



USAID | DELIVER PROJECT

Logistics Brief

Increased Storage Capacity Improves Nepal's Public Health Supply Chain



Newly constructed district store in Nepal's Parsa district.

USAID | DELIVER PROJECT
2011

A four-fold increase in storage space from 1999 to 2011 has enabled Nepal's public health supply chain to keep up with increased demand for health products.

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The provision of drugs through Nepal's public health supply chain has risen dramatically over the past two decades. In 2007, the Ministry of Health and Population (MOHP) adopted a free drug policy, greatly increasing access to lifesaving medicines and supplies. The added volume of products put extra pressure on already crowded storerooms.

From 1994-1997, when the MOHP carried out its Logistics System Improvement Plan (LSIP), warehouses across the nation were cleaned up, resulting in additional storage space. It also generated revenue for the government as unused items were auctioned off. However, the exercise revealed that numerous districts seriously lacked ideal storage space for health commodities, including cold storage for vaccines.

In 1999, the MOHP's Logistics Management Division (LMD), in collaboration with JSI Research & Training Institute and USAID, conducted an assessment of storage conditions and space needs at the district level. It showed that 58 of 75 districts had immediate storage needs, none of the districts had ideal cold storage facilities, and all 75 districts would require new stores. Space was inadequate and security was poor. In 49 districts, commodities were scattered in two or more rooms, with none of them specifically designed for storage.

Key Achievements

- 54 district warehouses completed.
- 18 district warehouses planned or under construction.
- Cold chain warehouse built in Patalaiya Transit Warehouse complex.
- A four-fold increase in storage capacity from 1999 to 2011.
- Decreased wastage and expiry of drugs.
- Increased packaging and distribution capabilities in districts.
- 152,938 square feet of storage space freed up through dejunking.
- Auctioning of unusable goods generated more than US\$235,000 in revenue for the Nepalese Government.



Every year, considerable quantities of drugs and other health commodities were damaged and became unusable because of the poor storage conditions in the districts. Adding and improving storage space therefore became a priority for the MOHP.

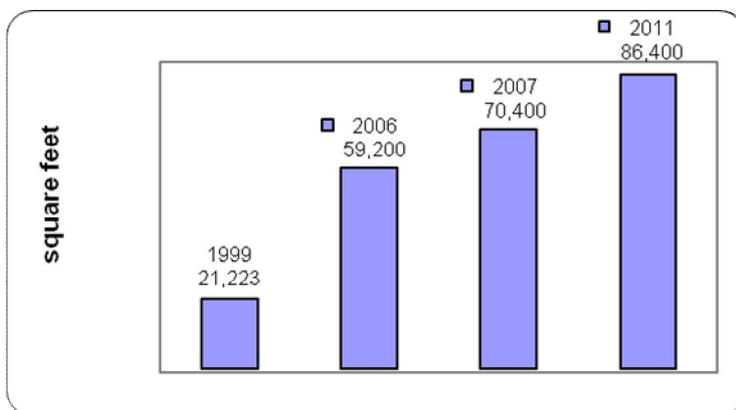
District Store Construction

With JSI/USAID sponsorship, the Architectural Project of Nepal created a warehouse design that would require no maintenance for 10 years. The design, which would be applied in all districts, included a separate cold room for vaccines, and to discourage health personnel from using the storage space as offices, no windows or toilets were provided.

The warehouse design had three size variations to accommodate storage needs, which up until 2007 had been relatively stable; a limited quantity of essential drugs had been distributed to health facilities each year. However, in 2007, with the free drug policy procurement of essential drugs increased almost 10 fold, and drugs were now distributed from districts to health facilities based on demand. This affected the need for storage and some of the newly constructed warehouses became too small to accommodate the volume of products. When the impact of the new policy became known, the warehouse design was adjusted to fit the new requirements.

The Government of Nepal (GON) was unable to fund all the warehouse construction it needed, so *Kreditanstalt für Wiederaufbau* (KfW) and the Department for International Development (DFID) stepped in with funding for 43 and 5 district warehouses, respectively. The GON itself funded 6 warehouses. In addition, KfW funded a national cold chain facility at Pathalaya Transit Warehouse.

Figure 1. Storage Space in Districts



With assistance from the USAID | DELIVER PROJECT and the Nepal Family Health Program (NFHP) to manage construction, the GON built 54 district stores between 2001 and 2011. By forming a steering committee that included MOHP personnel and was chaired by the Director General of the Department of Health Services of the MOHP, the ministry worked directly with the construction management team to set policies on where to construct stores first, how to select building sites, and

what design changes to implement. Decisions about which district warehouses to build first were based on need, land availability, and population. According to the policy set by the ministry, warehouses had to be constructed on land owned by the MOHP.

