

Conference Paper

Family-Friendly Kampong (FFK) Modelling: Developing Urban Resilience in Disaster-Prone Area

Euis Sunarti¹, Aliya Faizah Fithriyah², and Milatul Ulfa¹

¹Department of Family and Consumer Sciences, Faculty of Human Ecology, Bogor Agricultural University, Bogor 16680, Indonesia

²Department of Landscape Architecture, Faculty of Agriculture, Bogor Agricultural University, Bogor 16680, Indonesia

Abstract

Family-friendly integrated and holistic development is the principal solution for many socio-cultural, economic, and ecological problems of marginal families lived in a disaster-prone area. This descriptive-qualitative study at Panaragan Village Bogor city, a hydrometeorology hazard area, has elaborated characteristics and vulnerability of family and community, areal typology, family and environment transaction, also social environment vulnerability and quality. Data were collected from interviews, focus group discussions (FGDs), and observation then analyzed with a gap, potential, and SWOT analysis. Results showed that Panaragan had shown features as FFK, characterized by high territorial-bound, well-maintained social capital and leadership (formal and informal) strengthened with organizational facilities, well perception about the family condition, also superior awareness of potential threat and vulnerability in family and community. With diverse topography, FFK model based in hamlet (RW) level. FFK development was done with positive-labeling, intrinsic spirit of community cohesiveness, a satisfaction of acceptance and recognition, social piety, volunteerism, and generosity. Derivative strategy of FFK model aimed to find competitive and comparative excellence of community productive activities, provide chances for elderly to be senior citizen, escalate community leaders and youth capacity, upgrade public figures and religious leaders' leadership, maintain inter-family communication and interaction, preserve community leaders' motivation, and disseminate social environment maintenance burden.

Keywords: ecology family, family-friendly kampong, family transaction, urban resilience

Corresponding Author:

Euis Sunarti

Received: 24 May 2019

Accepted: 25 July 2019

Published: 4 August 2019

Publishing services provided by
Knowledge E

© Euis Sunarti et al. This article is distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use and redistribution provided that the original author and source are credited.

Selection and Peer-review under the responsibility of the ISTECS 2019 Conference Committee.

1. Introduction

Family is the smallest unit and as community builders that affect and are affected by their environment [1]. Environment supported by well-planned facilities and utilization in regards to population growth will lead to family stability. One of the Indonesian family portraits is marginal families who live in densely populated areas and prone the

 OPEN ACCESS

risk of disasters. Disaster is a phenomenon that brings about damage and destruction upon the environment, which eventually takes lots of lives, causes loss of properties, destroys various facilities, structures, and infrastructures that have been built. A number of phenomena show that population density was indicated as one of the causes of flood and landslide. Densely populated residents generally have their houses very close to each other without thinking about their groundwater infiltration. Similarly, many people who live in the bank of the river and throw their garbage to the river will ruin the environment and hasten the river to silt.

The city of Bogor is one of the cities that buffers the capital, covering 11,850 Ha and is inhabited by 1,047,922 people so that its population density reaches 8,843 people/Km². There are at least 32 points susceptible to natural disasters (flood and landslide), spreading over six districts in Bogor. The increase of the total population in Bogor will inverse with the capacity and supporting the capacity of the region, resulting in several densely populated areas of Bogor city; one of which is Kelurahan Panaragan (village), Central Bogor district.

This study was carried out in Central Bogor district - the center of development in Bogor city - and *Kelurahan* (sub-district) Panaragan was selected as the focus of the study since the characteristics, and the diversity of both population and family in this area are perceived to reflect the characteristics and general problems of family development in an area which is densely populated and prone to disasters. Three rivers surround *Kelurahan* Panaragan; namely, Cipakancilan, Cidepit, and Cisadane rivers. Its region has cliff topography and steep, which largely affects the living environment. This region is inhabited by as many as 1,631 families (5,624 persons, comprising 2,806 males and 2,818 females), covers 27 Ha, which is divided into 7 RW, 34 RT, has a population density is 20,729.63/km, and has 33.05% low-income families. The density of the population in this *kelurahan* causes a number of environmental points which tend to be a slum, prone to flood and landslide.

