

# People Response to Localize the Imported Culture

Study Case: the Dome House in the Rural Culture Post Javanese Earthquake 2006

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## ABSTRACT :

Recently International Solidarity becomes a vital component in responding promptly efforts and requests for supports to exchange international knowledge and technology that would help disaster relief both at emergency response and reconstruction phase. The Post Java Earthquake has proved as one of evidences since its event in May 26, 2006 by involvement of many international organizations to help hundreds of thousands of earthquake's victims—who left homeless—survive the crisis and rebuild their lives.

This massive international organization, by nature, introduces “their owned culture and mission.” One of them is Domes for the World Foundation (DFTW) who has a mission to improve the lives of people worldwide through the introduction and construction of Monolithic Domes. The Dome as “a new imported culture” in Java and as first housing shape in Indonesia is promoted to be one of nature's strongest buildings. It is resistance to fire, tornadoes, earthquakes, and it is inexpensive. The DFTW built a Model Village, so called a *new Ngelepen* in Yogyakarta, Indonesia. This model village is developed in accordance to a government relocated village plan from its original *Ngelepen*. The old *Ngelepen* was suffered from the landslide—moved and ruined almost 50 houses—resulted by the Java's Earthquake 2006.

The new dome culture has been lived and soon attracted many people since April 2007. Some visitors excited and labeled by such an *iglo*-like house, or even called as a “Teletubbies house”—a popular children's television program. Some were not happy with the shape which is strange comparing the surrounding existing house. However, this paper is not to judge whether the dome was suitable for Javanese Culture or not. The paper aims mainly to understand how families who live in the new *Ngelepen* response the Dome Culture and adapt to their owned family needs. The paper aims to mainly understand how families who live in the new *Ngelepen* response the Dome Culture and adapt to their owned family needs. The paper focuses on what things family benefit from the dome house, and what efforts people intent to improve in fitting the dome with family need. Several questions, observation, and family sketches of the future dome suitable for them have been done. It is participated by about 72 families who live there as respondents and became source of learning how Javanese people localized the imported culture.

**KEYWORDS:** Dome House, Imported Culture, Adaptive Response, Community Perception, Java Earthquake 2006

## 1. LAND SLIDE IN THE JAVA EARTHQUAKE AND THE NEED FOR RELOCATION

During the Java's earthquake 2006, homes in Ngelepen--nearby a Hindu Famous *Prambanan* Temple to the east of Yogyakarta, were not only shocked by the quake, but about 50 houses were, in effect, swallowed thirty meters whole by a catastrophic landslide. (See Fig. 1.) It was ruined houses but no one was killed. The Ngelepen village then was declared as an *unbuildable land* by geological recommendation. Consequently, families lived in the village had to be relocated.



Figure 1 Ngelepen Land Slide During Java's Earthquake 2006

According to Bayulke (1983; in Dikmen, 2006) relocation happens during the following situations:

- When the old location is subject to a natural hazard,
- When the old location is completely destroyed and to move the debris and to make new plotting in the old settlement is inconvenient for rapid recovery and housing purposes,
- When there is a chance to relocate the settlement to land which belongs to the Government since it is generally preferred not to have to pay for the land.

The Ngelepen relocation was a right decision because fulfilled the required situation that the area was subject to a natural hazard and the government was ready to provide the land for resettlement. Housing improvement and human settlement relocation from prone areas is a part of risk reduction.

## 2. THE INTERNATIONAL SOLIDARITY THROUGH INTRODUCING AN IMPORTED CULTURE

Recently International Solidarity becomes a vital component in responding promptly efforts and requests for supports to exchange international knowledge and technology that would help disaster relief both at emergency response and reconstruction phase. This massive international organization, by nature, introduces "their owned culture and mission." However, such international support should be based on common principles: effective and quick in action, flexible in implementation, and contextual with the local condition and potentiality. With these flexibility and "*contextuality*" principles, any of imported culture accompanied with the humanitarian aid can be anticipated locally and even become a global culture—the culture results from fusion of ideas. (McMullan, 2003)

The Post Java Earthquake has proved as one of evidences of this international tendency since its event in May 26, 2006 by involvement of many international organizations to help hundreds of thousands of earthquake's victims—who left homeless—survive the crisis and rebuild their lives. The various imported ideas, approaches, methods, technology, and even culture were unavoidable to be a part of the post disaster aid program as a result of emerging international solidarity. Learning to the way how the imported culture going to be localized within local identity becomes something worthy for adjusting both of them in an ideal way. (Ikaputra and Titisari, 2005) Looking at the process of introducing, adopting and assimilating the foreign culture into the existing community, will enrich the impact of the globalization in positive way, as Breidenbach and Zukrigl (1999)

stated: Globalization leads to a new cultural diversity. The case of Dome's Housing in the Rural Culture Post Javanese Earthquake 2006 could be one of the examples.

