Evaluation of the Reconstruction Plans for Tsunami Victims in Malaysia

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Abstract

'Rehabilitation' 1 and 'reconstruction' 2 projects for natural disaster stricken areas have always posed questions to the physical, social and financial aspects of the victims. With appropriate measures undertaken by the respective governments in executing rehabilitation and reconstruction projects, the community and the livelihoods of disaster-affected victims could be better restored. This research aims to investigate the viability of the recovery strategies undertaken by the Malaysian Government in its aims to alleviate the hardships of the tsunami-affected communities based on a questionnaire survey.

Keywords: tsunami victims; temporary longhouses; compensation aid; permanent housing; new town development

1. Introduction

On 26th December 2004, Malaysia experienced her first Tsunami Disaster following the magnitude 9.0 earthquake, which occurred 160 kilometers off the coast of Indonesia's Sumatra Island at a depth of about 10 kilometers. The earthquake triggered tsunamis with waves as high as 30m across countries around the Indian Ocean. The killing waves reached the northern west coast of Peninsular Malaysia and destroyed more than 40 villages and affected the lives of more than 4,000 people. Kota Kuala Muda, a small fishing village on the west coast of Kedah State of Peninsular Malaysia was the worst affected area.

This was the first time in the history of Malaysia that its government was forced to manage such a great disaster. Emergency evacuation and relocation plans were constructed promptly. In Kota Kuala Muda, construction of temporary longhouses for rehabilitation was commenced 3 weeks after the disaster and was completed within 2 weeks. One hundred and four affected families whose houses were no longer inhabitable due to the tsunami in 13 fishing villages were relocated to these temporary longhouses while proposal for developing permanent housing and a New Town Development Plan are being carried out in collaboration with a sole developer, The National Housing Corporation. (SPNB), established under the Ministry of Finance of Malaysia.

Based on the above scenario, this research aims to investigate the following aspects:

1.) To investigate the objectives and measures undertaken by the government in the rehabilitation reconstruction projects for the disaster-stricken areas
2.) To investigate the living environment and the satisfaction of the affected families who were relocated to the temporary longhouses.
3.) To evaluate the effectiveness of the government's compensation and other aid provided, and
4.) To evaluate the villager's responses towards the relocation program under the New Town Development Plan proposed by the Kedah State Government

2. Research Methodology

Basically, the research methodology will be divided into two parts; 1) interviews with governmental agencies and SPNB with regards to the rehabilitation and reconstruction plans, and 2) questionnaire survey in the form of interviews with tsunami victims of Kota Kuala Muda to evaluate their responses towards the above plans.

2.1 Provisions for Rehabilitation

1) Temporary Longhouses in Kota Kuala Muda

One hundred and twenty units of temporary timber longhouses are constructed approximately 1 kilometer inland from the affected shore (Fig.1.). Each unit of the temporary longhouses is approximately 70m² in floor area, with 3 bedrooms, a living/dining, a kitchen, and 2 bathrooms. Ninety-six tsunami affected families whose houses were totally destroyed and 8 affected families whose houses were being repaired were relocated to these temporary longhouses while proposal for developing permanent housing and a New Town Development Plan are being carried out in collaboration with a sole developer, The National Housing Corporation. (SPNB), established under the Ministry of Finance of Malaysia.

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2) Government Compensation Aid
Table 1. The Breakdown of Financial Aid for Tsunami Victims

| No. | Description | Amount (RM) |
|-----|-------------|-------------|
| 1   | Assistance to cover daily expenses (3 months) | 20,000      |
| 2   | Assistance for death | 40,000 |
| 3   | Assistance to cover medical expenses (1 year) | 15,000 |
| 4   | Assistance to cover funeral expenses | 5,000 |
| 5   | Assistance to cover school fees (1 year) | 2,000 |
| 6   | Assistance to cover travel expenses | 1,000 |
| 7   | Assistance to cover other expenses | 500 |