The study on friendly family areas is referred to sociology and ecology family theories based on the concepts forwarded by [2 – 6]. In sociology, a family is viewed as the smallest social unit in a society. Linkages and inter-dependency among families, and between families and their environment are the basic concept of ecology family. Ecology family has grown since the 19th era in regards to social reforms, urbanization, industrialization, expansion of public education, and attention to health and welfare of families. The perspective of ecology family regained its attention in the 1960s in line with the rise of awareness that there are linkages and dependency between human behavior and their environmental conditions, and the development of interest to observe

family phenomena as a holistic unity (system) [2]. Basic moral values of ecology family were found in the idea of interdependency between human and nature, the needs of human to live side by side with other human beings within a specific social environment, and the desire to gain a better life. Such values are implemented in adaptability, the power to survive, and maintenance of balance (homeostatic condition) to realize a better experience [6, 7].

This study aims to formulate a model to develop family-friendly areas in densely populated urban areas, through analysis on family perception on both internal and external environmental conditions, neighbor interaction factors, and analysis on strength, weakness, threat and opportunity strategies in developing a family friendly village model. The result of this study is the availability of document on a family friendly village model that can be utilized as a reference or basis of its implementation.

2. Method

As a descriptive qualitative study, data were conducted in a cross-sectional way or one-time unit; that is June to September 2017. The selected study area is Kelurahan Panaragan (Panaragan village), Bogor city, as the representative of an urban area which is densely populated and prone to disasters. Data indicated that variables of influence showing the past were reflected by present conditions which represent not only output but also a description of the past. The stages of the study are: 1) developing framework of thinking by referring to a theoretical framework, 2) developing study instrument based on thinking framework, 3) gathering data and document, 4) analyzing data, situation, and perception, and, 5) formulating a model of a friendly family area.

Variables of the study cover perception of internal and external family problems, a transaction of a family with the environment, social aspects, economy, characteristics of the region and environment. The data collected are primary and secondary ones. The secondary data were obtained from various documents: Bogor in figures and the profile of Kelurahan Panaragan. Primary data, on the other hand, were gathered through a survey upon 35 cadres, public figure and village administrators; interview with key informants; and observation. Instruments of the study were developed according to the data and information required to answer the aim of the study. The characteristics of a friendly family region were also gathered through quote tests and interviews. Data were then processed in a descriptive qualitative way referring to the study framework. Expert judgment was used in this analysis, and recommendation on activity priorities for its implementation was provided..

3. Results and Discussions

3.1. Family perception

Family perception on present internal and external conditions as well as insight regarding the roles of government in developing family was presented in Table 1 until Table 3.

TABLE 1: Distribution of respondents (%) concerning their agreement on family internal situation assessment.

No	Assessment on Present Family Situations	Agree
1	Function of religion, and moral and character education in the family is decreasing	46
2	Interaction and family togetherness at the moment is decreasing	31
3	Parental concerns and anxieties about future life are increasing	14
4	Parents' anxiety related to their child's relationship is increasing	11
5	A couple's chance to be interrupted by a third person (another man, or another woman) in their marriage is increasing	37
6	Factors that make divorce easily occur are increasing	40
7	Limitation or difficulty of a family to participate in social environment is increasing	60
8	Social support from extended family, neighbours and environment surrounded the family is decreasing	46
Average (%)		35.63

Table 1 shows that the majority of respondents agreed that at the moment parents' anxiety towards children's friendship, and parents' worries and anxieties upon children's future are rising. Then, four out of ten respondents agreed that nowadays, it is more limited and difficult for a family to take an active part in the society, indicating that more significant percentage (60%) still consider that family should not find difficulties in involving themselves in social activities.

The result of the survey also reveals the enormity of internal family problems, in which 40% to 90% of respondents agree that internal family problems are potential to turn into thread and risk for family resilience. Inconsistent results regarding the perception of family problems initiated by or related to external factors are presented in Table 2. More than two-thirds of respondents agree that there were many kinds of external problems disturbing family function, complicating welfare achievement, bringing in pressures, imbalance, and uncertainty, threatening family resilience, even leading to the increase of social and sexual deviance. Economic instability was closely related to financial pressures which eventually affected family welfare [8, 9]. Such results deserve attention and follow up in order to be prevented and anticipated so that it will not bring about the undesirable condition; namely, delicate family. The development of family resilience is crucial because family is the first and foremost institution to build qualified human [10].