The Domes for the World (DFTW), nonprofit organization from US, introduced a structure in a form of a Monolithic Dome. The Monolithic Dome takes the benefit of concrete cast as a single and integral structure which has strength stronger by its solid and unbroken structure. The Dome is promoted as a permanent structure which has a real strength, disaster resistance, energy efficient, cost effective, and attractive. (MDI, 2000: 3) Furthermore the so-called *EcoShell* (Economical thin-Shell concrete structure) has also the monolithic structure idea, which is resistance to fire, tornadoes, earthquakes, but inexpensive.

The first connectivity to link the DFTW to the battle of people Post Disaster in Java is Gadjah Mada University, one of importance hubs, which organized community support in affected area.<sup>1</sup> The DFTW supported the earthquake resistance house using the Monolithic Dome in the form of *EcoShell*, and asked the government or Indonesian partner to share or provide the land for the housing complex. The proposal for *EcoShell* housing complex (see Fig. 2.) illustrated the new idea which was completely unfamiliar to many of Javanese or Indonesian. This imported dome shape was attracted people because of its uniqueness but there has a doubt to tolerate the dome as our owned culture. Moreover, the Yogyakarta local government policy was set aside “an Aceh-like” reconstruction which was based on providing “a new housing complex” for the people. The policy directed to reconstruct house post earthquake on each single lot of the family own land. In the same time, the Java earthquake 2006 made thousands refugees left homeless and waiting for supports.

There should be an effort to match the DFTW intention and people needs as well as government policy to anticipate gaps between donors and beneficiaries. Furthermore, we came into the more specific issues: how to bridge the gap between the earthquake resistance *dome* home—which is required by any earthquake prone area—and the imported culture with challenge for people resistance; the gap between developing the exclusive housing complex and empowering community to rebuild hands in hands piece by piece of the land of the collapsed house. The issues became the potential starting point to develop further the proposal with contextual solutions: the match between DFTW solidarity and local wisdom.



Figure 2. First Dome Housing Proposal

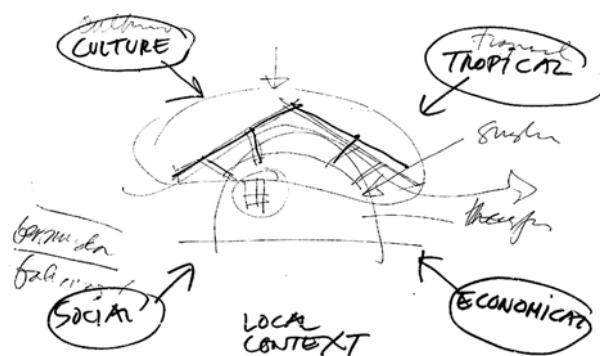


Figure 3. Issues of Dome's Home Implemented<sup>2</sup>

### 3. QUESTIONS FOR “*DOMES*’ CONTEXTUALITY”: AN INITIAL PROCESS

The rationale to bring domes to the earthquake prone area in Java was driven by the fact that the domes are believed to be superior to conventional construction in a way to protect the inhabitant to fire, tornadoes, and

<sup>1</sup> Gadjah Mada University is one of the biggest university in Indonesia and located in Yogyakarta which suffered the Java's Earthquake 2006. The multidisciplinary faculties in the university play its supports significantly to many post disaster related activities

<sup>2</sup> The schematic sketch of possible issues faced by dome implementation was drawn in the very initial discussion between the DFTW team and Gadjah Mada University

earthquakes. To cope with poor seismic resistance of very weak construction—which became first priority in the house reconstruction post Java’s earthquake—was also strengthened the reason to seek alternative construction such dome. The matter that left in the initial discussion towards possible implementation of domes was questioning about “culture of living” which was broken down into four issues. How could the dome anticipate the tropical climate, fit to socio-culture of the people in rural area, as well as become economically affordable house? (See Fig. 3 above) The question was raised to convince us that the dome—as an imported culture—could be contextually fit to the local community.

Advantages of a Monolithic EcoShells beyond the structural argument raised up in the initial discussion are as follows:

The *tropical aspect* of dome was the most crucial question to confirm the *contextuality* of the structure in creating living comfort in Java’s climate. Looking at dome shape provoked people’s perception to a familiar igloo house which by climate is located in the coldest place in the world. This skepticism needed an adequate explanation and argument. The DFTW explained in more technical term that the *capillarity* of thin shell of the monolithic dome makes the soil water moving vertically against gravity through materials along the curve line. Theoretically, the condition causes the inside dome cooler than outside one. In addition, the DFTW has also experienced to build the dome in tropical countries like Hawaii.