Table 2. The Targeted and Achieved Numbers of Families

| Group          | Targeted | Achieved |
|----------------|----------|----------|
| Total          | 1,000    | 1,000    |
| Male           | 500      | 500      |
| Female         | 500      | 500      |

2.2 Provisions for Reconstruction

1) Permanent Housing (RMR Housing)

Permanent housing for the tsunami victims adapted the concept of the 'Rumah Mesra Rakyat' Housing Scheme, a low-cost bungalow (detached house) with an approximate total floor area of 100m² (Fig.2.). Each of these houses consisted of a living/dining, a kitchen, 3 bedrooms and 2 bathrooms. Prior to the tsunami disaster, this special Housing Scheme was initially executed to help low-income families living in the suburban areas in Malaysia to secure decent housing with subsidies under the national budget. The construction of the RMR Housing for the tsunami victims is fully financed by the Tsunami Fund and is solely developed by SPNB. Affected families who wanted access to these RMR houses had to make application to the respective state governments for both the land and the house. A loan repayment scheme with subsidies from the Tsunami Fund and the National Budget will be offered as shown in Fig.2.

2) New Town Development Plan

Taking the opportunity to redevelop the affected area after the tsunami disaster, the Kedah State Government has drafted a proposal for a New Town Development Plan to relocate the scattered villages along the shore. Should the proposed plan be approved, a minimum of 6 villages along the coastal area will be relocated to the proposed new residential areas as shown in Fig.3. below.

3. Questionnaire Survey to Evaluate the Community Response towards the Recovery Measures

The outcome of responses to the questionnaire survey is shown in Table 2. This questionnaire is structured to cater for the different groups of subjects as shown. The questionnaire is divided into 5 parts, each with its respective objectives for evaluation (Table 3.).
3.1 Characteristics of the Respondents

1) The Family Structure & Household Size

Table 4. shows that a majority of the families in Group A, B & C comprises married couples who are living together with their children, followed by families with more than 2 households (married children who still live together with their parents) and single parent households. Fifty four percent of the respondents in this survey have a household size of between 5-7 persons.

2) Status of Land & House

Table 5. below summarizes that approximately 82% of the tsunami victims in Kota Kuala Muda are owner-occupiers where 32% of them are landowners, 42% are squatting on government reserved land and the remaining 8% are residing on rented land.

3) Occupation & Income Level

Table 6. below illustrates that among the various occupations of the respondents, 'fishermen' comprises the largest proportion in Group A (38%), Group B (35%) and Group C (30%) respectively, therefore, the income sources of many of the villagers were much affected by the tsunami disaster.

Table 7. shows that almost 51% of the respondents living in the villages before the tsunami earned a monthly income of RM 501 RM 1,000, followed by 34% who earned 'RM500 or less', while only 15% could manage to earn 'more than RM 1,000'.

This shows that a majority of those living in the villages could only manage to sustain a comfortable or lower than comfortable living. From the total respondents of 90 families in this survey, a majority 22% of the 'RM 501-RM 1,000' income earners are fishermen. Another 13% of the fishermen among the respondents earn less than RM 500 a month. Only the remaining 3% of fishermen could afford a better living.

After the tsunami disaster, the proportion of the 'below average' income earners increased to 53% as shown in Table 7. The fishing communities such as fishermen and fish traders mostly, contributed to this drastic increment. Besides the physical damage to the boats and fishing gear, the tsunami also caused an ecological impact, resulting in less fish being found in the ocean nowadays.

3) Extent of Damage from the Tsunami Disaster

As Group A consisted of respondents from the temporary longhouses, the ratio of respondents with houses totally destroyed showed a significantly high percentage of 90%. The remaining 10% included respondents whose houses were being repaired by the appointed SPNB.