Referring to Bronfenbrenner concept [3, 4] family is disposed of as a microsystem and a part of meso, hexo and macro systems. The policy is a part of a macro system that influences the family system. Therefore, Zeitlin et al. [11] elaborate the importance of improving family resilience, particularly, its implication for policy makers.

TABLE 2: Distribution of respondents (%) according to the agreement on family external situation assessment.

No	Assessment on current Situasi Family Situation	Agree
1	The increase of problems that disturb family functioning	28
2	The shift of values and culture that threatens family resilience	28
3	Difficulties of family to improve their welfare due to economic instability	17
4	Uncertainty which brings pressures in family life	14
5	Bigger time spent by family to earn a living; less time for other family functions	31
6	The increase of social and sexual deviancy in family life	34
Average (%)		25.33

Based on the perception of internal and external problems influencing family, respondents stated the importance of family resilience improvement as presented in Table 3. All respondents agree that family and society have to participate in a developing environment, building a mechanism to help and protect each other, and support a family to improve the safe and comfortable environment.

TABLE 3: Distribution of respondents (%) according to their agreement towards the importance of improving family resilience development.

No	Family evaluation:	Disagree
1	Efforts to improve family resilience is becoming important	91
2	Government is responsible in building family resilience and protection	92
3	Government has not been optimally building family resilience so far	97
4	Family and society have to take part actively in developing their environment	100
5	Family need to develop mechanism to help and protect each other	100
6	Government needs to encourage family dan society to develop safe and comfortable environment and make all the families feel at home	100
Average (%)		96.67

3.2. Evaluation on physical environment

This study found that on several spots, there were locations which are a slum, crowded, and prone to flood dan landslide disasters. Population density is closely associated with a potential for behavioral disorders [12] causing tremendous pressure on carrying capacity of nature and holding a capacity of the environment. Environmental pollution in suburban neighborhood can disturb conditions of society and environment, leading to an increase in disaster risks. Internal vulnerability factors like poverty, low income and

low social capital in low social class are predicted to rise disaster risks [13]. The lower middle class generally lives in disaster-prone areas with low-quality housing materials that are more prone to winds, floods and earthquake shocks [14, 15] stated that the more poor people live in an urban settlement, the more susceptible the environment.

The physical environment is essential in the development of family friendly areas. Evaluation of physical environmental conditions (Table 4) was used as an indication of an environment categorized as friendly families in the survey. Results show that more than 70% of respondents judged positively five items on the physical environment in their area, that is, cleanliness, tidiness, beauty, safety, and convenience. These show relatively good assets in reaching physical environment realizing family-friendly areas.

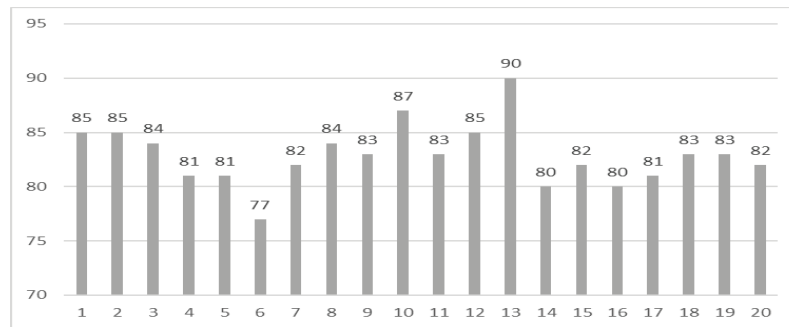
TABLE 4: Scores (%) of Respondent Evaluation according to Residential Environmental Indicators.