The *economic* aspect of dome could be mentioned from the concept of the Monolithic EcoShells itself. It saves economy in construction and in maintenance post construction. The EcoShell is the epitome of a thin shell concrete structure which can be built with few materials. Yet EcoShells have the advantage of being much stronger and longer lasting keeping maintenance to a minimum and inexpensive cost less than that of a conventional building.<sup>3</sup> In the case of proposed Monolithic EcoShell for Yogyakarta, with 7 meters in diameter which is equivalent to 35 m<sup>2</sup>, had a cost about 800 US\$ for the materials excluding cost of the labor and supported tools.<sup>4</sup>

The *socio culture* aspect of the dome created debatable discourse: whether we rejected this imported culture or welcomed it? In many ways, the imported culture would be an effect of the globalization. The effect of globalization today has to be thought carefully, considerably for the developing country. That is because so much imported culture would inevitably influence the local identity. (Ikaputra and Titisari, 2005) But if there are people fighting against domes probably because they look different and are “not available” in traditional designs. As Rick Crandall argued (Parker, 2001: 14-17) that the obvious reasons why people build the monolithic domes are the culture of living towards security, disaster resistance, low maintenance, and durability of the house. It is a challenge that a culture whether locally owned or new imported will survive by adaptation within the continued change environment. The future challenge of the *dome’s home* is rely on how community adapting it into community owned culture.

#### 4. LOCATING DOME’S HOUSING IN THE CONTEXTUAL PLACE

The DFTW intention to build a new house complex should be fit into a right place, avoiding a people jealousy

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<sup>3</sup> See also the information on the Monolithic EcoShell at the <http://www.dftw.org>

<sup>4</sup> Architect Rick Crandall from the DFTW mentioned the estimate budget for a Monolithic EcoShell dome proposed for Yogyakarta Post Earthquake Housing to illustrate “how cost-effective the budget of structure was” to Gadjah Mada University team in the initial discussion.

<sup>5</sup> The process of understanding whether Java’s earthquake in 2006 resulted an *unbuildable land*, and fit to the DFTW proposal, was through a multi-disciplinary discussion within Gadjah Mada University, among Geological, Civil Engineering, and Architecture departments.

<sup>6</sup> The interview was conducted intensively in August-September 2007 covering 64 respondents of 71 inhabitants. It was done by graduate students of Urban Design Gadjah Mada University.

<sup>7</sup> The original question in Indonesian is “*Apa yang ingin anda tambahkan pertama kali pada rumah anda jika anda memiliki kesempatan dan uang?*”.



towards fair distribution from any aid/support/donors. It was difficult but an Aceh-like *unbuildable land* was found in Yogyakarta. The Ngelepen village was subject to a natural hazard by geological consideration, so that the village, by definition, was declared as an *unbuildable land*. The Relocation became an avoidable plan. In the same time, the local Government, *Kabupaten Sleman (Sleman's District/Regency)* had provided a land for relocating the Ngelepen's settlement. This *Sleman's* relocation plan in Ngelepen was a right program to accommodate the DFTW. The Ngelepen relocation plan became a most recommended place for developing a new house complex for survivors of land slide proposed by DFTW.<sup>5</sup> It fit to the proposed plan both of donor and government, as well as the need housing for Ngelepen people after landslide. The Ngelepen case by nature had a different situation with other reconstruction areas in Yogyakarta and Middle Java. It was believed that placing the Dome's home complex in Ngelepen is a right decision. After taking a procedural mechanism such as approaching community through conducting a need assessment directly to the community in Ngelepen village, and requesting for a necessary local government support—the *Sleman's* Government, and asking the government permission, some discussion to fit and make suitable plan for community were done especially in three main aspects:

#### 4.1. The Cultural Based Dome's House plan

The first proposed dome's house plan was very western, in sense of living room and kitchen can be unified into one room. The idea of the *Guest Room* in recent house in Indonesia is to entertain guest, so it needed to be located in front part of the house and functioned as a *buffer* to the more private rooms as well (Ikaputra, et.al., 1992). On the contrary, the *Kitchen* is considered as “a dirty look place”, so it is never put in the more public part of the house. It is usually set in the back part of the house. This issue made the Gadjah Mada University team to recommend a more culturally embedded configuration within the given dome size of the DFTW's proposed house plan. (See Fig. 4) The recommendation located the Guest room and Kitchen separately to respectively front and back area of the dome plan. In between of those two rooms there are two bedrooms flanked a small space connected to the four rooms. The recommended plan has two entries: the main entrance for Guestroom and the side entrance has accessibility to the public facilities called *MCK (Mandi, Cuci, Kakus=Bathing, Washing, and Lavatory)*.

