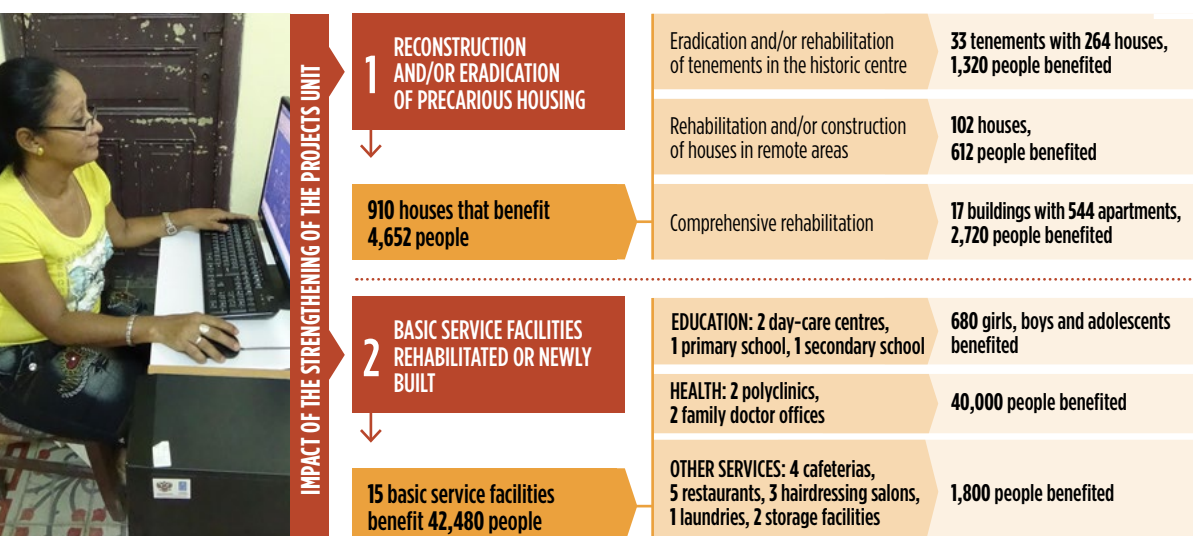


## A 500-YEAR-OLD CITY LOOKS INTO AND BUILDS THE FUTURE

One of the main goals of the Provincial Basic Projects Unit is to provide the most vulnerable families with immediate project design services, as many houses and basic services were affected by the hurricane. This entity, which has gained a lot of experience over the last 30 years, recognized the support of the Russian Federation and UNDP. **It doubled its capacity to develop executive projects** after the procurement of computer equipment, accessories, and network connections. Turnaround time is now shorter thanks to the modern technology that is being used, including software with additional features that have replaced manual work by project designers.



Some of the new projects developed for hurricane-affected houses were implemented along with the works on the 500th anniversary of the city of Santiago de Cuba. These works were carried out by the Construction and Restoration Company (ERCON) at the Office of the City Historian, which also benefited from the procurement of construction equipment for recovery actions on houses and social projects in the historic centre, thanks to this cooperation initiative. The equipment has enabled to increase ERCON construction capacity, including a multipurpose skid steer loader, an air compressor with jackhammers, and a 400-litre concrete mixer.



## PREPARED FOR WATER SHORTAGE

The project made it possible to set up and operate a workshop for the production of recycled plastic pipes, hydraulic connections, and bathroom fixtures. Innovators of the cooperative (non-state) sector in the eastern region were involved in the design of this facility and specialized, easy-to-use machinery. The idea is to use these productions in future leak repair campaigns under a local strategy aimed at dealing with drought in the province.

The installed capacity at local production centres will help face this event through the construction of tanks and cisterns.



## KNOWLEDGE AND CONTRIBUTION BY YOUNG PEOPLE



Hurricane Sandy associated losses in Santiago de Cuba included mainly roofs. The project therefore sought not only to revitalize the use of existing construction technologies but also to facilitate their transfer and adaptation to local conditions in Santiago de Cuba, a seismic hazard area. Progressive housing that meets liveability conditions and is based on self-help has been promoted.



The project has contributed to the training of the younger generation. A group of 58 students at the University of Oriente focused their work practices on production flows at CPLMCs, and several of them conducted research projects on local building materials production.

**THE COMPLETION OF A PROJECT, THE CONTINUITY OF A DREAM**

Four years ago, people in Santiago de Cuba could not imagine the construction boom that is being seen today in the second most important province of the country.