No	Residential Environmental Indicators	Average
1	Cleanliness of residential and surrounding environments	79
2	Tidiness of residential and surrounding environments	73
3	Beauty of residential and surrounding environments	71
4	Safety of residential and surrounding environments	79
5	Convenience to live in Kelurahan Panaragan	89

3.3. Family behaviour in developing society's character

Family behavior in developing society's characters was gained through the perception of 20 points of family behavior in regards to friendliness, caring, obedience, and many others. Results of assessment are presented in Hasil Evaluation presented in Figure 1 which reveals that the highest score (more than 85%) was given to family behavior in providing support to programs in society (no 13), trust from citizens (no 10), family activity in social activities (no 12), friendliness (no 1) and closeness among citizens (no2). Meanwhile, the lowest score was given to family awareness towards the safety of the environment (no 6), although the score was still high (score 77). Research conducted by [16] on elderly people found that creating and maintaining a family-friendly environment can be performed by strengthening a social relationship, participation, and integrity.

The interesting result from this study concerning the interaction pattern among the family which shows that differences between families living on relatively flat areas and families living on a slope topography -. Similarly, the topography of place of living was connected with characteristics of the family's social economy which was also indicated by characteristics of settlement (Figure 2). In several parts of the region, slope areas show more slum, fragile, poor sanitation and higher density than others. Regional



Keterangan :

- | | | | |
|----|--|----|--|
| 1 | Friendliness | 11 | Trust of society towards Government |
| 2 | Closeness among citizens | 12 | Activity in social activities / society |
| 3 | Harmony among neighbours | 13 | Support for programs in society |
| 4 | Mutual cooperation | 14 | Appreciation for differences |
| 5 | Concerns for neighbors | 15 | Bonds for living in one area |
| 6 | Concerns for environment safety | 16 | Obedience towards values and religion teaching |
| 7 | Concerns for cleanliness and health of environment | 17 | Compliance towards regulatins in society |
| 8 | Concerns for the beauty of the environment | 18 | Compliance towards leaders |
| 9 | Pleasure for helping and sharing | 19 | Willingness to involve in social activities |
| 10 | Trust among the citizens | 20 | Willingness to donate money or material |

Figure 1: Score Average (%) of Respondent Evaluation on Family Behavior in building Society’s Characters in Kelurahan Panaragan.

characteristics influence interaction and communication patterns among households. For houses located adjacent to each other but belong to different topography, their house face layout can be vastly separated, leaving a distance that makes them difficult to have an interaction. Mapping of area topography characteristic and dwelling location becomes the basis for determining possible interaction mechanism in the development of family friendly areas.

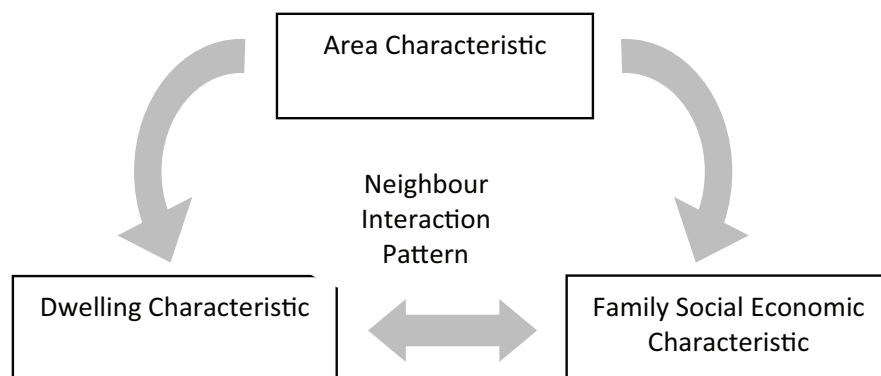


Figure 2: Neighbour Interaction Pattern Factors.

Interaction pattern among families develop neighbour system that can be viewed from the rooms and center of the crowd. The meeting points as a means of communication and interaction of many family members often take place at social and public facilities, such as, sports field, citizen posts, and courtyards which directly connected to the road, and therefore, it becomes a relatively vast flat area. Religion facilities are rarely used in this case.

The area characteristic of Panaragan is extremely crowded that it is impossible for citizens to build new building. Accordingly, development can only be carried out vertically by adding storeys. The results of observation on the topography of Kelurahan Panaragan is presented in Table 5. Some parts of Kelurahan Panaragan have cliff/steep characteristic; namely, RW 01 and RW 02. Some others are areas near the river. Such settlement condition has an effect on green open space (RTH), that is to the part of urban spatial arrangement that serves as a protected area.