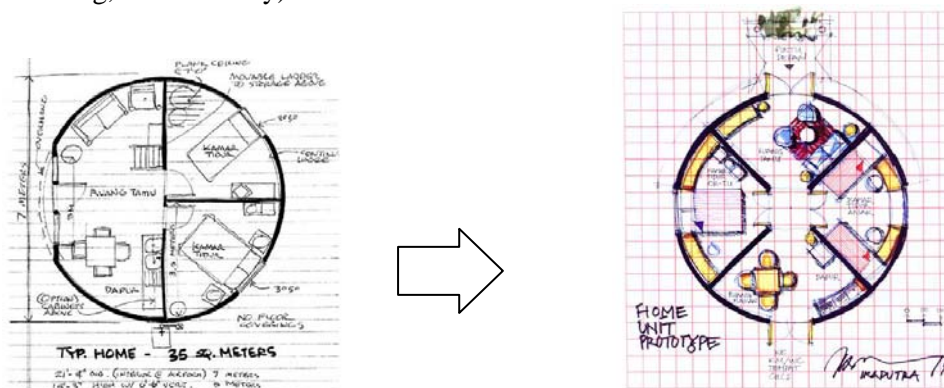


Figure 4. Developing the Cultural based House's Plan

#### 4.2. The MCK's based Site plan

The Process of Designing the site plan was brought into a final stage as a result of the design collaboration between the local government, the DFTW and Gadjah Mada university—an alliance post disaster that join in mutually supportive association with a common purpose: for the better live of the Ngelepen survivors. The collaboration resulted a design concept of the housing pattern based on the *MCK (Mandi, Cuci, Kakus)*, the common facilities for public bathing, washing, and lavatory. It was a suggestion of the *bupati*—a regent of the local government—that making the *MCK* as a common facility for a group of family was not merely for the sake of efficiency, but more on the custom of the rural community who either have a family bathroom and WC separated with the main house or do sharing with other families especially a well for clothes washing and bathing. The *MCK* became a central point of a cluster of 6-12 houses. This condition also matched with the DFTW purpose to develop a housing complex with better sanitation. Although the position of *MCK* was in the central cluster but this public facility was set in the service area or considered culturally as “the back yard of

houses”. (See Fig. 5)



Figure 5. The MCK's based Site Plan



Figure 6. Ideas to dome's dress-up by DFTW

#### 4.3. The “Dressing up” of the dome shape

The Dome as a shape for a house somewhat is new for Indonesian. Its shape made its looks very different with the landscape of the rural area. People opinions on the dome shape can vary from the *pro*-dome shape that would enrich the culture of the rural area, to the *contra*-dome shape which would be a resistance to the dome's distraction to the harmony of existing cultural landscape. A resistance theory is inherently contingent and unstable, based upon the experience of multiple spaces and voices. (Reed, 2003) Aware of this unstable opinion but definite dome's shape which would be implemented, the so-called a “dressing up” became a way to localize this imported culture (see figure 6 above). The dressing up concept would not give much influence to the performance of the dome in anticipate the earthquakes, tornadoes, or fire. The dome's dressing up would result a various possibility to meet the “cultural image needs” at first, for the inhabitant, and at last, for visitors who have various background knowledge. The dressing-up ideas will be generated from community, but opened for others such architects, students, artists to propose design as long as inhabitants would be happy.

### 5. THE NEW NGELEPEN: FITTING AND ADJUSTING THE LIFE.

Since April 2007, the very new dome culture has been lived and attracted many people. A housing complex has unique in its appearance. It is challenged to be lived by landslide's survivors and becomes a new attractive tourist spot complementary to the existing old Hindu-Budhism temples. Some visitors excited and labeled by such an *iglo*-like house, or even called as a “Teletubbies house”—a popular children's television program. Some were not happy with the shape which is strange comparing the surrounding existing house. However, this study is not to judge whether the dome was suitable for Javanese Culture or not. The study aims to mainly understand how families who live in the new *Ngelepen* response the Dome Culture and adapt to their owned family needs.

There are two main research questions:

- What the advantage that inhabitants have after 4 months lived in the dome?
- What their opinion to improve the dome's home?

Those above questions directed to “community self-evaluation” about dome they live. The self-evaluation contains two objectives: to understand the strength and the weakness of the dome. By identifying the strength, people could understand the dome's potentiality and keep it on. By asking what should be improved, then we understand what actually problems inhabitants face and need to be solved. To maintain the inhabitant objectivity in doing evaluation, the question was not neither in the form of *dichotomous questions*—which usually require yes/no answer nor ask a person to answer by choosing an option(s) from a multiple choice of possible answers, but in the form of open-answer question. In addition, to complement their answer, especially related to question “to improve the dome's home?”, we asked them to sketch “how their proposal to improve”.<sup>6</sup>

#### 5.1. Fitting the Advantage to Live in Dome

The First open answer question is: *What the advantage that inhabitants have after 4 months lived in the dome?*

Respondent answered freely. The answer may contain more than one opinion. The result can be categorized into two main groups: (1) Opinion or comments related to Dome (59%), and (2) Opinion or comments related to Dome's surrounding environment (32%); and the rest of 7 respondents was not surveyed yet because of difficulties to meet them during interview time.

