

# An Assessment of Implementation Status of *Janata Awash Program* in Nepal (*Case study Jnata awash program of Rupandehi from F/Y 2073/74 to F/Y 2075/76*)

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## Abstract

This study's main goal is to evaluate the Janata Awash Program's implementation status in Rupandehi, Nepal, where the program is dispersed among 13 VDCs and 4 Municipalities (before readjustment of local level). Interviews and a questionnaire survey were undertaken with applicants for the program, local leaders, officers in charge of implementation, and the monitoring body in the study region with regard to selected, non-selected, completed, and unstarted construction. In the fiscal year 2073–1974 there were 2214 applicants, which appears to be a relatively high amount. Since there are so many of them and they live in diverse places, it would be foolish to assume that one strategy will work for all low-income groups' housing needs.

**Keywords:** Housing, Low cost, Status, EVA, Awash.

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## BACKGROUND

In Nepal, it is customary for people to build their own homes, typically using their own resources and means. However, the current scenario has made it difficult to provide accommodation for the majority of families, particularly for those with low and marginal incomes. The housing shortage that is evident in both urban and rural regions due to factors like internal migration, rapid urbanization, rising population pressure, families uprooted by conflict, natural disasters, degraded environment, etc., looks to have turned into a significant concern for the country.

People Housing Program (Janata Awash Karyakram), a special housing initiative launched by the government of Nepal, is mainly geared toward dalits (untouchables), underprivileged and backward communities like Chepang, Bankariya, and the lower class.

### Statement of Problem

In Nepal, it is customary for people to build their own homes, typically using their own resources and means. However, the current scenario has made it difficult to provide accommodation for the majority of

families, particularly for those with low and marginal incomes. The housing shortage that is evident in both urban and rural regions due to factors like internal migration, rapid urbanization, rising population pressure, families uprooted by conflict, natural disasters, degraded environment, etc., looks to have turned into a significant concern for the country. It has attained focus of many experts such as Mishra, A. K., & Aithal, P. S., (2022); Mishra, A. K., & Aithal, P. S., (2022); Madan Sharma, Mishra, A. K., & Janani Selvam, (2022); Anjay Kumar Mishra & Er. Lalit Koju., (Sept, 2020); Parajuli, S. and Mishra, A.K., 2020. Mishra AK, Aithal S. and so on to reduce cost through effectiveness.

People Housing Program (Janata Awash Karyakram), a special housing initiative launched by the government of Nepal, is mainly geared toward dalits (untouchables), underprivileged and backward communities like Chepang, Bankariya, and the lower class.

### Research Objective

To find out the financial mobilization status, work progress and appropriate way to address the

housing need for the targeted group of the people in Rupandehi.

### Significance of Study

Although there are many studies conducted regarding the need of housing in the Kathmandu Valley, but this type of studies have not been conducted on Rupandehi (outside valley district) the adequate housing facilities for the poor and low income group of people (specially for *dalits and poor musalmans*). This study will be useful to the policy makers, implementers of housing project and NGOs and local bodies to study and analyse the present status of *Janata Awash Karyakram* and also for choosing the appropriate ways to address the need of the housing facilities for the low-income income group of the people in the Rupandehi, at the reasonable cost for further program.

### Literature Review

#### Approaches for the fulfillment of the housing need

There are five main approaches for the fulfillment of the housing need. They are also known as shelter packages. They are as defined below.

#### On-Site Upgrading

In this approach, the improvement of physical, social and economical environment of the existing informal settlement are carried out, without displacing the people living in it. It is one of the least expensive approaches and the most humane way of enhancing the city's much needed stock of low-cost housing, instead of destroying it. In this approach, both the local people and the government support the process of upgrading the informal communities.

It is carried out with the improvement of the existing houses and rebuilding them, by regularizing and securing their settlements for long term land tenure, upgrading their jobs, earning capacity and small business, improving their infrastructure services such as safe drinking water, drainage, sewerage etc. and access to the education and health care (Shah, S. K., 2016).

#### Re-settlement

This approach is generally applied where there is vulnerable living condition such as prone to landslide, flood etc. or when the land captured is high in the commercial value, illegally. Generally, the resettlement is carried out when there is no other option for the better living condition at the existing settlement, and most of the residents should be agreed and support the process for its successful implementation, without which the resettlement can become a forced eviction.

The resettlement projects are mostly carried out in India, Pakistan, Bangladesh, Indonesia and Philippines.

In India, the railway relocation projects in Mumbai proved that the improvements of infrastructures of the city need not to be done by

forcefully eviction of the residents. But it can be positive for the city to provide security and permanent houses for the poor people who are displaced by the project, with some investment of creativity, co-operation and co-ordination.

The land chosen for the resettlement plays an important role for the successful implementation of the project. The site for the resettlement should be near to the job opportunity, with the easy access to the public services such as schools, clinics, banks and transportation linkage because the new location must enable the residents to maintain, or rebuild their livelihoods, social networks and survival strategy with minimum disruption (Shah, S. K., 2016).

#### The Government-Built New Public Housing

In this approach, the low cost housing for rent or sale are designed, constructed and delivered to the targeted groups by the government, which should be normally seen as a way of ensuring affordable housing for the low income group of people. However the construction cost and management cost must be subsidized at the maximum possible extent. But this approach is proven to be much expensive for the government in most of the countries around the world (Shah, S. K., 2016).

#### Site and Services

In this approach, the government generally provides cheap and vacant land with basic services such as roads, electricity, drinking water, drainage, etc. in a planned manner, for the residential purposes. The individuals build their houses on the land as per their own affordability. This approach is an attempt to achieve the balance between minimum socially acceptable housing condition and the affordability of the beneficiaries. Its strategy is to share the responsibility for providing decent affordable housing in the urban areas between the government and the people. The responsibility of the government is to prepare the residential plots and facilitate them with certain basic infrastructures. Then, the individual plots are sold, leased or allocated to the targeted groups and the responsibility of the beneficiaries is to build their houses; sometimes with the soft loans, basic building materials and technical support provided by the project, and sometimes on their own financial management.

The construction and maintenance of the infrastructures and services are generally cheaper and cost effective since they are planned in a systematic and scientific manner. It is based on an idea of most government's ability to provide adequate and affordable housing to the urban poor households who really need it. The government plays the role of facilitator rather than the provider for the self help housing effort by the low income group of people themselves.

For example; In India, the Hyderabad Development Authority (HDA) adopted the strategies that poor communities constructed their houses and the HDA facilitated them by removing the exploitative elements of the process. As a result, HDA completed the project successfully (Shah, S. K., 2016).

### City Wide Housing Strategy

In this approach, all the stakeholders of the nation; the local and the national governments, the financing agencies, the supporting NGOs, the technical groups and the communities themselves, involve in the process to find out the collaborative way and develop the innovative solutions for the improved living conditions.

For example; the ‘Community Mortgage program in Philippines’, the subsidized land and housing program helped squatter communities to buy the land which they had been occupying and provide them the financial support for the and improvement of the infrastructures. The process of buying and registering of the land was done by the supporting NGOs on behalf of the beneficiary communities.