TABLE 5: Characteristics of Kelurahan Panaragan Area Topography.

RW	Cliff/ Steep area (RT)	Flat (RT)
1	RT 01 (ada getek), RT 02, RT 04, RT 05	RT 01, RT 02, RT 03, RT 04, RT 05, RT 06
2	RT 1, RT 02, RT 03, RT 04	RT 1, RT 2
3	RT 04 (Cidepit riverbank)	RT 01, RT 02, RT 03, RT 05, RT 06, RT 07
4	RT 02, RT 04 (only some of which are Cisadane riverbank)	RT 01, RT 02, RT 03, RT 04
5	RT 02, RT 04, RT 05, RT 05, RT 06, RT 07 (only some of which are Cisadane riverbank)	RT 01 (kelurahan and field of panaragan baru), RT 02, RT 03 (rotated field puteran, RT 04, RT 05, RT 06, RT 07
6	RT 02, RT 03	RT 01
7	RT 01, RT 02, RT 03 (only some of which are Cisadane riverbank)	RT 01, RT 02, RT 03

According to Edward Ullman [17], three factors affect inter-area interaction; that is, firstly, regional complementary, which occurs in different areas with different limitation of resources. In other words, it occurs between areas with a surplus of resources and those which have inadequate resources. Secondly, there is an opportunity to have intervention (intervening opportunity), where there are factors inhibiting interaction among regions so that one region requires another region to fulfill its needs. Thirdly, there is ease of transfer or movement in the space (spatial transferability), in which there is ease for transfer in space, whether they are humans, ideas, or information. This is influenced by absolute and relative distances, the cost for transport or inter-regional transportation, and the ease or smoothness of transportation.

3.4. Model of family friendly area development

In general, the model of family-friendly area development is presented in Figure 3. Lots of data regarding the area, population and family demography, perception on risks, and social- institutional aspects were analyzed through gap analysis on characteristics of family-friendly areas, agent and mechanism potential analysis, as well as SWOT analysis, to obtain a recommendation for action to build a family-friendly environment.

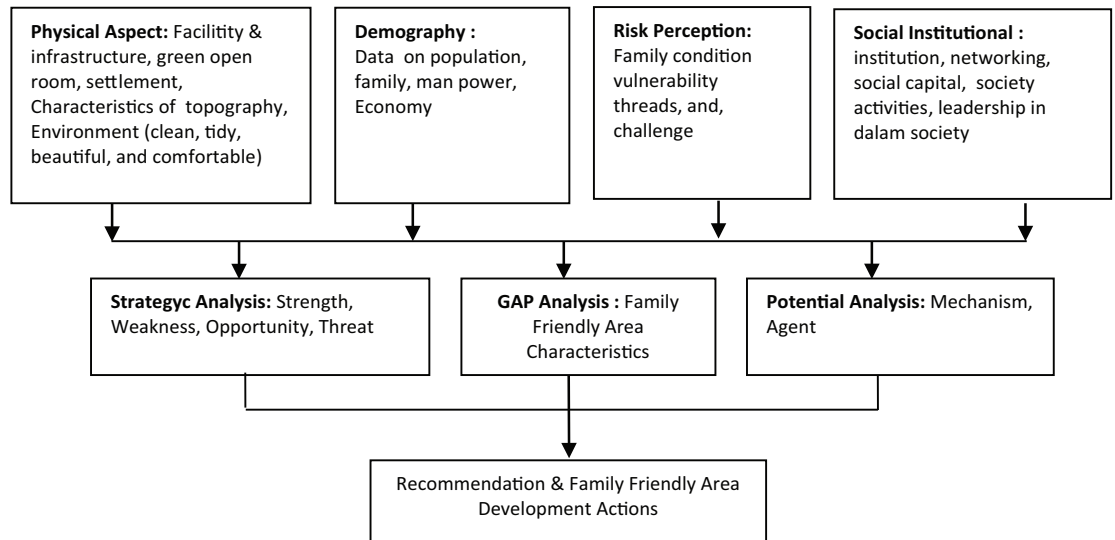


Figure 3: General Model of family friendly area model development.