For Group B that consists of tsunami victims who are still living in the villages, a majority, 56%, suffered partial damage to their houses, 38% of them have had their damaged houses repaired by the SPNB or other voluntary bodies while the remaining 18% have to pay themselves to repair their houses, as they claimed that the SPNB refused to conduct minor repair works.
Other than houses, all shop owners in Group A suffered a total lost as compared to only 57% of the shop owners in Group B. As for the fishing boats and fishing gear, 25% of the fishermen in Group A suffered damage while in Group B, a ratio of 75% was recorded. This was due to the fact that many fishermen who were currently living in the temporary longhouses kept their fishing boats at the riverbank behind the village instead of the jetty along the shore where most of the fishing boats of the fishermen currently living in the villages were stored when the disaster occurred.

### 3.2 Living Conditions in the Temporary Longhouses

1) **Physical Condition**

**Building Design:** Seventy percent of the Group A respondents felt that the temporary longhouses provided are cool with the provision of ceiling fans. Ninety-five percent of them agreed that the decision to use timber constructions that are raised on pad footings has helped to prevent water immersion during the heavy rains as flooding often occurs in the swampy area. Ninety-eight percent of the respondents believe that provision of internal ceiling boards has also helped to reduce the internal heat of these houses. However 85% of the respondents agreed that the timber materials are low in resistance to water and 75% of them added that they are also low in sound insulation due to the low priority given for proper coating and insulation works. Eighty percent of the respondents believed that the temporary longhouses would not last for 2 years as was planned due to the non-durable materials used. Seventy-three percent of the respondents were complaining that the temporary longhouses failed to provide a front porch as a safety zone between the main entrance of the houses and the access road. The absence of a front porch/yard has also posed a problem for the fish traders, as there are no workspaces provided in the temporary longhouses for them to clean and pack the fish for sale.

**Spatial & Planning Design:** Seventy percent of the respondents are satisfied with the layout of the houses, which include 3 bedrooms, a kitchen and 2 bathrooms, which in some cases are better than their previous dwellings. Seventy-five percent of the families are also satisfied with the number of rooms provided; whereby 90% of them are families with less than 7 persons. All the respondents living in the temporary longhouses are satisfied with the provision of electrical and water utilities, which are free of charge as long as they have yet to be relocated to the new permanent houses. Seventy percent of the respondents think that the 'longhouses' planning concept offers more chances to foster neighborhood relationships compared to the detached houses in the villages.

**Location:** Eighty-five percent of the respondents felt that the travel distance for the fishing communities to the jetty is not too far as most of them are commuting by motorbike. Sixty-three percent of them also feel safer from another tsunami disaster as the current housing is built a distance away from the shore.

**Communal facilities:** Eighty percent of the respondents think that though it is aimed to serve only as a transit platform, provision of a children's playground within the compound of the temporary longhouses is a necessity, as unlike children living in the urban cities, children living in villages are more active in outdoor activities.

2) **Social Conditions**

A majority of the tsunami victims in the temporary longhouses are satisfied with the social environment in the temporary longhouses. Eighty percent of the respondents living in the temporary longhouses have immediate family members, relatives or friends staying nearby, as in a traditional Malay kampong. Family members prefer to build their houses nearby each other when they extend their households. As the relocation of the tsunami victims was concentrated at one place, and most of the tsunami victims were living in the same village, there are few difficulties for them to become accustomed to their new neighbors.

Another major factor that has fostered the communal relationship in the temporary longhouses is the benefit of having all the houses facing each other along the main road. This has increased the chances of meeting, as many of them prefer to keep their front doors open for better lighting and ventilation into their houses. A high ratio of 83% of the respondents has been enjoying their time to chat with each other across the road or in front of one another's house every evening. Sixty-five percent of them also felt less lonely when seeing children playing outside the houses.

The Committee of Temporary Longhouses has also organized many communal activities for festivals or VIP visits. Ninety-three percent of the respondents living in the temporary longhouses were able to foster their relationship while helping to prepare for these functions.