Another example can be taken as ‘Baan Mankong Program’ in Thailand, which was executed by the ‘Community Organization Development Institute (CODA). The CODA is an autonomous public organization under the Ministry of Social Development and Human Security, which encourage the municipalities for the collaboration and co-operation with urban poor community organizations in such upgrading initiatives in several manners (Shah, S. K., 2016).

### Rental Housing

In this approach, rental housing units are made available to the urban poor through a variety of building types by the private sectors as well as the public sectors. The supply of the rental housings are generally facilitated by the private and public sectors in order to fulfill the housing need of the urban poor who cannot afford to by the housing units. Sometime, the rental housing also facilitates the adequate shelter for the people who come to the urban areas for a specific time period of one or two years, for certain jobs or specific works. The ‘National Urban Rental Housing Policy’ has recently been implemented in India. In Nepal, the

formulation of the policy for the rental housing is under process and worked upon. So, the policy about the rental housing is unclear and uncovered issues related to the various aspects of rental housing taking into consideration for the welfare of the tenants and the rent providers (Shah, S. K., 2016).

### Private Sector Housing

In this approach, the housing facilities are provided to the urban poor through the private sector land and housing development schemes. The interventions for providing shelter by the private sector housing companies could be carried out by; provision of 10% of the developed plots as subsidized price through cross-subsidy mechanism by the private developers, within a framework of corporate social responsibility (Shah, S. K., 2016).

### Land Sharing

In this approach, the intervention for the land sharing can be carried out in the following forms, depending upon the characteristics and situation of the settlement:

- The land sharing with the urban families need to be relocated due to the vulnerable living condition in their original settlements.
- The land sharing with the private land owner whose land has been occupied within the informal settlements so that the portion of his land can be returned back to him by arriving at acceptable solutions for both the parties.

After proper planning, some area can be blocked again to free some land for sale to subsidize the project. Through proper planning a certain percentage of the developed land (5%-10%) can be allocated in the land development schemes (land pooling, site and services) for the urban poor families (Shah, S. K., 2016).

### Initiatives undertaken regarding housing during different national plans

The importance of housing and resettlement has been recognized since the beginning of the first development plan of Nepal. The major works carried out regarding housing in different national plans are mentioned in the Table 1.

**Table 1: Initiatives Undertaken Regarding Housing during Different National Plans**

S. N	National Plans of Nepal	Works done regarding housing
1	The First Plan (1956-1961)	<ul style="list-style-type: none"> <li>➤ The resettlement of the farmers of overcrowded area was focused in order to protect the cultivated and fertile agricultural land from being further degraded.</li> <li>➤ Rapti Valley Multi-purpose Project was initiated that was focused on the resettlement.</li> <li>➤ Planning of other resettlement projects were also conducted in the areas such as Tokhu, Birta in Jhapa, Koshi Tappu, Kamal Konch, Teen Patan, Chitwan, Kumari Ko Jhari, Sunwar Tappu and Kailali.</li> </ul>

S. N	National Plans of Nepal	Works done regarding housing
2	The Second Plan (1962-1964)	<ul style="list-style-type: none"> <li>➤ Well-organized shelter was provided to 6,000 people, in 50 thousand acre of land.</li> <li>➤ The co-operative consisting of a rural region with 400 to 500 families having four to five number of villages with one hundred families in each village was proposed.</li> </ul>
3	The Third Plan (1965-1969)	<ul style="list-style-type: none"> <li>➤ The problem of housing was recognized in Kathmandu and Patan.</li> <li>➤ The advance salary for three years was provided to the government employees for the construction of houses.</li> <li>➤ The necessary incentives were provided to the private sectors for constructing 400 new houses for the low income groups in Kathmandu.</li> <li>➤ 51.28 hectares of land was acquired for the new residential plots with the utilities such as water supply, electricity, schools etc. to sell them to the low income groups of people on installment basis.</li> </ul>
4	The Fourth Plan (1970-1975)	<ul style="list-style-type: none"> <li>➤ The problem of housing was recognized in Bhaktapur, along with Kathmandu and Patan.</li> <li>➤ 'Building Department' was re-organized and named as 'Department of Housing and Physical Planning'.</li> <li>➤ 'The Physical Development Plan of Kathmandu Valley' was prepared to guide the policy formulation.</li> <li>➤ Physical development plan of Pokhara, Biratnagar and Birgunj and improvement and development of Bharatpur and Dharan were prepared.</li> <li>➤ Housing development in Kalimati to Balaju corridor of Kathmandu Valley was carried out.</li> <li>➤ Housing development in Pokhara and Biratnagar was carried out.</li> </ul>
5	The Fifth Plan (1975-1980)	<ul style="list-style-type: none"> <li>➤ 55 residential buildings were also constructed for the low income groups of government employees.</li> <li>➤ Survey, studies and sample collection of the local building materials found in and around Dhanakuta, Surkhet, Pokhara, Tansen, Butwal and Bhairahawa were also carried out.</li> </ul>
6	The Sixth Plan (1980-1985)	<ul style="list-style-type: none"> <li>➤ The land use policies and rules were developed and implemented for the housing development sectors in the urban area for the proper and well organized development of the housing.</li> <li>➤ Some residential houses were also built and sold to the low income groups.</li> </ul>
7	The Seventh Plan (1985-1990)	<ul style="list-style-type: none"> <li>➤ It was recognized that the urban population and its annual growth rate was increasing since 1956 to 1985 due to the increase in number urban areas (Town Panchayat). The number of Town Panchayat had increased from 7 to 29 during this period.</li> <li>➤ The 'Department of Housing and Physical Planning' was separated into two departments, namely; Department of Housing and Urban Development, and Department of Building.</li> <li>➤ A total loan assistance of Rs. 35 millions was made available to the Town Development Committees of Dipayal, Bharatpur, Lahan, Jaleswor and Dhulikhel municipalities for housing development projects.</li> <li>➤ Guided Land Development (GLD) projects were also implemented in the targeted areas of Kathmandu, Lalitpur and other few municipalities.</li> <li>➤ The Nepal Resettlement Company was renamed as the 'Rural Housing and Settlement Development Company' to prepare various plans and programs and to be economically self-sustained within a few years.</li> </ul>
8	The Eighth Plan (1990-1995)	<ul style="list-style-type: none"> <li>➤ Settlement facilities were provided to 25,000 families in co-ordination with the poverty alleviation program.</li> <li>➤ 7,000 plots of land were developed under the housing and public service program in the market centers for the low income groups.</li> <li>➤ The existing laws related to the housing and land development was revised and necessary laws were made to regulate the sale and purchase of lands, construction of buildings, land tax, construction of houses for rent etc.</li> <li>➤ The repair and maintenance of the existing housings, expansion of water</li> </ul>