3.5. Development of family friendly area

Mechanism of family-friendly area development was carried out by analyzing SWOT (strength, weakness, opportunity, and threat), as presented in Table 6. The choice of possible mechanism or strategy is supported by a number of conditions, some of which are: 1) positive labels, reward and stimulant from either officials or program manager (who has higher position) to citizens in order to support and encourage all the citizens and families to take active participation in development programs; 2) intrinsic motivation from a group of citizens (generally those owning higher social status) to take care of communality called “familiarity”; 3) satisfaction upon acceptance and recognition in the society and regional government; 4) a group of citizen representatives that show social piety or volunteerism or generosity; and 5) provision of operational cost for officials who have assisted in strengthening the commitment, for this is viewed as the government’s attention and concern upon the hard work done.

Content analysis resulting in derivative of family friendly area development strategy is to answer or find a way out from the following “how” questions: 1) find out competitive excellence and productive activity comparatives according to administration area or proximity of the other regions; 2) provide role room and optimize the role of elderly people as senior citizen to select suitable social activities; 3) improve and build capacity of the youth – not only those incorporated into existing youth organizations but also the ones fitting in informal youth groups, and even those who do not belong to any group; 4) keep improving work orientation and measureable achievement with adequate facilitation; 5) enhance the informal leadership of community leaders and religious

leaders and optimize their roles and functions in fostering family and society; 6) provide and give stimuli to implement the action of caring for interaction and communication among families; 7) care for the motivation of society initiator, increase its capacity, and give space to grow and develop with society; 8) spread the burden of social environment care, so that no one is overburdened.

TABLE 6: SWOT Analysis.

Internal Factors External Factors	Strengths (S) / Strength	Weaknesses (W)/ Weakness
	<p>S1: concern is relatively high S2: obedience to leaders is still high S3: dependency on ratio is low S4: orientation of religious values and norms is good S5: access to double income patterns S6: kinship ties</p>	<p>W1: education and skills are low W2: permissiveness starts to grow W3: added value service activities are low W4: facilities and interaction space are inadequate W5: material and financial contribution capabilities are limited W6: enforcement of rules and laws to troubled citizens is low</p>
<p>Opportunities (O) O1: access to advanced information O2: access to program facilitation O3: Government support O4: business opportunity O5: collaboration partnership</p>	<p>SO Strategy: SO₁ optimizing religious value orientation, concern, and obedience to leaders to access for program facilities and Government support SO₂ maintaining low burden of dependents to develop collaborative partnership and business opportunities</p>	<p>WO Strategy: WO₁ having access to program facilities and Government support and conducting collaborative partnership to empower productive economy to gain business opportunity WO₂ having collaboration with family development stakeholder and empowering community to prevent culture of permissiveness and enforcement of rule and law of public order WO₃ increasing interaction space and information access as well as business opportunity to improve family economy in order to increase contribution to community activities</p>
<p>Threats (T) - disturbance and crowd - the return of "defeated" overseas citizens - unscrupulous behaviour - limited employment opportunities - ignorant culture - high density, crowded</p>	<p>ST Strategy: 1. maintaining kinship ties and concerns to dampen the "crowded" situation or negative impacts and provide support for returnees 2. optimizing religious value orientation and awareness to prevent deviant behaviour and ignorant culture,</p>	<p>WT Strategy: Wt1: Enforcing law for citizens of sexual deviance behaviour and at the same time establishing protection and prevention Wt2: Providing job skills training and job access assistance to those needed Wt3: Providing space facilitation and encouraging interaction among citizens so as to build social cohesion Wt4: Giving management assistance to space with high density and causes "crowded"</p>

The findings of specific mechanism that can be used and implemented to develop conducive atmosphere or environment for families in *Kelurahan* Panaragan in fulfilling its functions and tasks are encouraging, supporting, and facilitating potential agents or

subjects implementing family development. This is to optimize the existing mechanism in order to improve both physical and nonphysical aspects of family friendly area indication. This is visualized in Figure 4.