Looking at the data we can see that almost 2/3 of the answer reflected the advantage or benefit of the dome for their living, and that of 1/3 shown the share of inhabitants about advantages of the dome housing common facilities, the quality of environment including the relocation setting. These answers reflected the strength of the New Ngelepen Housing which is not only *per se* adopting imported dome but building a better living environment after disaster. Those above two categories can be more specifically explained in Figure 7 below:

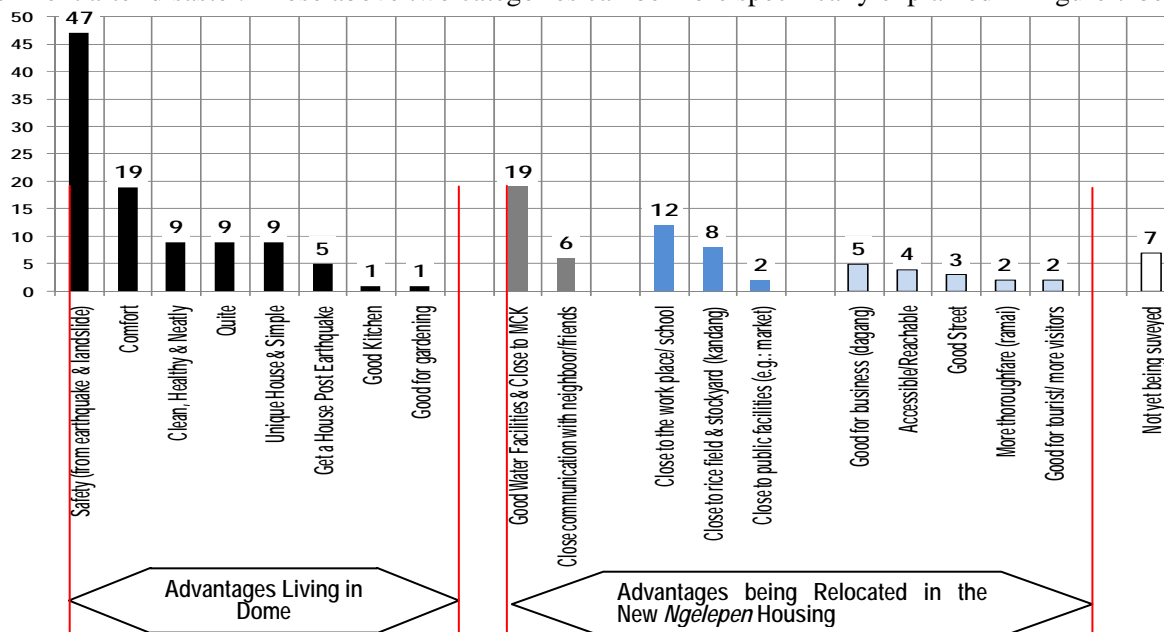


Figure 7. Inhabitant's evaluation on the Advantage to live in New Ngelepen Housing

*Inhabitant's opinion about Advantages Living in Dome.* Most of the inhabitants highlighted the advantage living in Dome's Home. They evaluated that living in dome give more *safety* primarily from earthquake and landslide. This fundamental safety feeling is very important to reduce traumatic experience. Living in dome gives a fundamental safety feeling to reduce traumatic experience. This safety feeling becomes sort of "energy psychology"—energies for the purpose of alleviating psychological problems of survivors. (Feinstein, 2008) The safety feeling was in line with the fact of structural strength of the monolithic dome to survive from earthquake and tornadoes. In the future, the dome's home expects to protect its occupants from injury or death during natural disaster. Beside appreciation of having a house post earthquake, inhabitants acknowledge that dome's home gives better living condition at least from aspects: comfort, quiet, clean, healthy and neatly house. Although it is not significant, one-two respondents mentioned about good kitchen and good for gardening. Some of them were proud to have simple and unique dome's house.

Unwell planned Relocation can produce severe stress on community and on the individuals in the community, such as a failure of adjustment a new living environment, such as worries about the condition of homes and community, difficulties getting around in a new location. (ATSDR, 2005) Birkman et.al. (2007) is also remind us that in relocation, the new location should suit people's livelihood requirements. New Ngelepen inhabitant's opinions on the safety feeling, the better house condition and facility, and the proud of dome uniqueness, create a good starting point to cope with stress and unsuitable environment which often occurred in the relocation program. People are getting customize to live in the dome's home: the new style of living.