S. N	National Plans of Nepal	Works done regarding housing
		supply, sanitation and healthy environment in and around the house premises in low income group areas for 15,000 families were carried out. ➤ The national policy on Housing would be finalized, and attempts would be made to strengthen institutional capability of concerned bodies and co-ordination mechanism for gradual implementation of the policy.
9	The Ninth Plan (1995-2000)	➤ The land development necessary for 14,000 housing plots were launched for developing planned settlements and market centers in different parts of the country through the Rural Housing Company. ➤ A model village development program for 750 families in each of the five development regions to support village development by developing a commodious model village for human habitation. ➤ Cost effective and cheap plots were provided to 50,000 families of backward, minorities of the society, landless farmers and genuine squatters.
10	The Tenth Plan (2000-2005)	➤ Five areas were developed as pilot program of high density settlement of 10 to 15 families in each group. ➤ Group housing and joint housing development were carried out in four cities by involving the private sectors, and housing loans were provided to 1199 families.
11	The Eleventh Plan (2007-2009)	➤ Rs. 245.50 millions of the budget was allocated for the housing sector development programs, which included the different programs such as the construction and distribution of cost effective housing, rehabilitation of displaced families, land and housing development programs to fulfill the housing demand, physical improvement of housing by using earthquake resistance technology, model settlement development program, physical environment improvement program in squatter settlements, subsidized loans to poor families through finance companies etc.
12	The Twelfth Plan (2010-2012)	➤ 4850 units of low cost housing were constructed for the poor, disadvantaged and excluded groups under the People Housing Program (i.e. <i>Janata Awash Karyakram</i> ). ➤ Reconstruction of the buildings damaged during the political dispute, construction of the government buildings, implementation of land development program in Kathmandu Valley and other municipalities, strengthening of buildings according to the National Building Codes was also done.
13	The Thirteenth Plan (2013-2015)	➤ 2237 units of low cost housing were constructed for the poor, disadvantaged and excluded groups under the People Housing Program. ➤ 130 housing units were constructed for the urban poor groups.

(Source: NPC Reports)

Although the housing has been identified as an important sector since the implementation of the first plan in 1956 in Nepal, they were more focused towards fulfilling the housing need for the government offices and quarters only, till the fifth plan. The sixth plan (1980-85) had made some initiations for fulfilling the housing need for the low income group for the first time in Nepal. During the sixth plan the land use policies and rules were developed and some residential houses were also built and sold to the low income group of people.

#### The Fourteenth Plan (2016 – 2018)

There are altogether 47, 67,000 residential buildings in Nepal in which 54,27,000 families reside. Among them, 85.26% of the families reside in their own house while 12.81% families reside on rent. So regarding the housing and building sector, the long term vision of the fourteenth plan is to provide the housing

which is safe and affordable for all by encouraging and activating the private sectors (NPC, 2016).

The main objectives of the fourteenth plan for the housing and building development are as following:

1. To construct and develop the building which is safe, economic, environmental friendly and earthquake resistance.
2. To promote the housing that is safe, economical and affordable for all income groups of people.

During the fourteenth interim plan, it is expected to construct 20,000 housing units for the poor and excluded groups through the 'People Housing Program' i.e. *Janata Awash Karyakram*. 14 numbers of special housing, housing for old aged people and community housing will be constructed. Similarly, 70

numbers of integrated settlement will be developed (NPC, 2016).

### **National Shelter Policy 2012**

The Ministry of Housing and Physical Planning of Nepal Government published and implemented the National Shelter Policy in 1996 for the first time, on the basis of detailed survey and study of about two years, in order to develop the housing facility in a planned way. Although this policy had tried to address the housing need for the people to a considerable extent, it was silent about many emerging problems related to the housing need. In this National Housing Policy 1996, the policy for the rural and urban areas was not mentioned separately in a clear manner. The housing problem for the poor and deprived families of the rural areas was also not mentioned. Similarly, this policy was also silent about the housing problem for the families living on rent in the urban areas, and the responsibility of the state was also not mentioned in a clear manner. Likewise, the interest of the land owners was not addressed in the land pooling program, due to which it was beyond the access of the general people. This policy was also not able to address the housing problem of the low income group of people settling in the urban areas (NSP, 2012).

Considering all these problems, this policy was revised in 2012, and as a result, the National Shelter Policy 2012 was introduced in order to manage the housing problem in an effective way.

The long term vision of the National Shelter Policy 2012 was to provide housing, which safe, adequate and as per living standard, to all. There were three main objectives of the National Housing Policy 2012, which are listed below (NSP, 2012):

1. To increase the housing production, suitable to all income groups, safe and environment-friendly, and to upgrade the quality of existing housing.
2. To effectively mobilize the financial resources required for the development of housing.
3. To carry out institutional reforms by clarifying the roles of governmental and non-governmental organizations, private sectors and communities.

In order to achieve the first objective mentioned above, the National Housing Policy 2012 has adopted the strategies, according to which the housing has been classified into five categories as mentioned below:

#### **1. Permanent Housing**

It includes the permanent structures for purely residential purpose, the full ownership of which remains with the user.

#### **2. Common Housing**

It includes the multi-storey permanent structures for purely residential purpose, which remains under the common or joint ownership of two or more users.

#### **3. Mixed Housing**

It includes the multi-storey permanent structures for residential purpose, constructed so as to be able to carry out non-residential activities as well.

#### **4. Rental Housing**

It includes the permanent structures for residential purpose, which requires payment of charges for using it and which does not remain under the ownership of the users.

#### **5. Temporary Housing**

It includes the housing, which is made available to the families displaced by the reasons of natural calamities or conflict, before their permanent resettlement, as an immediate relief, and of the types such as huts or camps that may be used only for some time.

### **National Housing Plan 2014**

The National Housing Plan 2014 has been prepared and approved by the Government of Nepal under the initiation of Ministry of Urban Development to provide the practical and objective plans and programs for the next ten years by identifying the necessary and suitable programs in order to achieve the goals and objectives of the National Shelter Policy.

According to the National Housing Plan 2014, 85% of total 5423297 families reside in their own house and 12.81% reside on rent. In urban areas, 56.80% of total 1045575 families reside in their own house and 40.22% of the families reside on rent. Although there are many apartment housings and joint housings being constructed in Kathmandu Valley and other urban areas since last three decades, they are only focused toward addressing the housing problems of the high income groups of the people (NHP, 2014).

It has been estimated that altogether 390000 numbers of housing units will be required for the low income group of people only till 2030. Among these, 90,000 housing units may be fulfilled by addition of floors, and repairs and maintenance of existing houses and 300000 numbers of new housing units will be required to be constructed to fulfill the housing need for the low income groups of people (NHP, 2014).

In order to fulfill this need of housing for the low income group of people, the National Housing Plan 2014 has proposed the following programs for the next ten years:

**Table 2: Programs Proposed in the National Housing Plan 2014 to fulfill the Housing Need of Low Income Groups**

S. N	Program Description	Unit	Target
1	People Housing Program i.e. <i>Janata Awash Karyakram</i> (3,000 units per year)	Residential Building	30,000
2	Housing for poor families residing in slums and squatters according to Millennium Development Goal (100 families per year)	Families	1,000
3	Apartment housing for urban poor (25 families in 10 cities per year)	Families	2,500
4	Co-operative housing program (500 families per year)	Families	5,000
5	Housing facility program through rehabilitation center (100 units per year)	Person	1,000
6	Low cost rental housing program	Families	5,000
7	Private housing program (1000 developed residential plots per year)	Developed residential plots	10,000
8	Addition of floors and repair and maintenance of existing residential houses	Residential houses	1,10,000
9	Construction of private houses	Residential houses	2,25,000
Total			3,90,000

(Source: NHP, 2014)

The proposed ten years programs have been prepared by dividing the housing facilities under the following three sectors:

1. Housing facility through institutional sector (specially for low income groups)
2. Housing facility operated by private sector
3. Capacity building for housing sector

#### Initiatives Undertaken for fulfilling the housing need in Nepal

Like other developing countries, Nepal has also recognized the problem of housing need for the low income group of people according to which several initiatives for the fulfillment of the housing need have been undertaken since long ago. However these attempts are of small scale compared to the scale of the increasing housing problem of the people.

