



**BUILDING
CASANEPAL**
Apeiron Onlus



BEING A WOMAN, IN NEPAL

Nepal, a **Least Developed Country** (LDC) characterized by slow **economic growth, socioeconomic underdevelopment, and a low level of human development**, is emerging from a politically and socially fragile post-conflict era, structural poverty and inequality, and deeply entrenched forms of social exclusion.

Despite political commitments and a progressive legal and policy framework, GBV has long been a challenge in Nepal. The 2011 Nepal Demographic and Health Survey (NDHS) revealed that one in five women of reproductive age (15 – 49) reported a lifetime experience of physical violence and more than one in ten experienced sexual violence. 35% of women aged 45-49 had experienced physical or sexual violence in their

lifetime, compared with 21% of women aged 15-19. Disturbingly, GBV is the major reason that suicide is the leading cause of death among Nepali women of reproductive age.

However, **a majority of women who experience GBV (75%) do not seek any help** and only 7% of women who experienced sexual violence reported the assault.

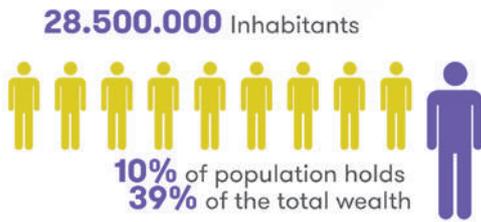
According to a 2014 study, almost 1 in 2 adolescents believed that women should tolerate violence in order to keep harmony in the family; 1 in 6 married girls had experienced physical violence, and 1 in 3 reported being forced to have sex by their husbands.

The level of disempowerment of women in Nepalese society, **their economic**



Nepal in data

Population and wealth distribution



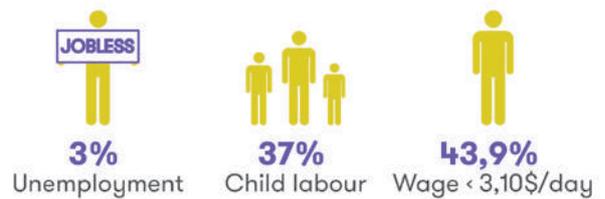
Wealth distribution



Human Development Index



Job and salary



Gender inequality



Education and gender inequality



Maternal mortality



New Mommy age



Sources:

UNDP, "Human Development Report 2016: Human Development for Everyone", 2016
NLSS - Nepal Living Standard Survey, 2011



dependency on men, traditional power structures, the lack of family and legal support, and their subordinate social position are all factors making them particularly vulnerable to GBV.

The Government of Nepal has carried out some positive initiatives in terms of GBV prevention and response. For example, Nepal has ratified many international instruments including the Convention on the Elimination of all Forms of Discrimination against Women (CEDAW) in 1991 and its optional protocol in 2007, and reports to the UN on national implementation status every four years. Despite many governmental efforts, effective implementation remains

questionable when it comes to Action Plans, the enforcement of the laws, and the quality of services provided to GBV survivors. **GBV prevention and response is still an arduous challenge for Nepal.**

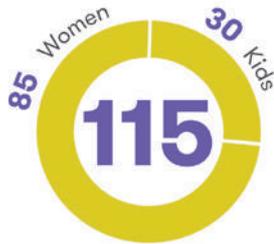
To address this problem, in 2007 Apeiron established **CASANepal**, a safe home to provide Rescue, Rehabilitation, and Reintegration (the three R's) to survivors of GBV. Since its establishment, CASANepal has evolved and added a fourth R, Referral services, in order to provide complete and holistic support to those we serve. CASANepal was started with the main objective to **strengthen existing support systems for survivors of gender based violence and their children.**