*Inhabitant's opinion about Advantages being Relocated in the New Ngelepen Housing.* In the scale of housing

environment, many of inhabitants stated that their house has good water facilities and closes to *MCK* (*Mandi-Cuci-Kakus*=Bathing-Washing-Water Closet Facilities). Some of them feel that they have closer communication with their neighbors/friends. Living in the present location of settlement makes inhabitant closer to the work place, school, public facilities (such as: market), and close to rice field as well as stockyard. Furthermore, inhabitants also see their housing complex with good street—more thoroughfare—and more accessible or reachable as a challenge to do business (by opening kiosks, etc.), a good for tourist and more visitors coming. Dikmen (2006) wrote that the site chosen for reconstruction is one of the most important steps of the relocation process. He quoted Barakat (2003) who mentioned that the choice of location and site selection are the most important factors in determining the success or failure of new settlement programmes. Understanding the inhabitant’s opinion above indicates that the New Ngelepen Housing is located in more strategic place comparing to the former settlement. This condition could be a good starting point for the a whole process of relocation. The political will or the role of the *Sleman’s* government to provide better location to resettle the survivors of the landslide in the Ngelepen village is also one of the key successes.

### 5.2. Improving Living in Dome’s House

To know “What inhabitant’s opinion to improve the dome’s home?” we prepared an open answer question: “What first priority will you add to your house if you have a fund and chance?”.<sup>7</sup> This question is aim to understand “what the weakness of the dome or housing complex” in positive way. This question was asked three times to collect as much as many answer which also shown priority level of each respondent. Then we asked each respondent to draw or sketch their intention in a paper. The sketch complemented the inhabitant’s answer and is an important component to explore the original ideas of respondents in improving their condition. The open-answer can be categorized into 5 tendencies. Those are answer related to (a) Element Attached to Dome; (b) New Room/Facility’s Addition; (c) Similar Room’s Additions; (d) Outdoor Facility and Landscape; and (e) no answer or no survey. (See Fig. 8)

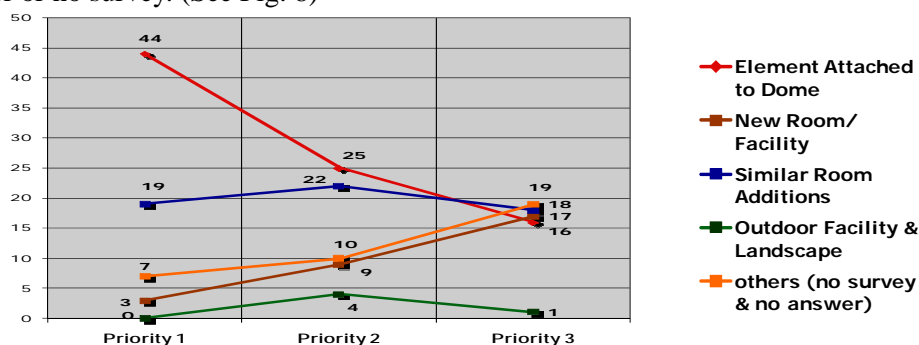


Figure 8. Category of Tendency Inhabitant’s intention to Add to their House.

The figure 8 shows the tendency of the inhabitant, at most, to add elements attached to dome comparing to other intentions. This indicates that there is a need to improve the dome. The second most desirable was adding a similar room that they have already had that is either “guest room”, kitchen, or bed room. The third intention was having new room/facility. The need of rooms was also quite rational, but we should know whether caused by the square meters or the function of the rooms. Less desirable preference but it was mentioned by the inhabitant was the need of outdoor facility and landscape.

*The Improvement of the Dome.* The result of the interview makes the need of additional eaves and *teras* or veranda-like/canopy as the highest priority. It was 41 inhabitants (64 % of all respondents) want to add canopy, veranda, or eaves as the first priority, and respectively 25 % of respondents and 11 % add those addition elements as the second and third priority. This meant that all of respondents wanted to add canopies/veranda or eaves in front of or above of doors/windows. Bruno Stagno (2002) a Chilean architect and author of “*An Architect in the Tropics*” mentioned that the existence of ventilation, roofs, eaves, and vegetation, shade gives tropical architecture its cultural identity and character. The reason why inhabitants wanted to have canopy/terrace and eaves is most-likely to provide protection of the opening (window and doors) from the rain. They are worry to the door/window wood frame which would be easily damage by the rain. Some predicted



that water would enter the room from openings in the torrential rain time. Concerning canopy and veranda they wanted to add, the intention was also to create more rooms where allows the breeze moving through without hindrance. This desirable canopy or veranda would complement the walled dome house and harmonize the old custom sitting in veranda and new more private dome's home. None of inhabitants complained on discomfort caused by the passive cooling inside the dome. They satisfied with comfortable temperature inside the dome except upper floor especially in the mid day. This situation indicates that the dome in some extent has fulfilled the requirement of conditioning the thermal comfort inside, but it still has the problem left unsolved in protecting dome's openings from the rain.