Several models of land development programs were launched in the mid seventies such as Site and Services (S&S), Guided Land Development (GLD) and Land Pooling (LP), by the Nepal government. These programs were conducted within the legislative framework in the form of Town Development Act 2045 (1988). Although these programs achieved a considerable progress in serving a population of the urban areas, with 7665 developed plots, they were meant only for the middle and high income groups of people and as a result, the low income groups were still far away from the access of the adequate housing facilities (Malla, 2004). Although the private housing companies, the commercial banking sector and other agencies are playing an active role for providing the housing facilities in the urban areas, they are more focused on the high and middle income groups of people rather than the low income groups.

#### People Housing Program (Janta Awash Karyakram)

The 'People Housing Program (PHP)' also known as '*Janta Awash Karyakram*' has been launched in 2009, by The Department of Urban Development and Building Construction (DUDBC), Ministry of Physical Planning and Works of Nepal Government. This

program has been initiated in order to meet the objectives set by the Interim Constitution 2006 of Nepal. The Nepal Government included the program in its budget of fiscal year 2009/10. The main objective of this program is to provide access to the adequate housing facility for the poor and excluded groups of the society. In order to meet this objective and to implement the program in an effective way, first of all 'People Housing Program Working Policy 2006' was prepared which provided a well planned and structured procedures for the beneficiaries selection, fund disbursement and institutional mechanism for the execution of the program. The Nepal Government allocated the budget of NRs. 300 million in 2009 for the execution of the program by constructing the low cost housing units for the excluded groups (*dalits*) and disadvantaged Musalmans of the three districts; Saptari, Siraha and Kapilbastu. Initially, the project had targeted to construct 1,000 housing units in each of the three districts by the end of fiscal year 2010/11. However, the construction work of 999 housing units in Saptari district, 848 units in Siraha district and 426 units in Kapilbastu were initiated, among which 999 housing units in Saptari district, 324 housing units in Siraha district and 80 units in Kapilbastu district were completed by the end of fiscal year 2010/11 (DUDBC, 2011).

Then after, the program was continued and expanded in other districts also. The program has been implemented in 33 districts, and a total of 5,981 number of housing units have been constructed, whereas 2,388 housing units are under construction till the end of fiscal year 2014/15.

The plinth area of each housing unit is 30.16 sq. m., comprising of two rooms with a verandah and a small cooking space. The cost of each housing unit is NRs. 1,49,280.00, among which the beneficiaries have to contribute NRs. 10,000.00 in term of cash or kind and the remaining amount is distributed directly to the account of the beneficiaries as a grant from the Government of Nepal (GoN).



**Photo 1: People Housing Program, Rupandehi**  
(Shah, S.K., and Mishra, A.K., 2018)



**Photo 2: People Housing Program, Chitwan**  
(Shah, S.K., and Mishra, A.K., 2018)

### Lumanti Housing

Lumanti is a non-government organization dedicated to the poverty alleviation in Nepal, through the improvement of housing condition for the poor people. Its establishment is related with the first national workshop on 'The issues of squatter settlements' organized in 1990. The key person for organizing this workshop was Dr. Ramesh Manandhar, who died in a Thai airbus crash in 1993. In order to take forward his dream of 'secure shelter for the poor', the Lumanti was established in 1993, which literally means the 'memory' in *Newari* language.

The vision of Lumanti is to 'make safe, secured and sustainable communities where people have their rights respected leading to a dignified life'. Its goal is to 'provide secured housing through sustainable enhancement of living condition of the poor through social, physical and legal transformation (LUMANTI, 2008).

The Lumanti has been established with a mission to alleviate poverty and hardship through

advocacy and improvement in housing and socio-economic conditions including access to WASH facilities. Realizing the problem of housing services faced by many low income groups of people, Lumanti has been initiating many housing programs in many urban centers of Nepal, since its establishment. In association with the municipalities, the Lumanti has currently launched a 'Program for improvement of the housing and living condition of the urban poor in Nepal'. It is also facilitating the role in aiding two individual dwellers federation in 30 districts in securing housing rights for the poor communities in Nepal. The Slum Upgrading Forum, an informal network of the organizations involved in slum and squatter improvement, initiated by Lumanti, has also been set up and meeting is held occasionally to discuss the related issues (UN-Habitat, 2010).

Among the various housing projects launched by Lumanti, some of the major housing projects are mentioned below:

### Ichangu Housing

The Nepal Government brought 20% of allocated land for the urban poor from the Ichangu Land Pooling Project, in which 233 units of cost effective apartments are being constructed. The whole housing project was implemented in two phases. In the first phase, 130 housing units in 3 blocks; B1, B2 and B3 with housing units 40, 45 and 45 respectively were constructed. The construction work of the first phase of Ichangu Housing has been recently completed, where as the second phase of this project, with 103 housing units is ongoing. The buildings of both the phases are of 5 storey, in which RCC frame structure with hollow concrete block as infill material and are being built on the land of 4-3-1-3 (21416.53 sq. m.) for the first phase and 3-4-0-0 (17797.00 sq. m.) for the second phase (Shah, S. K., 2016).

### Housing Program executed by Habitat for Humanity International (HFHI)

The Habitat for Humanity International (HFHI) has been focusing on assisting to solve the housing problem in the rural areas of several districts of Nepal, by working with the local agencies. Their housing module consists of; housing development from a basic module of two rooms with additional one room, and the construction work is carried out by step by step approach promoting the locally available materials with cost effective technology and transfer of knowledge (UN-Habitat, 2010). In 2009, The Habitat for Humanity International worked on 5,000 units of urban slums upgrading project in Kavre district, in the partnership with the local saving cooperatives.

Apart from this, The HFHI has also assisted 1000 families through better housing program, and recently it has planned to construct 1,00,000 housing units over next 5 years in the partnership with the

microfinance institutions, banks, cooperatives and self-help groups (HFH, 2012).

### The UN-HABITAT Resettlement Project

The UN-Habitat carried out the resettlement project for the families affected from the Koshi flood of August 2008 in the Eastern Nepal, funded by UNDP and UN-Habitat, and executed through the collaboration with the local government, communities, the NGOs like Lumanti and HFHI, and the other concerned organizations. The approaches of the project can be summarized in the term of several aspects such as working in partnership, facilitating and supporting the participatory approach and pro-poor approaches (UN-Habitat, 2010).

### Shelter and Local Technology Development Centre (SLTDC) Low Cost Housing Units

The Shelter and Local Technology Development Centre (SLTDC) applied mainly the following technologies to decrease the construction cost of the housing units:

1. The hollow concrete block masonry was used, which was cheaper than traditionally used brick masonry by 37.5%
2. The precast concrete system was used which eliminated the use of huge formwork and economized the construction cost of the RCC slab by 25%. Additionally, it allowed reducing the cost of ceiling plaster economizing the cost by 10%. It also reduced the time taken for the construction work.
3. The masonry projection for doors and windows frame was applied which reduced the cost up to 70%.