CASANepal: a safe home

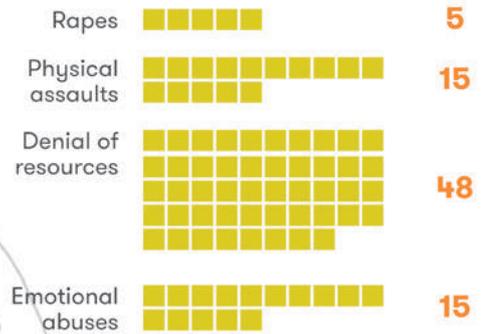
2016 data



CASANepal guests



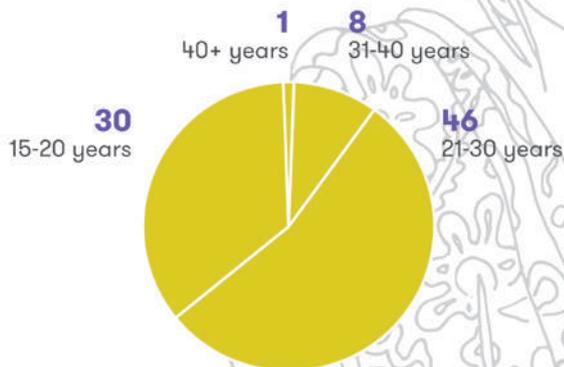
Types of GBV endured by the residents*



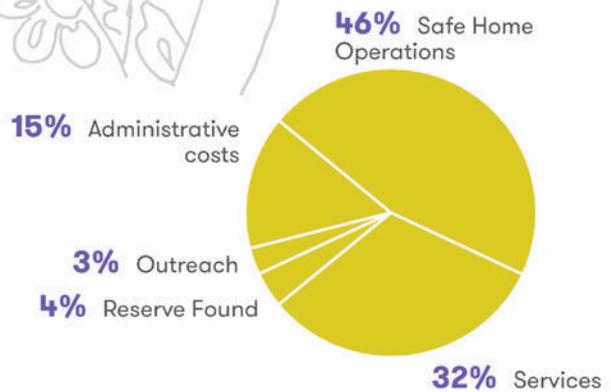
* 2 cases are not officially GBV



Age group of the residents



Financial status and utilization



Reintegration



24 women are still in CASANepal, following their own recovery plan

A SUSTAINABLE BUILDING FOR CASANEPAL

Ten years after CASANepal's start, and based on the results achieved so far, we need to ensure the project's autonomy and sustainability, avoiding exclusive dependence on donors support. CASANepal's operational cost in 2016 was around Rs 7.304.428/ \$ 71.254 which encompassed services for 85 women and 30 children; it has therefore become urgent for Apeiron to ensure its survival and to continuously ensure the high quality of services.

To do so, the first step is to **ensure Apeiron's ownership of the building where survivors are hosted.**

This would allow a significant reduction in management costs, eliminating the cost of rent, which is currently around Rs 1.210.443/\$ 11.800 per year, and would also ensure greater organizational stability by eliminating

the precariousness of poorly regulated lease agreements.

Moreover, the construction of a building exclusively intended to accommodate GBV survivors would allow us to design its form based on function, including space for productive activities to generate income to support the house and residents.

In 2016, Apeiron Nepal bought land on the outskirts of Kathmandu. Apeiron Nepal is a non-governmental and non-profit organization legally registered in Nepal and, therefore, operates under strict constraints on the use of real estate. In particular, the land purchased has been officially registered with the Social Welfare Council, who stipulate that the land is intended for

Nepal - Kathmandu, Mulpani

coordinate geografiche:
27° 42' 48,30" Nord
85° 23' 47,10" Est

Legenda

 Localizzazione Sito Nuova CASANepal

 Localizzazione Sito Nuova CASANepal



the construction of a safe home and cannot be sold or changed in use, except through a complex process that also includes official SWC approval.

After a careful assessment of different professional firms based in Nepal, Apeiron decided to assign the technical drawings, engineering calculations, and the cost estimate of the building to JSA - John Sanday Associates, an Architectural & Engineering Consultancy from Kathmandu.

The requirements for the new building were worked out during an ad hoc FGD (Focus Group Discussion) with the staff who have been running the safe home for the last 10 years, as well as with some beneficiaries who benefit from the current structure, in order to guarantee effective functionality for the future building. JSA then designed the building according to these inputs.

BUILDING FORM

The design for the new CASANepal safe home is taken from traditional Newari architectural style using modern materials and technology.

The buildings are made of bricks with narrow, elongated windows.

The overall project is divided into three separate sections, each with a specific use, and to break up the mass of a single structure. To maximize the energy in the building, the northern section is higher than the other two so that all the rooms in that section receive natural light and sufficient cross circulation of natural air.