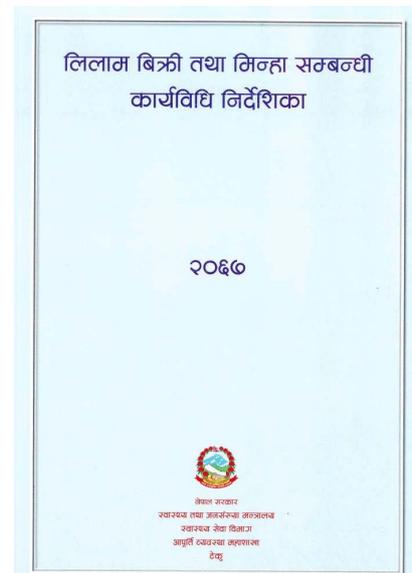
The USAID | DELIVER PROJECT/NFHP worked with LMD and the architect to identify building sites and obtain land approval letters. They monitored progress at construction sites and equipped the new storerooms with the appropriate racks, pallets, and cupboards. They oversaw the transition from the old to the new space and helped to organize the stores according to best practices before handing over the key to the District Health Office (DHO). Wall charts and standard storage guidelines helped DHO staff maintain the organization of the store. Staff also received training and the LMD provides regular oversight.

De-junking and Auctioning

Beginning with the LSIP plan, the MOHP, with support from donor partners, carried out a massive clean-up and de-junking effort across the nation. Storerooms at all levels of the supply chain, including health facilities, were cleaned and de-junked, and equipped with racks if needed. At that time, there were no programs for maintaining storage standards, so the MOHP established new processes and trained storekeepers on how to maintain the stores.

Broken-down vehicles, obsolete equipment, expired medicines, and damaged supplies taking up space in store rooms and around building complexes were disposed of or sold at auction. The effort continued until 2003, when clean up and de-junking support was provided only upon request and focused primarily on MOHP/Department of Health Services stores, national referral hospitals, and regional/zonal hospitals. The USAID | DELIVER PROJECT and NFHP provided technical and financial support for auctioning and disposal activities in these facilities including—

- Completing physical inventories of all goods to determine the quantity and condition of non-expendable goods and whether they were usable, unusable, or repairable according to government regulations
- Separating usable and unusable goods
- Collecting unusable goods for auctioning and disposal in separate locations
- Preparing list of unusable items for auditing purpose
- Facilitating inspection of unusable items according to government regulations
- Coordinating evaluation committee of government representatives to determine minimum prices of goods to be auctioned
- Coordinating auctioning committee, preparing all auction documents, and conducting public auction with necessary technical support
- Supervising the proceeds from the auctions and ensuring their deposit in the designated government revenue accounts
- Facilitating handover of the auctioned items
- Updating stock books or creating new stock books after auctioning and disposal of goods
- Reorganizing and physically cleaning all stores and vacant space.



Guideline for Auction and Disposal

The initiative generated revenue for the government and freed up significant amounts of storage space, which could be used to store health commodities or even add hospital beds. At Bir National Referral Hospital, which has 300 beds, the de-junking effort made room for additional 48 beds, increasing the hospital's capacity significantly. Up until 2011, the de-junking efforts have generated more than US\$235,000 in revenue for the national coffer and freed up 152,938 square feet of storage space.

Government institutions are required to auction and dispose unusable commodities every year, but because of cumbersome processes and the complexity of coordinating with other government departments, these

tasks were often pushed aside. In 2010, the LMD took a lead role in revising the guideline for auctioning, disposal, and write-off, making them easier to use. Working with multiple government departments, the LMD made the guideline generic so they could be used by any other public sector office and had it approved by the Ministry of Finance and the Financial Comptroller General's Office. With these new guideline, it will be easier for all public sector offices to carry out auctioning, disposal, and write-off on a regular basis with minimal external support.

Lessons Learned

The following factors played an important role in successfully increasing storage capacity:

- **Donor coordination is essential.** The construction of the district stores is an example of excellent donor coordination. Better coordination between the GON and external development partners has resulted in more funds being available for logistics in Nepal.
- **Policy impacts plan.** MOHP's 2007 free drug policy greatly increased the need for storage space and necessitated significant changes in the construction of warehouses.
- **Advocacy within the ministry helps.** With advocacy around the impact of newly constructed warehouses in districts, MOHP was able to increase its funding for further construction of district warehouses.
- **De-junking and auctioning can be low-cost solutions.** With little support, significant amounts of space can be freed up for storage and may even create revenue for the government. Common guidelines can help make it more efficient.
- **Store design must support its function.** The design of the stores (with no provision of windows or toilets), helps to ensure that the buildings are used for their intended purpose.

While the effort of constructing warehouses in the remaining districts continues, there are challenges. Maintaining the storage standards in individual warehouses can be difficult when storekeepers are transferred and new personnel from other ministries may not be familiar with guidelines and processes. Within the GON, officials are transferred every two years as a counter-corruption measure. Timely completion of GON-funded district warehouses remains a challenge, as construction is managed through the Department of Urban Development and Building Construction. Continuing the momentum for construction of new stores in the remaining districts will be important for completing the planned construction. An additional challenge is the immediate need for funding in the remaining three districts.

With de-junking, auctioning, and the construction of new stores, Nepal has made impressive gains in supporting its public health supply chain. Adequate storage conditions for commodities is a pre-condition for delivering quality health services to clients, and the new stores provide a sound infrastructure for logistics operations in the future.

The authors' views expressed in this publication do not necessarily reflect the views of the U.S. Agency for International Development or the United States Government.

USAID | DELIVER PROJECT

John Snow, Inc.

1616 Fort Myer Drive, 11th Floor

Arlington, VA22209USA

Phone: 703-528-7474

Fax: 703-528-7480

Email: askdeliver@jsi.com

Internet: deliver.jsi.com