Initially, 1 unit of the housing was constructed for demonstration, at Satungal, Kathmandu. Its construction cost was just NRs. 50000000 including the cost of land too (Shrestha, 2011).

### The Ex-Kamaiya Neighborhood

The Ex-Kamaiya has been focused by the Nepal Government and INGOs, after they have been liberalized from slavery system. The Nepal Government facilitated them with the land to construct their houses, begin farming and lead their life freely. Similarly, several INGOs like Action Aid Nepal (AAN) and Habitat for Humanity (HFH) supported the ex-kamaiyas by building the houses for them. The construction cost of each housing unit was NRs. 75,000.00 (\$1,000), excluding the cost of infrastructures such as electricity, toilet, water, roads and drainage.

The management committee was formed including the ex-kamaiyas, which was responsible for channeling of funds and coordinating with the local government to get wood from the forest. Out of 40,000 ex-kamaiyas, 10,000 of them received the small plots of infertile land. Yet the living standard of the ex-

kamaiyas was not improved as it was expected, since providing free land was not enough, additionally the skill development training and interest free loan are also needed to facilitate them with employment opportunities (Shah, S. K., 2016).

### National Housing Company (Rastriya AAwash Company)

The National Housing Company, initially named as 'National Resettlement Company', was established in 1963, with the following main objectives:

- To arrange houses for the homeless, helpless and disaster affected families by securing resources from relevant institutions.
- To promote the planned settlement. The government share is 52% and the remaining 48% for the public subscription. The share for the public share has not been issued yet, and hence it is a fully government owned company. The company is generating its resources from the sale of housing plots and has made provision for the development and general expenditure also. Although the Nepal Government does not make the regular budget available, the encroached public land is used to launch the housing and market area development program.

The conditions for the cost recovery include; the beneficiary has to pay back the cost of the house within 10 years period i.e. maximum 120 installment in monthly basis. If an individual fails to pay 5 installments continuously, the company takes the late charge and if in case it is found to be ignored, the house is transferred in the name of the new beneficiary. Nepal government has now proposed to expand the scope of the company in the urban areas too.

The National Resettlement Company completed ten resettlement projects in seven districts till 1989 by converting the forest areas into the productive farmland. 19076 families in total were resettled in 26347 hectares of land in 26 years from its establishment. In 1989, the National Resettlement Company was re-organized and named as Rural Housing Company. The Rural Housing Company has been running the five major projects in the following areas of Nepal:

1. Kakarvitta, Jhapa
2. Kavrepalanchowk
3. Nabalparasi, Makar
4. Bardia, Tara Tal
5. Kanchanpur, Parasan, Tribhuwan Basti

In 2012, the Rural Housing Company realized that it was necessary to expand its activities in the urban areas too. Accordingly, the company was affiliated through the Ministry of Urban Development and the office of the Company Resister, and it was restructured and named as 'National Housing Company (i.e. Rastriya Awash Company)'

**People Housing Program Implementation Guideline**

In order to implement the people housing (*Janata Awash Program*) in the selected settlements, the 'People Housing Program Implementation Guideline 2009' was approved by GoN, Ministerial cabinet on the date 2066/11/05. It has six sections and 23 clauses with

4 annex. Till the date of approval It has been amended four times by GoN, Ministerial cabinet meeting on different dates. Finally, province 5 of Nepal has also revised the 'People Housing Program Implementation Guideline 2073' and named as 'Province No 5 People Housing Program Implementation Guideline 2075'.

**Table 2.1: Revision in People Housing Program Implementation Guideline 2009**

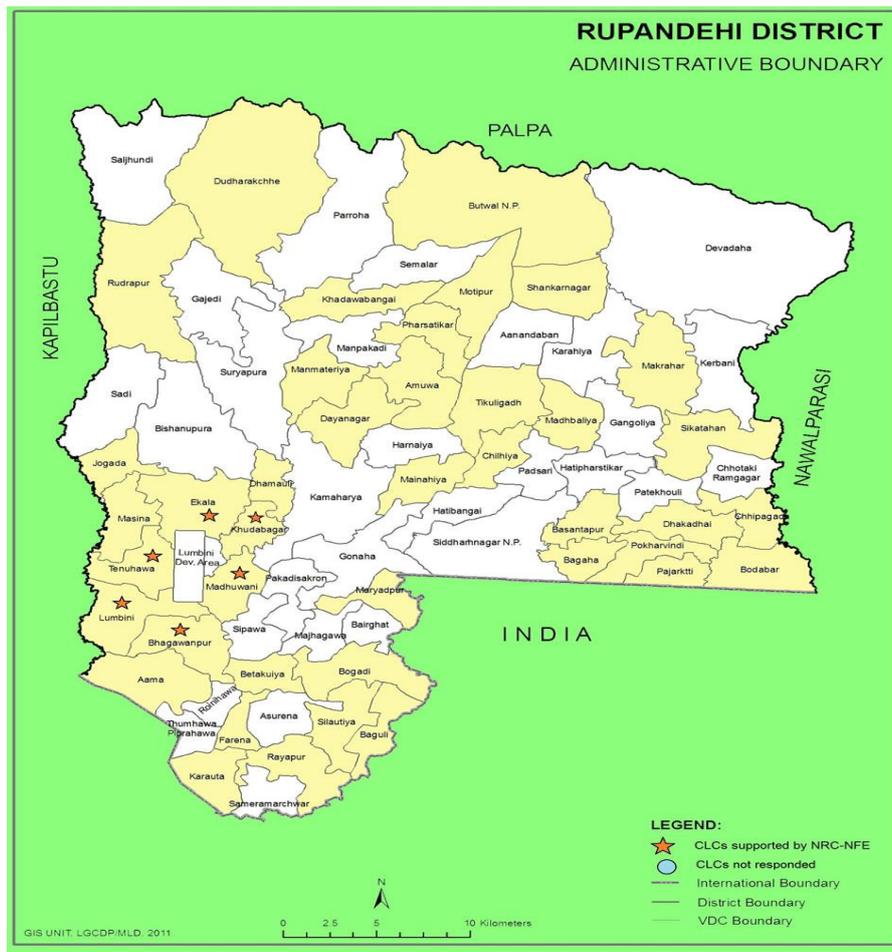
Amendment Serial No	Name after amendment
1	People Housing Program Implementation Guideline 2068
2	People Housing Program Implementation Guideline 2069
3	People Housing Program Implementation Guideline 2071
4	People Housing Program Implementation Guideline 2073
5	Province No 5 People Housing Program Implementation Guideline 2075

**RESEARCH METHODOLOGY**

**Study Area**

In Rupandehi, program is widely spread in to large area within (17 VDC and 4 Municipality before rearrangement of local levels). Study areas are those areas where program is scattered. Study areas are listed below and shown on Photo 3 (DUDBC R. D., 2076).