The staircase on the western side acts as the link between the three blocks with a common passage.

LOCATION AND CLIMATE

The building makes use of its location and climate both in its vertical form and its spatial layout. The rooms are located along the southern side so that ample natural light is received in workstations during the day. The vertical circulation stairwell is located on the western side with indirect light. The setback of 9,84ft/ 118,11in around the site gives

ample space for light and ventilation to enter the building. The skirt roofs provide shade for the windows and protection against harsh sunlight during summer. The building will be insulated with a cavity wall construction – an energy efficient design. The courtyard design plays an important role as it gives natural light and also provides shade during the summer period.



ENERGY EFFICIENCY

The design explores the opportunity for maximizing the potential use of the daily path of the sun to give natural warmth in the winter, to both interior and exterior spaces, and to provide natural lighting to interior spaces. Every room in the building receives natural light. The vertical and horizontal shading accentuates the interplay of light and shade on the building exterior as well as protecting the interior from glare. Landscaping in and around the building softens the building exterior, and also provides a cooling effect to the interiors.

BUILDING DETAILS

Brick façades are a prominent architectural feature in the Kathmandu Valley. There are different types of traditional bricks used in building construction. Each type of brick has its unique feature and use. The brick structure will be an energy

efficient cavity wall construction.

The outer fair-faced brick walls will be of machine made bricks while the inner brickwork will be normal brickwork with plaster. Brick cornices at floor level are of a typical traditional design in Kathmandu.

All doors will be constructed of timber and all windows will have aluminum frames. Small-width windows have been incorporated into the design to give a sense of the traditional Newari narrow window style. All windows will be double glazed for energy efficiency.

Given the expense of timber construction, the wooden post design will be replaced by metal posts, which are more cost effective and can be painted to look like timber posts with metal capital brackets. A courtyard has multiple uses: it can be used for functions, performances, social gatherings, and many other activities. The courtyard will serve as a

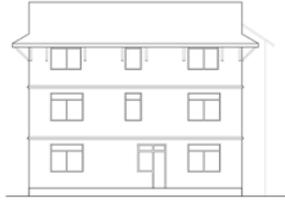




SOUTH ELEVATION



WEST ELEVATION



NORTH ELEVATION



EAST ELEVATION



BLOCK B
SOUTH ELEVATION



BLOCK B
EAST ELEVATION



BLOCK B
NORTH ELEVATION



BLOCK B
WEST ELEVATION

meeting place where people can socialize. Typical traditional roofs are pitched roofs covered with clay tiles, but our design utilizes a pitched roof with coloured CGI sheets on the main building. The other two structures will have flat roofs with skirt roofs. These roof spaces will be used for different community activities.

As the set-back to the building is sufficient, all rooms will receive natural light, as the building is single bay and facing south. The buildings are designed in such a way that the southern light to the buildings is unobstructed.

The main gate leads to the parking area for staff and visitors. The production store is placed just after the parking so that it does not hamper inner circulation while transporting the products from the store. The ground floor of the complex is for general use: i.e. office space, hall,

and ECD room. All the private spaces are on the upper floors which includes rooms for both adults and children and warden room. The courtyard, which can be multi-use for socializing, is an important feature of the design as the women from different locations and cultures can share their feelings and thoughts.

There shall be one main distribution board (MDB) to be installed at basement level for two floors (second and third floor). Each floor shall have one floor distribution board and one sub-distribution board. The electrical supply for the MDB will be taken from the existing main panel board of the building.

An energy management system has been proposed to minimize wasteful use of lights and to make maximum use of natural light. This system can save up to 60% of the lighting energy costs, an important distinction in a city with such





frequent electricity shortage.

The complex is located in zone 5, which is an area of high seismic risk; therefore, there is a need to utilize simple and practical seismic resistant design concepts.