It is very interesting to observe inhabitant's sketches about what they want to add. The ideas of designing the eaves, canopy and veranda attached to dome were very local. It does not mean that they use the local material but they also use the imported material like steel, fiber, etc. (See Fig. 9) Tropical architecture's consideration exists automatically as inhabitant's life preference.

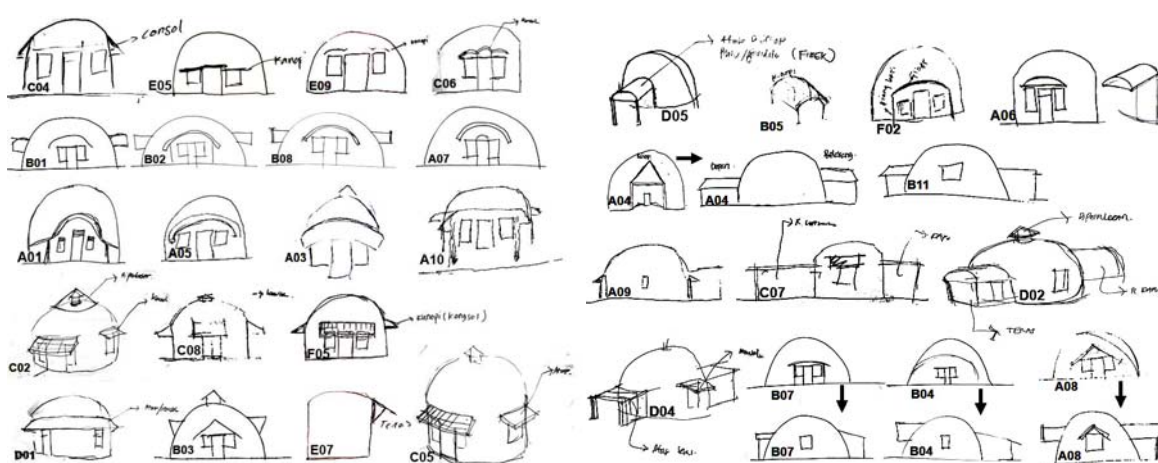


Figure 9. Inhabitant's Sketches of Eaves and *Teras* (veranda-like/canopy) they wanted to add

Looking at sketches categorized as so-called a *teras* or veranda-like or canopy, It was drawn as an additional roof which creates a partially enclosed room attached to dome exterior. The *teras* usually has a number of functions ranging from entertaining guest informally, chatting with neighbor, family sitting place, to parking vehicle. Sometimes a canopy was added at the back part of the house. This back part canopy was called as *emplek-emplek*, a temporary roof construction to house a kitchen or to store cordwood for cooking. The way inhabitants drew indicates that they arranged the additional canopy suitable with the dome shape. They, again, are getting customized with the dome shape.

*The Need of Room (s) Addition.* The free answer of the question asking "What priority will you add to your house if you have a fund and chance?" was a need of additional room (s) whether a new function room or similar room to the existing room's provided in the dome. The new additional room can be mentioned such as garage for vehicle (usually motorcycle or bicycle that most of the family has); *warung* (shops); stockyard (*kandang ternak*); storage, meeting room, etc. The similar room they wanted to add is either kitchen (*dapur*) or "guest room" (*ruang tamu*) or some wanted to have more private/individual bathroom and Water Closet.

Observing the graph in the figure 10, the tendency to add a new room was not demanded at the first priority. Among new rooms needed the garage or vehicle park was in the highest need. The garage was usually place for motorcycle or bicycle—vehicles that most of the family has. The need of garage was not added to the dome in the first priority because the vehicle size can be flexible enough to be put inside the dome or kept it outside next to the dome. Although it was not in high demand, other new rooms needed such as shop (*warung*), storage, meeting room, were demanded merely of functional consideration (in the case of storage and meeting room for neighborhood association added in the dome of community leader—*ketua RT*) in the New Ngelepen. Although the need of stockyard (*kandang ternak*) was not significant but it shows a facilities that related to

existing livelihood. This indicates that inhabitants was relatively not facing problem on the mean of life support in the Relocation. Even they gain a challenge to do business by the intention to open a shop or *warung* at *dome's home*. Looking at the graph at figure 11, then we realized that making another kitchen is in highest demand. Almost 77 % family (49 respondents) wanted to add a new kitchen beside the existing kitchen inside the dome. If the provided rooms in the dome has fulfilled requirement of the basic room's need—the “GBK”(Guestroom-Bedroom-Kitchen), why inhabitants still need another Kitchen?