- |               |                 |                |               |
|---------------|-----------------|----------------|---------------|
| 1. Devdaha    | 5. Bodhabar     | 9. Sktahan     | 13. Mainahiya |
| 2. Tilottama  | 6. Karauta      | 10. Bagaha     | 14. Hatbangai |
| 3. Sainamaina | 7. Dhakadhahi   | 11. Basantapur | 15. Binupura  |
| 4. Lumbini    | 8. Pokharbhindi | 12. Bogadi     | 16. Suryapura |
|               |                 |                | 17. Rayapur   |



**Photo 3: Map of Rupandehi**  
 Source: <http://ddcrupandehi.gov.np/en/district-profile>

### Population Selection and Sampling

A sample is a part of the population that was actually examined in order to gather the information of the whole population.

For this study, the files related to *Janata Awash* Program being implemented in Rupandehi will be reviewed at UDDBO Rupandehi. Moreover diversified types of respondent will be selected. The respondent will be present and former Senior Divisional Engineers, Engineers, Sub Engineer, Social Mobilizer, Section Officer from DUDBC Rupandehi division, UDDBO

Rupandehi and Ministry of Physical Infrastructure Development, Province No 5.

Local Leaders under concern local authority, selected beneficiaries, Non Selected Applicants and Construction Not Started Applicants are selected as respondents.

Out of total population total no of sample size selected for primary data collection is 99 as shown below in table 3. Five set of questionnaire for different group of respondents shall be prepared and distributed.

**Table 3: Respondents of Primary Data for the Questionnaire Survey**

S. N	Category of Respondents	Number	Percentage
1	Implementation Level Staff	11	11.11
2	Local Leaders	14	14.14
3	Beneficiaries Under Construction/Complete Construction	50	50.51
4	Non Selected Applicants	15	15.15
5	Construction Not Start Applicants	9	9.09
	Total	99	100

### Data Collection

To fulfil the objective of the study, the questionnaire survey as well as the consultation with the concerned experts and with the local people have been carried out which provide the primary data for the study. Similarly, the interview with the concerned government agencies (DUDBC, Ministry of Physical Infrastructure Development etc.), policy makers and implementers have been also been conducted which yield the primary data required for finding out the appropriate approach to fulfil the housing needs for the low income groups, at the reasonable cost.

Apart from the primary data, the secondary data have been also obtained to fulfil the objective of the study. For this purpose, the study of different factors affecting the appropriate method for the fulfilment of the housing need for the poor *musalmans* and *dalits* have been also be carried out.

### Data Analysis

Regarding the second and third objective of the study, the hierarchy of the important factors influencing the housing needs, and appropriateness of the methods for the fulfillment of the housing need were identified using the Relative Importance Index (RII). The participating respondents have provided

numerical scoring expressing their opinions on the degree of importance of each Indicator. The data collected were analyzed using various statistical methods. The relative importance of the different option have been identified using the relative importance index (Aibinu and Odeyinka, 2006).

$$RII = \sum_{i=1}^5 \frac{W_i X_i}{A \times n} \text{ or } \frac{\text{Average Importance}}{5} \times 100\% \text{ (Mishra, A.K., 2019)}$$

Where,

$W_i$  =the weight given to the  $i$ th response:  $i=1, 2, 3, 4, 5$ ,

$X_i$  = frequency of the  $i$ th response,

$A$  = the highest weight (5 in this study), and

$n$  = the number of respondents.

The analytical research was helpful to find out the number of housing units required to be built for the fulfilment of the housing need in Rupandehi for *dait* and poor *musalman*.

Earned value analysis was carried out to find out the relation between the financial progress and physical progress. Data obtained from Ministry of Physical Infrastructure Development Province No5 was used for this analysis (MOPID.P5, 2076).

Planned Value(PV)
Earned value(EV)=value of the % of work complete
Actual cost(AC)
BAC
Cost variance (CV)=EV-AC
Schedule Variance(SV)=EV- PV
Cost Performance Index(CPI)=EV/AC
Schedule Performance Index(SPI)=EV/PV=
If there is no variance at all:

Estimate at Completion (EAC)=BAC
Estimate to Compete(ETC)=EAC-AC
If there is no variance and it is expected to continue:
Estimate at Completion (EAC)=BAC/CPI
Estimate to Compete(ETC)=(BAC/CPI)-AC
If there is variance ,but now it's gone:
Estimate at completion(EAC)=AC+BAC-EV
Estimate to Compete(ETC)=BAC-EV
Variance at Completion (VAC)=BAC-EAC
i. If there is no variance at all:
VAC=BAC-EA
ii. If there is no variance and it is expected to continue:
VAC=BAC-EAC
iii. If there is variance ,but now it's gone:
VAC=BAC-EAC
Total Cost Performance Index(TCPI)=(BAC-EV)/(EAC-AC)
i. If there is no variance at all:
To Complete Performance Index(TCPI)=(BAC-EV)/(EAC-AC)
ii. If there is no variance and it is expected to continue:
To Complete Performance Index(TCPI)=(BAC-EV)/(EAC-AC)
iii. If there is variance ,but now it's gone:
To Complete Performance Index(TCPI)=(BAC-EV)/(EAC-AC)

Note: BAC= Budget at Completion

## RESULT AND DISCUSSION

### Suitable Approaches

Numerous strategies have been suggested to solve the urban low-income populations' housing needs. However, the crucial methods for addressing the housing needs of low-income groups in the Kathmandu Valley have been taken into account in this study, including: enhancing the physical infrastructure of the existing housing (on-site upgrading), building one's

own new home elsewhere (relocation), the government's construction of new public housing, providing land at a reduced price with planned basic infrastructure services (site and services), and working with non-governmental organizations for the purpose of The Relative Importance Index has also been used to determine the best methods for meeting the low-income housing needs.

**Table 4: Different Approaches for Fulfilling the Housing Need**

S. N	Approaches	NSA		CNSA		Average Importance	
		RII	Rank	RII	Rank	RII	Rank
a	Improvement of the physical infrastructure of the existing housing (On-site upgrading).	84	1 <sup>st</sup>	88	1 <sup>st</sup>	86	1 <sup>s</sup>
b	Construction of own new house at another place (Resettlement)	48	3 <sup>rd</sup>	36	3 <sup>rd</sup>	42	3 <sup>rd</sup>
c	Construction of new public housing by the government	58.667	2 <sup>nd</sup>	48	2 <sup>nd</sup>	53.33	2 <sup>nd</sup>
d	Providing land at subsidized rate with planned basic infrastructure services (site and services)	4	4 <sup>th</sup>	36	3 <sup>rd</sup>	20	4 <sup>th</sup>
e	Collaboration with NGOs for the subsidized loan for constructing new house.	0	5 <sup>th</sup>	2	4 <sup>th</sup>	1	5 <sup>th</sup>
f	Rental Housing	0	5 <sup>th</sup>	2	4 <sup>th</sup>	1	5 <sup>th</sup>
g	Private Sector Housing	0	5 <sup>th</sup>	2	4 <sup>th</sup>	1	5 <sup>th</sup>
h	Land Sharing	0	5 <sup>th</sup>	2	4 <sup>th</sup>	1	5 <sup>th</sup>

This result of RII based on different approaches fulfilling housing need was found as drastically different from the Kathmandu valley. Improvement of the physical infrastructure of the existing housing (On-site upgrading), Construction of

new public housing by the government and Construction of own new house at another place (Resettlement) are the best top three important approaches for fulfilling the housing need of poor muslimans and dalits in Rupandehi.