Ninety percent of the respondents also agreed to the fact that the tsunami disaster itself has helped the community in the temporary longhouses to offer care and understanding among one another. By sharing and telling their side of the story during the fateful day, many of the respondents found it helpful as a way to forgo their traumas and anxieties concerning the tsunami disaster. Concerning questions regarding civic consciousness among the families living in the temporary longhouses, 75% of the respondents felt that the community itself is now capable and well prepared to handle any future disaster such as fire, or even another tsunami.

As for social disadvantages, 25% of them found the trespassers in front of their houses annoying, as they always tend to look into the houses of others through the open doors or windows. The lack of supervision for children by their parents has caused a high ratio of 60%
of the respondents to express their anxieties regarding the children who play on the only access road in front of the houses where the traffic is heavy. Besides, children who are playing nearby the construction site may cause delays to the building works should any accidents occur.

3) Communal Participation and Relationship

Table 8.(a) illustrates that 97% of the respondents are keen to participate in the community activities held. This may be due to the fact that many of them were once living in the same village. It is a traditional practice of a Malay culture to invite the whole village for any major functions held at their home such as wedding ceremonies, parties or even funerals. Therefore, the community living in the temporary longhouses still holds strongly to this practice.

| Frequency of participation | Number of respondents | Relationship with other residents | Number of respondents |
|---------------------------|-----------------------|----------------------------------|-----------------------|
| All the times             | 151                   | Often visit each other's house   | 253                   |
| Often                    | 8                     | Visit only specific purposes     | 4                     |
| Depending on the activities | 9                   | Only meet in communal            | 2                     |
| Want to but never have the chance | 10               | Only chat at the door front      | 9                     |
| Only when invited         | 10                    |                                  |                       |
| Only when activities are held near the house | 3               |                                  |                       |
| No interest              | 3                     |                                  |                       |

Table 8.(b) illustrates the extent of the relationship among one family and another within the compound of the temporary longhouses. A high ratio of 62% of the respondents is able to visit other families (not including family members, or relatives) at any time, even to the extent of entering the houses of their respective hosts without invitation. This shows that a majority of the families living in the temporary longhouses faced no difficulties in becoming accustomed to their new neighborhood.

3.3 Satisfaction of Living in the Temporary Longhouses

Fig.4.(a) shows that a high percentage of 77% of the respondents in Group A are satisfied with their current living conditions. Their responses are mostly based on their appreciation to the government for providing them with temporary shelters.

On the other hand, 23% of respondents in Group A who expressed dissatisfaction with their current living conditions, expressed their preference for the lifestyle in the kampung (Malay village), where every house is individually built surrounded with trees that provide many sheltered spots for outdoor gathering that offers a more carefree and relaxing living environment. This group also contributed to the 28% of responses that stated their preference to build temporary houses in the villages by themselves with the help of the government rather than staying in the provided temporary longhouses as shown in Fig.4.(b). On the other hand, 60% of them prefer to stay at the current temporary longhouses provided, as they are still fearful of the sea. They also felt less lonely and are able to meet new friends due to the concentrated planning of the temporary longhouses. The relocation into temporary longhouses has also promised access to permanent houses with land in the redevelopment program for those who were previously squatting illegally on reserved land.

Fig.4. (a) Satisfaction & (b) Preferences of Living Conditions

4. Compensation Aid and its Distribution

1) Compensation Aid Received

Eighty-five percent of the respondents from Group A received the 'Totally Destroyed' aid of RM 5,000. Another 10% of the respondents, who are staying in the temporary longhouses while waiting for their houses to be repaired, received the 'Partially Damaged' aid of RM 2,000. The remaining 5% of the respondents who were living in rented houses before the disaster were compensated RM 2,000 for 'Furniture & Household goods'.