The basis of a good seismic design is to minimize irregularities in the building volume – creating as close as possible a totally symmetrical footprint. In consideration of achieving the optimum degree of safety against earthquakes, the layout of the building's structural elements is symmetrical using a regular grid. Long cantilevered projections are avoided as well as offsets in a vertical and horizontal plan configuration. The total length measures 94,16ft/ 1.130in and the breadth is 52,49ft/ 629,92in, which means the total length and breadth of the building meets

the seismic basic criteria of ratio manner L/B (length/breadth) 1,79 against 3 as per the Nepal building code. Similarly, the building height ratio to its total length, as well as its height to breadth is about 1.35, which is within the permitted code requirements. A 3D model will be analyzed using appropriate computer software for structural design both in linear and non-linear analysis in later design stages.

The infill walls are proposed brick masonry in cement mortar. The numbers of openings are minimized as far as possible not to reduce the lateral strength of the infill wall against seismic resistance. The in-fill walls are proposed to be built with reinforcement at appropriate intervals to avoid tensile cracks in the event of seismic action. Hence, the design system for the whole building is capable of resisting all the

lateral loads caused by an earthquake in addition to the self-loads (the load of the structure itself, the occupants, and the furnishings.). Thus, the building design has considered all the appropriate seismic factors. The structural elements are proposed to have TOR Steel (Fe415) and/or TMT reinforcements. Cement to be used is proposed to be OPC (Ordinary Portland Cement). Concrete casting on the structural elements is proposed to be on M20 ratio and not less than that. All the RCC works other than the structural elements are proposed to be on M15 ratio.

Brick facades with timber doors have been used to show the traditional architecture of Nepal. Even struts and posts have been incorporated to represent local architecture.

However, all the windows which are double glazed for energy efficiency, have wooden coloured aluminum frames. It is proposed that the interior walls will be plastered and painted as per the space requirement. Low height, lightweight partition panels with transparent glass have been proposed in the office areas, which will provide friendly and interactive spaces. The pathways shall be either of telia tile or any other suitable floor tile. The telia tile will make the space more traditional. Flagstone paving has been proposed on the pedestrian walkways, which will merge with the adjacent landscape elements to enhance the ambience of the building's surroundings. The landscape is designed to complement an overall built environment.

OVERALL BUDGET

So far, Rs 20.574.051/\$ 200.566 was spent on land acquisition, property registration and property transfer, border demarcation, soil analysis, and payment of various taxes.

The idea of developing the new CASANepal structure in separate blocks (the three main buildings with several accessory buildings) ensured the possibility of building in stages, thanks to the funds collected earlier.

Below are listed the costs for the realization of the various buildings:

BLOCK A

| EXPENSES | Nepalese rupee | Dollar |
|--|-------------------|----------------|
| Site clearance / mobilization works, earth works | 556.600 | 5.426 |
| Masonry works & partition works | 2.256.862 | 22.001 |
| Concrete works | 4.368.572 | 42.587 |
| Roof works | 1.185.927 | 11.561 |
| Wooden doors works | 605.017 | 5.898 |
| Aluminum windows works | 453.711 | 4.423 |
| Flooring and skirting works | 1.260.913 | 12.292 |
| Finishing works | 2.238.705 | 21.824 |
| Miscellaneous works | 1.561.062 | 15.218 |
| Subtotal | 14.487.674 | 141.233 |
| Subtotal + 13% vat | 16.371.072 | 159.593 |

BLOCK B

| EXPENSES | Nepalese rupee | Dollar |
|--|------------------|---------------|
| Site clearance / mobilization works, earth works | 181.464 | 1.769 |
| Masonry works & partition works | 1.137.509 | 11.089 |
| Concrete works | 2.226.600 | 21.706 |
| Roof works | 320.665 | 3.126 |
| Wooden doors works | 205.673 | 2.005 |
| Aluminum windows works | 411.345 | 4.010 |
| Flooring and skirting works | 520.285 | 5.072 |
| Finishing works | 865.159 | 8.434 |
| Miscellaneous works | 72.524 | 707 |
| Subtotal | 5.941.224 | 57.918 |
| Subtotal + 13% vat | 6.713.583 | 65.447 |

BLOCK C

| EXPENSES | Nepalese rupee | Dollar |
|--|------------------|---------------|
| Site clearance / mobilization works, earth works | 163.307 | 1.592 |
| Masonry works & partition works | 1.173.822 | 11.443 |
| Concrete works | 1.996.719 | 19.465 |
| Roof works | 241.986 | 2.359 |
| Wooden doors works | 254.090 | 2.477 |
| Aluminum windows works | 350.926 | 3.421 |
| Flooring and skirting works | 459.866 | 4.483 |
| Finishing works | 968.150 | 9.438 |
| Miscellaneous works | 60.420 | 589 |
| Subtotal | 5.669.286 | 55.267 |
| Subtotal + 13% vat | 6.406.293 | 62.452 |