The main social activities are at RT and RW levels, where society form a number of small groups based on the same purpose. Some activities that might become an interaction event of a family with their neighbors are: RW/RT get together (*arisan*, *poskamling* - guarding the security of a certain area); gathering of *kader* (*posyandu* – integrated service post); working together (clean Friday, clean Sunday); dues of death and spontaneous dues (for certain activities); commemorating religious festivals; doing exercises together; religious study groups (*Majlis Ta’lim* for women, Mosque board for male, children and teenagers groups in a mosque); and youth activities. The implementation of such activities (whether routine or incidental) varies in each RW/RT, depending on their agreement. Working together or helping each other is a culture of voluntary among the citizens. The diversity of socio-economy and characteristics of family and society affect the support and participation of society on every decision to be taken in discussion or activities carried out in each RW/RT. Social support needs are related to socioeconomic diversity of families, as Sunarti’s study on the portrait of Indonesian family resilience according to livelihood patterns [18] and agroecology zone diversity in which families live [19].

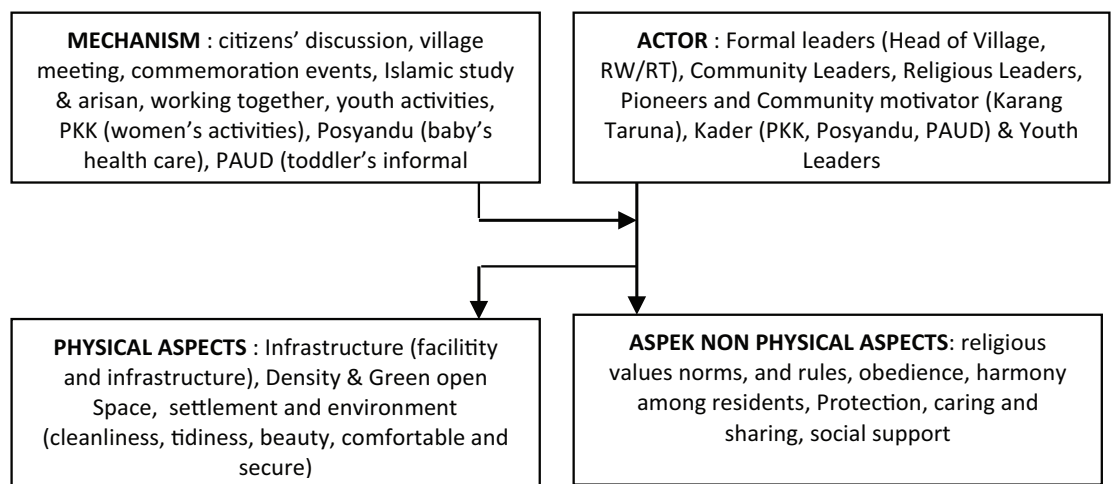


Figure 4: Actor and mechanism in developing family friendly area.

4. Conclusion and Recommendation

Kelurahan Panaragan area has shown a family friendly area. This is indicated by a reasonably high territorial bond, social capital, and leadership (both formal and informal)

which are still well-maintained, and strengthened by governance structure up to the RT level, good perception about the family condition, high awareness towards threat potential and vulnerability in family and society. Results of the study reveal that the basic and potency of family-friendly area development in Kelurahan Panaragan is at RW level. Government has to provide support and facilitate both initiators and actors of community social development at RW level to take care of social capital so that it can function as a vulnerability barrier and social threat prevention. The idea of society to build their environment and the capacity to realize it, however, is hindered by a number of problems, including fund and skills. Therefore, support from the government and other parties is severely required, without necessarily destroying the independence of society which has been formed. Furthermore, society still needs to increase its capacity in line with various vulnerability and threats in life.

Limitation and future agenda. The development of the family-friendly area is viewed as a demand but also threat nowadays due to the complexity of problems resulting from an imbalance of various dimensions and aspects of life at both individual and family levels, which are related and affected one another with the quality of its environment in a bigger context. Based on these, the study of this family-friendly area development model has strategic values and position. Nevertheless, this study is felt to have a limitation in data and information exploration due to the limitation of implementation time. It is, therefore, very essential to be refined. Several agenda and the threat of another family friendly area development are related, for its sustainability, with the quality of family and society life in one area, development of generic indicator for family-friendly areas, development of perpetrator capacity, and empowerment minimal facilities conducted by the government.

