hierarchical top-down structure denies a meaningful platform with which the local population can contribute to the debate or decision-making processes.

### **Mobility capital ('motility')**

In terms of human mobility, the high level of motorbike ownership (90%) means that almost all households possess a mode of transport that can reach regional destinations. *Farming only*

performs poorly though, with 3 out of 7 households without a motorbike and 2 without a bicycle. As a peri-urban area, the proximity to the city, together with the growth of the trade and industry sectors, has facilitated the availability of new employment opportunities beyond traditional practices. It is unsurprising that *farming only* performs less well in terms of multi-local employment. However, it is interesting that the *farming + secure non-farming work* and *non-farming only* groups score better than the *farming + insecure non-farming work* group. This suggests a successful, if not causally proved, relationship between a diversified, multi-local employment profile involving job security and the chance of achieving higher levels of financial income.

Exactly half of the households have one or more members who migrate out of the village. After marriage, a mix of permanent, temporary and circular migration can be seen, moving out of the province and in a few cases abroad. In assessing the mobility of goods, Dạ Lê Chánh's role as a commercial centre is important. A local market with over 190 traders, alongside 57 shops, represents a trading centre that operates beyond the mere custom of village residents. Traders and customers come from villages located north in Phu Vang district, and east in Thuy Thanh commune, thereby showing a strong commercial hub beyond designated administrative boundaries. Finally, in terms of information and communications technology, phones and television are prevalent throughout the village with 39.2% of households using the Internet.

## 5 Discussion of findings

From all the findings, an image is built up of a strong active community that has felt some benefits from rapid economic development in Vietnam. Ninety point nine percent of residents surveyed perceives an improvement in the quality of life over the last ten years with economic development (25.8%) representing the most frequently stated change. Central to village life is a web of social and family networks that inform patterns of employment and residency extending throughout the country and sometimes beyond. A strong base in agriculture provides a degree of self-sufficiency, compensating against but also providing opportunities to derive a small household income. However, most households are also involved in the industrial and service sectors, which provides the majority of household income at 60.9%. This diversification allows residents to spread the risk of any income vulnerability with economic success bolstered by the security of waged full-time employment. The outcome is more productive than a singular concentration on farming, benefitting both economic and physical assets in the household. Indeed, a further group, who have moved away from direct farming practices, also show positive results in these areas, if not reaping the benefits of an agricultural pastime. The majority of these households seems to have made an active choice to move away from farming, renting their land out to others. Indeed, while there has been a partial land loss for many households, only three have suffered total loss and been forced into a complete shift of



livelihood trajectory.

As well as diversification, the multi-local nature of livelihood trajectories plays an important role within the economic and material success of a household. The proximity of Dạ Lê Chánh village to an urban area works as an advantage here. A complex and entrenched relationship with Hue City moves well beyond simplistic notions of the rural against the urban. Whether providing opportunities for employment, market produce, health facilities or leisure options, Hue is a prominent figure in the physical, social, and cultural landscape of Dạ Lê Chánh. Meanwhile, the village itself is a hub of a trade network with a significant market and a large number of shops providing livelihoods to both locals and residents from surrounding localities. This can only strengthen resilience against any negative influence of urbanisation. It is only for households committed to the singular practice of agriculture that issues arise. There is vulnerability through the production of lower levels of income. As a result, the accumulation of physical capital through household possessions is less, alongside a lack of mobility capital with fewer capabilities for travel. With the ages of the respondents significantly older than those of other sub-groups, it is likely that the research concurs with other studies that point to an older generation who either reject or are unable to make a transition to other forms of employment.

## **6 Community resilience to future developmental scenarios**

Evaluating community resilience in Dạ Lê Chánh village speculates on future developmental trends. Three developmental scenarios can be put forward, which are likely to have a strong effect upon the village, yet highlight ambiguities in the path forward.

### **6.1 Urbanisation and land use change**

With the extensive plans in place for new urban housing in Thuy Van commune, it seems that potential land loss will bring big changes to local livelihoods. Four points of change must be highlighted here. Firstly, in the short to medium term, Dạ Lê Chánh village will be left as a back-up area of urbanisation with land maintained for rice cultivation. Secondly, the longer-term expectation of many is that eventually the land will be converted anyway. Thirdly, even if the land in the village itself remains untouched, the direct surrounding area will be totally redeveloped with the new urban infrastructure providing a new backdrop to village life. Fourthly, a shift in status from a rural commune to an urban ward will bring a higher tax band and tougher qualification rules for schooling. Whilst not causing a large impact on household coffers, the effect of such administrative changes would nevertheless have a negative influence on livelihood outcomes to all village residents.

The land loss could be devastating for those only practising agriculture, dismantling the sole occupation without the capabilities to make a smooth transition to any new livelihood

trajectory. For those with a diversified employment profile including farming, the loss would also be felt. For those who do not farm but own land, compensation might provide a worthwhile investment if used wisely. However, as for all households, poor compensation rates offer a poor exchange of natural for financial capital. Furthermore, the food stock and security from agriculture would be lost with the village then wholly dependent on outer market sources. Even if the land is maintained in the village, the significance of urban encroachment is palpable. On one level, new urban housing could bring new employment opportunities. The village status as a local trade hub could be extended. Then again, the general effect on a local consciousness steeped in a tradition of farming could be much more damaging, undermining the whole social identity of the locality.