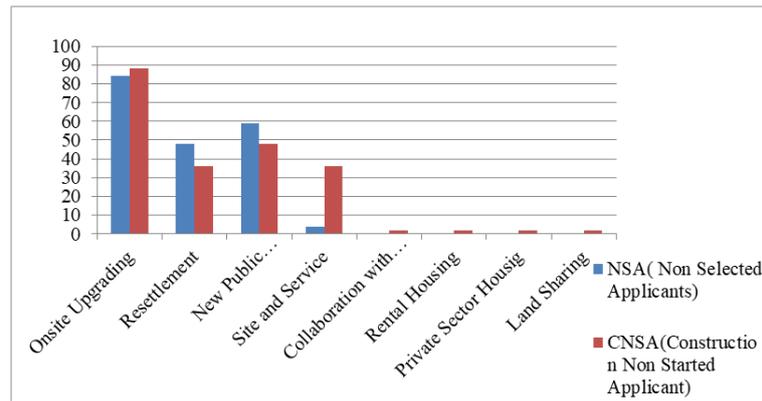


Figure 1: Different Approaches for Fulfilling the Housing Need

### Work Progress and Implementation Status

#### Status of user committee

Among 500 numbers of total selected applicants 448 numbers of applicants joined on different construction having committee members

ranging from 5 to 18. In second phase also among 138 numbers 124 numbers joined on different user committee as same process of phase i based on Implementation Guidelines of Janata Awash Program. Details are shown below on table 5 and 6.

Table 5: Working through Status of Phase I

Rupandehi Phase I			
Total Houses No.	Worked through User Committee	Worked through single beneficiaries	Cancelled
500	448	4	52

(Source: UDBO, Rupandehi)

Table 6: Working through Status Phase II

Rupandehi Phase II			
Total Houses No.	Worked through User Committee	Worked through single beneficiaries	cancelled
138	124	11	13

(Source: UDBO, Rupandehi)

Cause of cancelations and details of progress of single applicants are documented and presented on annex. There are around 58 numbers of user committee expressed their view the process of implementation of through user committee is very much effective and they felt very easy to work on group

#### Jati Wise Selected Detail of Applicants in Phase I

The details of Jati wise distribution of applicants in phase I of program based on distribution area are presented below on Table 7.

Table 7: Total Applicants Status of Janata Awash Karyakram in Rupandehi

S. N	Location	Total Applicants No's	Selected Applicants No's	Hindu Selected Applicants	Musalmans Selected Applicants
1	DEVDAHA	281	60	57	3
2	TILIOTTAMA	165	29	28	1
3	SAINAMANA	184	43	43	0
4	LUMBINI	338	85	50	35
5	BODHABAR	261	63	55	8
6	DHAKADHAI	78	17	12	5
7	POKHARBHINDI	32	5	2	3
8	SIKTAHAN	144	36	32	4
9	BAGAHA	62	11	7	4
10	BSANTAPUR	32	8	6	2
11	MAINAHIYA	66	13	11	2
12	HATIBANGAI	56	7	7	0
13	BISNUPURA	80	22	16	6
14	SURYAPURA	91	22	19	3
15	BOGADI	82	20	20	0
16	RAYAPUR	68	19	17	2
17	KARAUTA	194	40	23	17
	Total	2214	500	405	95

(Source: UDBO, Rupandehi)

**Area Wise Implementation Status of Phase I**

Area wise implementation status and progress report of Janata Awash Program of phase (I) are shown in table 8.

430 numbers of houses are completely constructed and handover to the related households, 3

numbers of houses are under construction and rests of 500 are cancelled. Among canceled houses 18 numbers of houses are selected and again started to construct through second phase and still on implementation phase.

**Table 8: Area Wise Implementation Status and Progress Report of Phase I**

SN	Location	Total Applicants No's	Selected Applicants No's	Progress Status				Cancelled due to different reason
				DPC	Wall	Roof	All completed	
1	DEVDAHA	281	60				49	11
2	TILIOTTAMA	165	29				22	7
3	SAINAMANA	184	43				40	3
4	LUMBINI	338	85		1		76	8
5	BODHABAR	261	63				57	6
6	DHAKADHAI	78	17				7	10
7	POKHARBHINDI	32	5		2		2	1
8	SIKTAHAN	144	36				34	2
9	BAGAHA	62	11				11	0
10	BSANTAPUR	32	8				8	0
11	MAINAHIYA	66	13				11	2
12	HATIBANGAI	56	7				0	7
13	BISNUPURA	80	22				13	9
14	SURYAPURA	91	22				22	0
15	BOGADI	82	20				19	1
16	RAYAPUR	68	19				19	0
17	KARAUTA	194	40				40	0
	Total	2214	500		3		430	67

(Source: UDBO Rupandehi)

**Election Area wise Selected Applicants distribution in Phase II**

During panning of second phase, program is planned to distribute in all election area and total no of

houses to be constructed on different election areas were decided first as shown below on Table 9. This table also shows the number of *hindus* and *musalmans* selected numbers of household.

**Table 9: Selected Applicants Distribution in Phase II**

S. N	Election Area No	Hindu	Musalmans	total
1	1ka	8	2	10
2	1kha	6	4	10
3	2ka	10	0	10
4	2kha	0	0	0
5	3ka	0	0	0
6	3kha	6	2	8
7	4ka	14	6	20
8	4kha	20	0	20
9	5ka	28	2	30
10	5kha	18	12	30
	Total	110	28	138

(Source: UDBO Rupandehi)

**Election No Wise Implementation Status and Progress Report of Phase II**

In second phase among 138 selected numbers of beneficiaries, 13 numbers of houses are canceled, one houses is on DPC complete phase, another is also on wall complete phase, 76 numbers of houses are on

the phase of roof completion, finally 53 numbers of houses are on the phase of toilet completion and finally three number of houses are ready to hand over until last of the fiscal year 2075/76. Details of elections wise progress status is shown below on Table 10.

**Table 10: Election no Wise Implementation Status and Progress Report of Phase II**

S. N	Election Region No.	Total Houses	DPC completed	Wall completed	Roof Completed	Toilet completed	All completed	No. of Not started houses
1	1(1)	10	1		1	4	3	1
2	1(2)	10			1	6		3
3	2(2)	10			1	5		4
4	3(2)	8			4	4		
5	4(1)	20			12	8		
6	4(2)	20			10	10		
7	5(1)	30		1	19	6		4
8	5(2)	30			19	10		1
	Total	138	1	1	67	53	3	13

(Source: UDDB Rupandehi)

**Work Progress and Implementation status of UDDB Rupandehi**

The total implementation status and progress of Rupandehi, Kpilbastu, Argakhanchi, Palpa,

Nawalparasi (Susta-West) up to Fiscal year 2075/076 implemented through UDDB Rupandehi is shown below on Table 11.

**Table 11: Total Work Progress and Implementation Status of UDDB Rupandehi**

Building Office Rupandehi	
Progress Level	No of Housing Units
Plinth level completed	18
Wall Level completed	14
Roof work Complete	76
Toilet work Remained	405
All Completed	1134

(Source: UDDB Rupandehi)

**Financial Mobilization****Financial mobilization of Fiscal Year 2075/076**

As per the data obtained from the Ministry of Physical Planning and Infrastructure Development

province No 5, financial progress and physical progress and budget details are shown below on Table 12.