For Group B, 93% of the respondents received the RM 2,000 'Partially Damaged' aid. This group included victims ranging from those whose houses suffered only slight damage (i.e. damage to windows and doors) to those which were partially damaged (i.e. the collapse of kitchen walls) and for the remaining 7% who only suffered minor damage to their household goods received the RM 2,000 'Furniture / Household goods' aid. Many victims in Group B are dissatisfied with the monetary aids received, as they are not in proportion to the extent of damage suffered. Many of them whose houses were partially damaged also naturally suffered damage to all their furniture and household goods in the tsunami disaster. Though compensation for furniture and household goods are allocated under the Tsunami Fund account as highlighted in Table 1. (items 14 & 15), many victims have yet to receive such aid. Hence, many victims staying in the villages are currently living in houses without, or with minimal furniture and household goods.

Fig.5. illustrates that an average of only 34% of affected fishermen received some kind of aid. Despite the provisions allocated for fishermen, only 33% and 42% of the affected fishermen who were boat owners living in the temporary longhouses and the villages respectively received the RM 3,000/RM 1,000 aid from the government for their damaged boats respectively.
Ironically, 67% of the affected fishermen living in the temporary longhouses received fishing gear while none of the affected fishermen living in the villages received such aid. A reverse situation was seen in the case of 'dana nelayan' (loans for fishermen) whereby 67% of the affected fishermen living in the villages were approved for the loan while none of the loan applications submitted by the affected fishermen living in the temporary longhouses were approved. There are also cases where non-affected fishermen whose boats were not damaged were given access to 'dana nelayan' and other provisions. The above analysis indicated that there was no uniformity or standard guideline to monitor the distribution of the compensation aid to the tsunami victims.

2) Type & Cost of Expenses for Damage

Furniture/household goods and vehicles are the main items which most of the victims have spent their aids and life savings to retrieve after the disaster. Affected families living in the temporary longhouses have been receiving household items contributed by private organizations. Therefore, 85% of those who received the 'RM 5,000 Totally Destroyed' aid (Group A) can afford to spend on electrical goods for leisure such as television, CD players, etc. and 71% of them were spending their money to repair or buy vehicles. For those who received the 'RM 2,000 Partially Damaged' aid, 83% of them spent their money to purchase the necessary pieces of furniture and household goods and 68% of them spent their money on retrieving their vehicles.

An average of 47% of the respondents were spending less than RM 2,000 for furniture/household goods and vehicles. On the other hand, 23% of the respondents have spent more than RM 2,000 in purchasing new furniture/household goods while 34% of them have spent more than RM 2,000 in retrieving their vehicles. This has proven that aid of a minimal RM 2,000 could only cover a minor part of the victims' needs, particularly for Group B who suffered total loss of their household properties.

3) Demerits and Causes of Government Compensation Aid

A high ratio of 75% of the respondents believed that there was unfairness in the distribution of the compensation aid among the fishermen as shown in Fig. 5. Besides, respondents in Group B also commented that the 'RM 5,000 Totally Destroyed' aid was inappropriate as temporary longhouses and new permanent houses are provided for those who received such aid. Besides, 42% of the respondents said that the compensation aid given to them could hardly help them in any way as the aid received was not even enough to cover their daily expenses for the several months that they were unable to go to the sea. Thirty percent of the respondents think that the distribution of compensation aid for fishermen and housing repair took too long to reach them. Another demerit was the failure of the government to approve the applications for 'dana nelayan' for some affected fishermen and the other loans applied by traders who need capital to reopen their grocery stores.