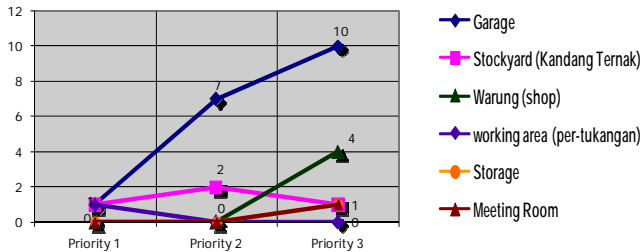


Figure 10. A Priority to add a New Room Facility

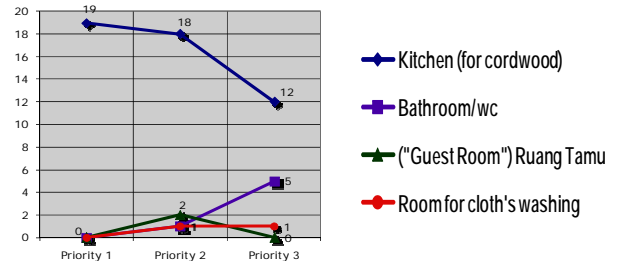


Figure 11. A Priority to add a Similar Room

We can argue that the need of another kitchen is not caused by the lack of provided kitchen but the need for more suitable place for cooking custom. The culture of cooking is somewhat tied to tradition. As in the socialization activities, before the dome's housing was implemented. The discussion on the kitchen's issue was raised. The older family preferred to have kitchen outside while the young wanted to have kitchen set in the dome as proposed by the DFTW. But in fact, both older and young family still have conservative in perception. Although some of them do not use the cordwood (*kayu bakar*)—which can easily make the kitchen's ceiling at the dome dirty of soot—but the perception of the kitchen is still a *dirty* place. In the modern family in Indonesia, house often has two-kitchen called *clean* and *dirty* kitchen (=dapur bersih and dapur kotor). The clean kitchen becomes a show case for a symbol of wealth, while the *dirty* kitchen is real place for cooking which usually located in the back part of the house. Although it is still hypothetical, the need of another kitchen can be understood as (a) “the existing kitchen” could not accommodate the *culture of cooking* of the Ngelepen people or (b) the additional kitchen can be shown as a process of the relocated family has improved their condition became more “modern family” with the *dome's home*. The more anthropological focus on this issue is recommended to be studied.



Figure 12. Inhabitant's Sketches of Additional Room's Composition

The additional kitchen has become very important room when we observed that almost in inhabitant's sketches they put this kitchen to be a part of house plan development. They drew the new kitchen to the back part of dome, either attached to it or separately plan. (see Fig. 12) The additional kitchen sometimes was in composition with other family needs for facilities such storage, private bathroom/washing room/closet. Meanwhile, the front part of dome was favorable places for *teras* (porch); *warung* (kiosk/shop) and meeting

room. The garage or parking for vehicle can be either at the front, back, or side of the dome. The additional rooms' composition shown in sketches arranged in a radial shape with the dome as a central, or an axis-like composition with the dome in the middle of axis. Another alternative was scattered composition without dome as a reference for arrangement. The first two model of arrangement indicates that the inhabitant aware of the dome's shape that the additional rooms followed the nature of the round shape of the dome. Meanwhile the last arrangement reflected that some inhabitants were not thinking about round shape.

## 6. DRESSING UP IDEAS AND ACTUALIZATION BY COMMUNITY

The survey result done in August 2007, 4 month after landslide survivors lived in, the intention to add eaves (*tritisan*) and porches/veranda-like elements called *teras* (front part of dome) and *emplek-emplek* (back part of the dome) was in high demand. After 10 months they lived in New Ngelepen, they coped with problems the dome faced.



Figure 13. Additional Elements attached to dome by Inhabitants

Most of the inhabitants added eaves on the doors or windows to protect the wood frame of door/window from the rain. The eaves' addition seems cheaper and affordable but has protection function from broken window's frame by rain water. Some added bamboo's structure for a temporary kitchen attached to dome. (See Fig. 13) For the wealthier family they added polycarbonate canopy attached to dome for *teras* or made a spacious additional room outside dome. Although the tendency of adding the new element attached the dome was understood as the way community improved the dome as well as actualized and fulfilled their need, a guideline or more references should be promoted to the inhabitant to avoid slum development or disadvantage of dome's housing image in the future.

## 7. LESSON LEARNT:

From the study we can learn at least three pointers:

- The international solidarity will be a part of global culture in disaster relief and "an introduction of imported culture" is un-avoidable. Therefore working with a local partner is needed.
- The community, the survivors of Landslide after Java Earthquake 2006 in New Ngelepen, has a capacity to adopt a new culture and adapt to their own needs. It becomes one of sources of learning how people localize the new culture into their own.
- The Dome's Housing is still ongoing process to be localized within local culture, and it needs to accompany its process towards better development for better future life of the landslide survivors.

Therefore, the un-avoidable new culture introduced by the International Solidarity Post Disaster can be localized if the community or survivors of a disaster event has contextual adaptability to accommodate their owned resources matching with support from the donor, the local government as well as local University.

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