**Table 12: Financial Status of Janata Awash Program in Rupandehi**

Program Name	Allocated Budget	Spent Budget	Financial Progress	Physical Progress
Janata Awash Program	Rs 74774000	Rs 45877800	61.63%	75%

(Source: MOPID Province No 5)

**Financial Mobilization and Payment Stage****Table 13: Financial Mobilization Stage Phase I**

I phase 2073/074 Program	
Financial Mobilization Stage	Amount in Rs
First Installment	53810
Second Installment	64570
Third Installment	75330
Final Installment	21529
Contingencies	10761
Total	226000

(Source: UDDB Rupandehi)

**Table 14: Financial Mobilization Stage Phase II**

II phase 2075/076 Program	
Financial Mobilization Stage	Amount in Rs
First Installment	83125
Second Installment	99750
Third Installment	116375
Final Installment	33250
Contingencies	17500
Total	350000

(Source: UDDB Rupandehi)

Above Table 13 and 14 clearly showed the installment details of program during implementation stage of both phase I and II. First installment is provided to beneficiaries after the work completion of plinth level and simultaneously other installments are provided after the completion of wall erection ,roof

completion and finally successfully construction of toilet and set up windows and door.

#### Financial Status Based on Election Area

Payment for new agreement, Payment for old agreement, total allocated budget in F/Y 2075/076 and remaining in allocated budget details based on different election area are shown clearly below on Table 15.

**Table 15: Election Area Wise Amount Spent to Users in Phase II of Rupandehi**

S. N	Election Region No.	Total Houses	Payment for new agreement	Payment for old agreement	Total Allocated Budget in F/Y2075 -76	Remaining in Allocated Budget
1	1(1)		5449085	1320183	45315696.00	736345
2	1(2)		2034900	235369		232750
3	2(2)		1879225	395211		199500
4	3(1)		1197000	41980		133000
4	3(2)		2394000	82200		232750
5	4(1)		5985000			665000
6	4(2)		5985000			665000
7	5(1)		8079750	164540		897750
8	5(2)		9875250	197003	1097250	
	Total		42879210.00	2436486.00		4859345.00

(Source: Anjay Kumar Mishra, Aithal, P. S. and Hamid Saremi (2020:))

#### Earned Value Analysis of Program

This study demonstrates that the best strategy for meeting the housing needs of low-income people is rental housing. According to information from the Ministry of Physical Infrastructure Development, the allocated and spent budgets for F/Y 2075–76 were respectively Rs. 74774000 and Rs. 45877800. Financial improvement was determined to be 61.63% while physical progress was found to be 75%.

discovered to be Rs 10202700 and the schedule variation was determined to be Rs -18693500, indicating that the program is running behind schedule.

When the CPI value is more than 1, as it is in this case when it is 1.223, the project is said to be under budget.

In this PHP application, the cost variance was

**Table 16: Earned Value Analysis**

AS per data from Ministry of Physical Infrastructure Development					
Allocated Budget=		74774000			
Spent Budget=		45877800			
Physical Progress=		75%			
Financial Progress=		61.63%			
Project Duration=12 months					
Planned Value(PV)=		74774000			
Earned value(EV)=value of the % of work complete=					56080500
Actual cost(AC)=		45877800			
Budget at completion(BAC)=	74774000				
Cost variance (CV)=EV-AC=			10202700		
Schedule Variance(SV)=EV-PV=			-18693500		
Cost Performance Index(CPI)=EV/AC=				1.22389	
Schedule Performance Index(SPI)=EV/PV=				0.75	
If there is no variance at all:					
Estimate at Completion (EAC)=BAC=				74774000	
Estimate to Compete(ETC)=EAC-AC=				28896200	
If there is variance and it is expected to continue:					
Estimate at Completion (EAC)=BAC/CPI=				61170400	
Estimate to Compete(ETC)=(BAC/CPI)-AC=				15292600	
If there is variance ,but now it's gone:					
Estimate at completion(EAC)=AC+BAC-EV=				64571300	
Estimate to Compete(ETC)=BAC-EV=				18693500	
Variance at completion(VAC)=BAC-EAC					
i. If there is no variance at all:					
VAC=BAC-EAC=		0			

ii. If there is variance and it is expected to continue:						
VAC=BAC-EAC=		13603600				
iii. If there is variance, but now it's gone:						
VAC=BAC-EAC=		10202700				
Total Cost Performance Index(TCPI)=(BAC-EV)/(EAC-AC)						
i. If there is no variance at all:						
To Complete Performance Index(TCPI)=(BAC-EV)/(EAC-AC)=						0.646919
ii. If there is variance and it is expected to continue:						
To Complete Performance Index(TCPI)=(BAC-EV)/(EAC-AC)=						1.222389
iii. If there is variance ,but now it's gone:						
To Complete Performance Index(TCPI)=(BAC-EV)/(EAC-AC)=						1
Note: All amounts are in Rs.						

Anjay Kumar Mishra, Aithal, P. S. and Hamid Saremi (2020):

## CONCLUSION

From the research study, following conclusions are made:

- Different approach for fulfilling their housing need are Improvement of the physical infrastructure of the existing housing (On-site upgrading), Construction of new public housing by the government, Construction of own new house at another place (Resettlement), Providing land at subsidized rate with planned basic infrastructure services (site and services), Collaboration with NGOs for the subsidized loan for constructing new house respectively to importance and people are not interested for Rental Housing, Private Sector Housing, Land Sharing approaches.
- The major problem in planning process of *Janata Awash Karyakram* is found as; Low budget more number of beneficiaries, Lack of awareness on the part of beneficiaries, Beneficiaries not interest for contribution, Difficulties in identifying beneficiaries respectively. Whereas the major problem in implementation phase are time overrun, cost overrun, and problems in quality achievement respectively.
- After study, we found the construction user committee plays the vital role for the successful implementation of program. 448 and 124 no of beneficiaries are under different construction committee and among them 430 houses already constructed up to last fiscal year. Rests of them are on implementation phase except 34 and 13 no of houses. Whereas four user in I phase and 13 user in II phase are constructing their houses separately.
- People really happy from program and they wants to say thanks to government but expressed their view about house size if slightly large with separate kitchen (especially in *musalmans*) will be far better.
- After study it also shown that the physical progress is greater than financial progress but earned value analysis shows that program is behind the planned schedule.

## RECOMMENDATION

- It may not be possible to build new houses for everyone, from the alternative approaches deduced

from our research study to address their housing needs; new programs can be launched for long term resolution to this issue.

- In tasks assigned to users committee, because of incapability or inefficiency of a single member, programs are turning ineffective, so management should be improvised and strengthened.
- As per our study on earn value analysis, delay is significant and behind the schedule. With physical and financial progress at stake and time management in consideration, with sufficient resource allocation, resource management, enhancing technical expertise, boosting awareness among locales, organizing effective mason training sessions , this delay can be substantially reduced.

## Recommendation for Further Study

- A detail study about the cost effectiveness analysis of *Janata Awash* Program houses and level of beneficiary's contribution can also be study on future by interested personals.
- Alternative models and design of major approaches for fulfilling the housing need can be set up and apply to field by any government bodies, NGOs, INGOs and donor agencies in study area.

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