## **6.2 Global markets and food security**

In the transition to the market-based economy, Vietnam has embraced global trade. However, following the price spikes in 2008, there has been increasing concern about food security. In Resolution No. 63/NQ-CP, the national government calls to preserve 3.8 million hectares for rice production by the year 2020. This aim is achievable, except that, on the whole, the land use change remains dominated by conversion for urban and industrial use. Therefore, extra policies may be needed to properly weigh the need for food security against a preference for economic development. With plans for urban development already at an advanced stage, it is less than likely that such policies might directly affect Thuy Van although the status of Dạ Lê Chánh village as a back-up urban area does leave it open for subsequent reappraisal. Were village farmland to come under government security as a prioritised source of food, households from all livelihood trajectories could maintain their natural capital with its translation to physical or financial stocks through rice production. However, this may not benefit a younger generation that chooses against agriculture for its livelihood. As with urban encroachment, the influence of structural policy played through developmental processes does not account for local autonomy to determine the desired direction of any livelihood trajectory.

## **6.3 Climate change**

Climate trends point towards drier, hotter summers followed by wetter spells. Increasingly extreme weather conditions can only have a negative impact on rice cultivation. Once again, the livelihood trajectory dependent upon farming would suffer most from such a scenario with diversified households able to offset some losses through other sources of income. The second impact of climate change ties in with urban planning. It appears that a fragmentation of the planning process, cobbled together between distant departments, means that climate policy is often relegated under a desire for economic development. For example, there is a grave danger that not enough attention is given to water drainage systems, with a new concrete landscape limiting natural runoff points. In addition, as a contrast to the demands of food security, climate

policy tends towards the championing of forest areas. In this context, rice farming is seen in a less positive light, producing more greenhouse gases than other forms of agriculture. In all of these situations, there is little room for local voices to be included in the debate. This seems perverse where local knowledge could actually provide vital information for the improvement of urban plans that mitigate climate change or a maximisation of food production.

## 7 Conclusions and policy recommendations

Vietnam has had great success over the past twenty years through a concerted programme of economic development, combined with social transformation. The study of Dạ Lê Chánh village in the central region reflects such improvements showing poverty alleviation, growth in financial and physical capital, and wide infrastructural development. An evaluation of four different livelihood trajectories (as opposed to strategies) pinpoints success to a multi-local diversification of employment profiles with the security of waged full-time work producing the best outcomes. As a peri-urban area, the proximity to Hue City offers many employment opportunities. However, a focus on mobility shows that social and family networks are utilised for extended movement throughout the country and beyond. Mobility is shown to be a vital feature in the formation and maintenance of livelihood trajectories, allowing community access to human, information, financial and trade networks. In its relationship to the city, and acting as a trade hub as an important local commercial centre, mobility has always taken place to some extent. However, under the growing interconnectedness of globalisation, local livelihoods are branching out further than ever to seek an improved standard of living although State policy keeps an ever-watchful check on life. Of the four highlighted livelihood trajectories, households only practicing agriculture show the least mobility, both a cause and result of a lack of economic development. For them, a dependency on farming leaves them susceptible to social, economic and environmental shocks.

The peri-urban status of Dạ Lê Chánh village works both as a benefit and a burden. The new urban housing planned for the commune brings a threat of wholesale land loss. This could devastate farming households and undermine the social fabric of the village. Families less dependent upon agriculture possess the means to ride out the severity of change although insufficient compensation will undoubtedly incur a decrease in livelihood levels. Indeed, the story is not quite as clear-cut as this. The looming issue of food security could yet play a part and protect the cultivation of rice in Dạ Lê Chánh. Furthermore, the impact of climate change could also affect future decisions on land use, as productivity is threatened by increased periods of drought and flooding. If the future is uncertain, one point is clear. The local community does not possess the autonomy to fully determine its own path and must jostle for position within a multiplicity of global and State-influenced structures and processes.

In light of these findings and discussions, certain policy suggestions may be put forward. Relating to land use change, greater transparency is needed in the process of land acquisition with a firmer implementation of existing corruption laws. Local impact studies could improve the inclusion of local voices in the process. The compensation system must also be overhauled to produce fair market prices for land acquisitions with staggered payments and closer consultation to assist with livelihood reconstruction for those most severely affected. For the urban planning process, greater transparency must also be improved. Environmental policies must be fully integrated into planning procedures, including an acknowledgement of climate change scenarios. Local knowledge will aid these factors in advising on the effects of infrastructural change and disaster risk management. Finally, government policies must assist the changing livelihood trajectories of traditional farming communities. For those most lacking the capabilities to adapt to the developmental processes of change, the maintenance of government welfare payments will remain vital. Meanwhile, for an increasingly mobile population, resorting to multi-local forms of employment and longer-distance migrations, the household registration system must be reformed to retain rights despite any displacement.

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