ADDITIONAL BUILDING

| EXPENSES | Nepalese rupee | Dollar |
|---------------------------|------------------|---------------|
| Kitchen | 859.210 | 8.376 |
| Guard house | 1.077.090 | 10.500 |
| Patient transit room | 1.355.389 | 13.213 |
| Production store | 1.488.435 | 14.510 |
| Subtotal | 4.780.124 | 46.599 |
| Subtotal + 13% vat | 5.401.540 | 52.657 |

ADDITIONAL COSTS

| EXPENSES | Nepalese rupee | Dollar |
|---------------------------|------------------|---------------|
| Sanitary costs | 1.128.995 | 11.006 |
| Electrical costs | 1.694.108 | 16.515 |
| Landscaping costs | 4.295.946 | 41.879 |
| Construction supervision | 1.246.449 | 12.151 |
| Subtotal | 8.365.498 | 81.551 |
| Subtotal + 13% vat | 9.453.013 | 92.153 |

Lastly, will be added also the costs for furnishing (carpets, curtains, mattresses, pillows and household linen, etc.); they are assumed to be around Rs 4.416.990/ \$ 43.059

To the aforementioned costs will also be added the general administrative costs, paid for preparatory activities, bureaucratic procedures and monitoring activities, estimated at approximately Rs 1.512.746/ \$ 14.747

Below is a summary table of the total costs for the project:

| EXPENSES | Nepalese rupee | Dollar |
|--|-------------------|----------------|
| Purchase land and additional costs | 20.572.307 | 200.549 |
| Block A, B, C, additional building total costs | 34.893.597 | 340.160 |
| Additional cost | 9.451.101 | 92.134 |
| Furnishing | 4.416.990 | 43.059 |
| General administrative costs | 1.512.746 | 14.747 |
| Total | 70.846.741 | 690.649 |

DONATIONS

There are many ways to contribute concretely to the construction of the new CASANepal. Your donation could provide:

- A **bed** and a **wardrobe** with a contribution of **Rs 30.261/ \$ 295.**
- **200 bricks** with a donation of **Rs 60.522/ \$ 590.**
- **3 doors** and **3 windows** with a donation of **Rs 121.044/ \$ 1.180.**
- **An entire bedroom** with a donation of **Rs 605.221/ \$ 5.900.**
- All the **interior decoration** of one of the buildings with **Rs 1.210.443/ \$ 11.800.**

You can also contribute to the complete or partial realization of the three main buildings and the various accessory buildings, according to the items listed in the above budget.

Any donation bigger than or equal to Rs 121.044/ \$ 1.180 will be recognized with a special plaque with the donor's name placed on-site.

All donations, even small, are fundamental to the realization of this ambitious but essential project to provide a safe, appropriate space for GBV survivors and their children.

To support the CASANepal construction project, you can make a donation on:

Bank transfer (Nepal)

Account name: APEIRON

Account number: 01411001258

Name of the Bank: Laxmi Bank Limited

Swift code: LXBLNPKA Country: Nepal

Bank transfer (Italy)

Account name: APEIRON

BANCA PROSSIMA 05000/1000/103529

IBAN: IT66U0335901600100000103529

ABI: 03359 CAB: 01600 BIC: BCITITMX

CC: 1000/00103529

Paypal

Send your donation to
info@apeironglobal.org



ABOUT US

Apeiron is a non profit organisation working for a gender equal society in Nepal since 1997.

Through 4 main areas of interventions; Gender Based Violence Prevention and Response, Awareness and Education, Income Generation and Institutional Collaboration, Apeiron fights against prejudice, violence, and inequalities so that women develop the skills necessary to support themselves and their families.

By helping women confront uphill battles, we enable them to overcome the constraining barriers in their life and realize their potential.

www.apeirononlus.it

 **APEIRON**
UNA MANO PER IL NEPAL