The main cause of such demerits was due to the lack of competence among government officials in evaluating the extent of damage. Tsunami victims who suffered more losses are in a more disadvantaged position as they received the same amount of compensation as those who suffered minor damage. The failure of the government to disclose the Tsunami Fund Account and the decisions on how they handle the fund aroused dissatisfaction and anxieties among the tsunami victims towards the government. The involvement of too many parties such as the Fishery Department (LKIM) and the heads of the villages, together with the lack of proper records in distributing the provisions for fishermen have also posed problems of favoritism, as most of the aid was reserved for their friends and families according to interviews with the villagers. The failure of heads of the villages to report the actual conditions of the victims living in the villages has also given the government the wrong impression that the livelihoods of the tsunami victims living in the villages were already restored. Information from the government with regards to the provision of boats, engines and fishing gear in the form of 'dana nelayan' was doubtful. Many fishermen were not aware that those who received the 'dana nelayan' are not entitled to receive any free boats contributed by the other organizations. Hence, those who were keen to secure their income resources had hurriedly applied for the 'dana nelayan', which is a 'loan', instead of waiting for their chance to receive the free provisions.

4) Demerits and Causes of Non-Governmental Aid Provisions

Forty-five percent of the respondents in Group B were complaining that many goods given out by non-governmental agencies were only given to the tsunami victims living in the temporary longhouses. This was mainly due to the failure of the mass communications in reporting the real situation of the tsunami victims living in the villages as all the attention was focused towards the tsunami victims in the temporary longhouses. Thirty-six percent of the 90 respondents
stated that many aids that came to affected areas, i.e. new clothes, mattresses, food or daily goods went 'missing' due to the absence of a proper record when receiving and distributing the aid. Many took advantage of this unmonitored situation and smuggled some of the goods out for their own use, or for sale.

Distribution without any prior notice has also resulted in many of those who were not at home failing to receive such aid. Irresponsibility and favoritism shown by the heads of the villages in distributing the aid to the affected villagers have also further deprived the victims from receiving such aid. Some were even complaining that some of the boats, which were supposed to be distributed free of charge to affected fishermen were put on sale. Hence, the unmonitored situation of aid distribution has further caused anxieties among the tsunami-affected community.

5. Relationship of the Communities after the Tsunami Disaster

Fig.6 illustrates that 30% of the 90 respondents who are experiencing deterioration in their relationship with the community believed the cause was mainly due to the disputes that were triggered by the unfairness in the distribution of aid between the tsunami victims who are living in the temporary longhouses and those who are staying in the villages.

6. Response of the Community towards the Reconstruction and the New Town Development Plans

1) Intentions of the Villagers to Move

Only 13% of the respondents from Group B intended to continue living near the sea despite the occurrence of the tsunami disaster and 8% of them are eager to move. Eighty percent of respondents in Group B show their interest to move only under certain conditions (i.e. satisfactory compensation for their houses and lands). However, respondents in Group C who were not affected by the tsunami disaster show no intention to move at all.

2) Affordability

In Group B, 60% of the respondents will be able to pay the RM100 monthly if they are allocated new RMR Housing under the relocation plan. However, 30% of them, who could not afford to pay the RM100, are able to pay for the RM50 monthly payment instead. Only 5% of them who are fishermen had no comment regarding their affordability as they could hardly earn a decent income since the tsunami disaster. As for Group C, 60% of the respondents could afford the monthly payment of RM100 for the new RMR Housing and another 40% could only manage to pay for the monthly RM50 instead. This shows that the proposed monthly payment scheme of RM50 is viable should the government revise the scheme for the unaffordable group.

3) Willingness to move

Table 9. shows that a high ratio of 83% of the respondents in this survey expressed their willingness to move into the new RMR Housing under the reconstruction plan while 14% of them refused to move.

Table 9. Willingness to Move

| Group                                      | Yes | No | No Comment | TOTAL |
|--------------------------------------------|-----|----|------------|-------|
| Affected families in temporary longhouses  | 36  | 2  | 1          | 40    |
| Affected families in villages              | 33  | 6  | 1          | 40    |
| Non-affected families in villages          | 5   | 5  | 0          | 10    |
| TOTAL                                      | 74  | 13 | 3          | 90    |

Fig.7. Priorities Considered for Moving

Fig.7. indicates that 67% of the respondents in Group A are willing to move into the RMR Housing provided for fear of another tsunami. However, despite the fact that many of the respondents are squatting on government reserved land, only 14% of the respondents prioritized the guarantee of a permanent house and land under the reconstruction plan.