References

- [1] Sunarti, E. (2015). *Ketahanan Keluarga Indonesia: Dari Kebijakan dan Penelitian Menuju Tindakan: Orasi Ilmiah Guru Besar IPB. Bogor (ID). IPB.*
- [2] Bubolz, M. M., & Sontag, M. S. (2009). Human ecology theory. In *Sourcebook of family theories and methods* (pp. 419-450). Springer, Boston, MA.
- [3] Melson, L. G. (1980). *Family and environment: An ecosystem perspective*. Burgess Pub. Co..
- [4] Berns, R. M. (1997). Ecology of the Peer Group. *Child, family, school, Community socialization and support. Ed 4th. Harcourt Brace. Florida, 332-346.*

- [5] Klein, D. M., & White, J. M. (1996). *Family theories: An introduction* (pp. 149-177). Thousand Oaks, CA: Sage Publications.
- [6] Sunarti, E. (2006). Indikator keluarga sejahtera: Sejarah pengembangan, evaluasi, dan keberlanjutannya. *Bogor: Institut Pertanian Bogor*.
- [7] Sunarti, E. (2009). Pengembangan Model Ecovillage: Pembangunan Kawasan Perdesaan Serta Sumbangan Pertanian Bagi Peningkatan Kualitas Hidup penduduk Perdesaan. *Naskah Akademis LPPM - FEMA IPB*.
- [8] Sunarti E, Tati, Atat, Raffela RN, Lembayung D.P. (2005). Pengaruh Tekanan Ekonomi Keluarga, Dukungan Sosial, Kualitas Perkawinan, Pengasuhan dan Kecerdasan Emosi Anak Terhadap Prestasi Belajar Anak. *Jurn. Media Gizi dan Keluarga*. 29 (1), 34-40.
- [9] Sunarti, E. (2018). Work Stability, Economic Pressure and Family Welfare in Indonesia, *The Social Sciences*, 13: 1186-1193.
- [10] Sunarti, E. (2001). Studi ketahanan keluarga dan ukurannya: telaah kasus pengaruhnya terhadap kualitas kehamilan (Disertasi). *Institut Pertanian Bogor, Bogor, Indonesia*.
- [11] Zeitlin, M. F., Megawangi, R., Kramer, E. M., Colletta, N. D., Babatunde, E. D., & Garman, D. (1995). Strengthening the family: Implications for international development. Tokyo, Japan: United Nations University Press.
- [12] Evans, G. W., Lercher, P., & Kofler, W. W. (2002). Crowding and children's mental health: the role of house type. *Journal of environmental psychology*, 22(3), 221-231.
- [13] Brouwer, R., Akter, S., Brander, L., & Haque, E. (2007). Socioeconomic vulnerability and adaptation to environmental risk: a case study of climate change and flooding in Bangladesh. *Risk Analysis: An International Journal*, 27(2), 313-326.
- [14] Fothergill, A., & Peek, L. A. (2004). Poverty and disasters in the United States: A review of recent sociological findings. *Natural hazards*, 32(1), 89-110.
- [15] Alcayna-Stevens, T. (2015). Slum socio-ecology: an exploratory characterisation of vulnerability to climate-change related disasters in the urban context.
- [16] Emler, C. A., & Mocerri, J. T. (2012). The importance of social connectedness in building age-friendly communities. *Journal of aging research*, 2012.
- [17] Ullman, E. L. (1956). The role of transportation and the bases for interaction. *In Man's role in changing the face of the earth*, 862-880
- [18] Sunarti, E. (2013a). Potret Ketahanan Keluarga Indonesia di Wilayah Tertinggal, Terpencil, Perbatasan, Kumuh, dan Rawan Bencana. *IPB Press*. Bogor.
- [19] Sunarti, E. (2013b) Potret Ketahanan Keluarga Indonesia. Perpektif Keragaman Pola Nafkah Keluarga. *Widyalyika Utama*. Jakarta