Thirty-nine percent of the respondents in Group B would only move into the RMR Housing provided under the New Town Development Plan if the whole neighborhood were moving together. A majority of them showed their concern in ensuring that the well-established community would not be devastated by the relocation plan. Another 21%, who depend on the sea for their living, expressed concern for the location...
of the proposed New Town, which is near the shore as they are unwilling to move too far away from the sea. Among the respondents who are squatting on the reserved land, only 9% expressed their willingness to move as they gain access to permanent houses and land. However, none of the respondents in Group B or a mere 5% of the respondents in Group A has chosen to live in the RMR Housing because of its design or comfortable level, as this standard housing seemed less attractive to them due to its size and limited open ground area.

As for Group C, a majority 40% of the respondents expressed the same concern for the community, as they would prefer to stay among the same neighborhood if they are relocated.

7. Community Participation

Sixty-five percent of the 90 respondents show no interest in building their own desired houses even if land and financial support are to be provided by the government. Many of them prefer to avoid the trouble of designing and building and think the best way is to follow the standard design adopted (?) by the government.

On the other hand, 72% of the total respondents expressed their desire for the government to conduct discussions or briefing sessions with regards to the reconstruction and new town development plans before these plans are approved. They are eager to know more about these plans as they felt insecure with the government who might approve development plans which may threaten their current living conditions. However, the remaining 26% think that these discussions are worthless and could cause delays in the development works.

8. Summary of the Evaluation for the Rehabilitation and Reconstruction Measures

With reference to the statistical analyses above, the responses from the questionnaires conducted can be generally categorized into 1) physical, 2) social, and 3) financial aspects. The survey conducted has proven that though the affected community in Kota Kuala Muda has shown a high level of satisfaction for the provision of temporary longhouses and the new permanent housing (physical aspects), a majority of them are still struggling for their livelihoods after the disaster.

Rehabilitation measures for immediate relief have failed to recognize that the major cause of the slow progress in restoration is due to the incapability of the victims to secure their livelihoods (financial aspect). The failure of the Malaysian Government to exercise the proper conduct of aid provision has stagnated the process of restoring the livelihoods of many victims, particularly among the fishermen and victims who were not provided with temporary shelter. The second major aspect, which could accelerate the recovery process, was to rehabilitate the devastated community by way of promoting social acquaintances and to avoid the possibility of social disputes among the tsunami victims (social aspect). Many victims showed their appreciation to the community for psychosocial support. Physical recovery as shown in the case study where many victims had already expressed their satisfaction for the basic provisions in the temporary longhouses is proven to be of lower priority compared to financial and social recovery.

On the other hand, the reconstruction plan for tsunami victims and the proposed new town development plan for the villagers have received positive response as they provide a safer living environment for them who still fear another tsunami and the possibility of staying in the same neighborhood after relocating (social aspect). Participation in the form of discussions for the proposals of the reconstruction plans is also demanded for a more comprehensive planning. The high percentage of affordability and the location site of the new permanent housing that posed no threat to the livelihoods of the affected community, has added to the benefit of the plan (financial aspect). However, among all factors concerning the reconstruction plan, the least concern is shown for the design and layout of the new permanent housing (physical aspect). The above strategy seeks more valid recovery measures to better restore the livelihoods of the disaster-affected community as summarized diagrammatically in Fig.8.

Fig.8. Model of a Valid Recovery Measure

Reference
1) ‘Rehabilitation’ – efforts to temporarily restore the livelihood of the disaster affected victims by providing temporary shelters and compensation aid while reconstruction plans are being carried out.
2) ‘Reconstruction’ – efforts to permanently restore the livelihood of the disaster affected victims by providing permanent housing or development that helps to promote a better and safer living environment
3) Mesra is a Malay word which means ‘friendly’ or ‘in harmony’.