Much remains to be done, but the opportunity provided by the Russian Federation and UNDP has opened a door to development and has shown that the articulation of a desire to do things, ingenuity, local effort, necessity, and partnership can yield important results.

The dream of rebuilding better in Santiago de Cuba, using local people and capacities, is growing stronger and being realized in the thousands of houses that are being built or rehabilitated in the city. Many of them have the imprint of this cooperation project.

**RUSSIAN FEDERATION**

Empowered lives. Resilient nations.

50  
YEAR

**EPROM**  
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When people in Santiago de Cuba speak of hurricanes, they always mention Flora and Sandy.

Hurricane Sandy, which occurred almost half a century after Flora, darkened the eastern Cuba landscape. Just a few people died thanks to population training and government management. However, economic losses amounted to over 4.7 billion pesos, including 2.6 billion on the housing stock (a total of 262,703 houses were affected). Santiago de Cuba was the most affected city, with 81,066 houses destroyed.

Against this background, the United Nations System (UNS) in the country, jointly with the Government, developed an Action Plan that articulated the support to be provided by UNS agencies and mobilized funds from various countries for the response and early-recovery stages.

The United Nations Development Programme (UNDP) sought to meet the most recurrent basic population needs, including the supply of roofing elements for housing and of means for safe water management. The idea was to improve sanitation and hygiene measures.

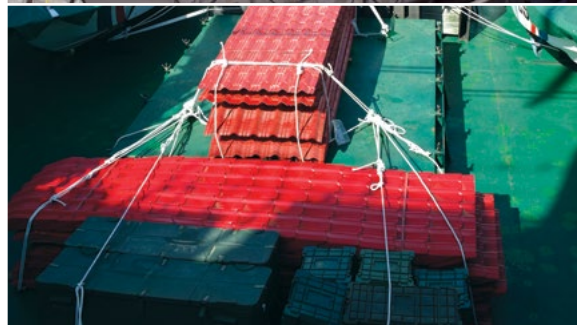
The province is still working to overcome the devastating effects of this hydro-meteorological event. In the current reconstruction phase, this project stands out for its main objective: to promote the sustainable production of local building materials using the endogenous potential and natural resources for house construction and repair.

The project also boosted production chains at the municipal level, and promoted resilient construction solutions and efficient economic models.

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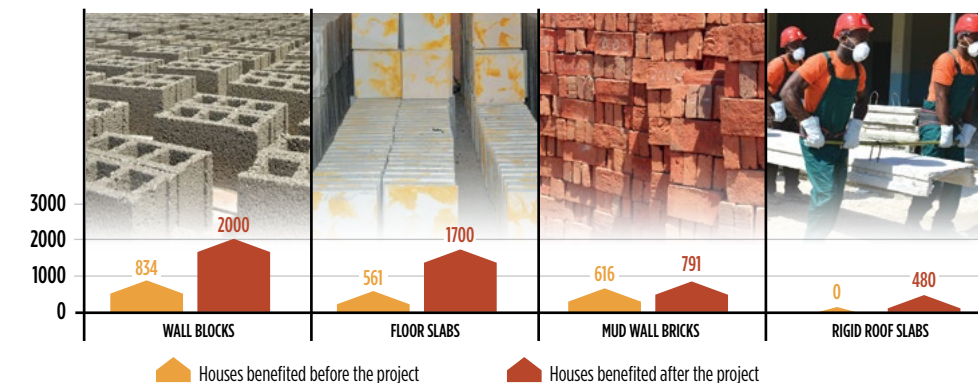
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## ROOFS, WALLS AND FLOORS GUARANTEED

Supported by the project, EPROMAC increased its production capacity by 38 per cent. This will benefit around 2,000 families every year. They will have the opportunity to buy materials for house construction, repair or rehabilitation.

INCREASE IN THE NUMBER OF HOUSES THANKS TO THE STRENGTHENING OF LOCAL BUILDING MATERIALS PRODUCTION CAPACITIES



While the demand of the local population is much higher than supply (the production capacity of the 9 CPLMCs strengthened under the project), the foundations have been laid to improve efficiency in the production chain and ensure good-quality building materials at affordable prices, as they are developed in the municipalities where they will be distributed.

A total of 46 new pieces of equipment were procured for the production of local building materials, including 6 block manufacturing machines, 9 cement mixers, 10 hydraulic presses, 5 flooring mixers, and 1 French roof tile press (indispensable for roofing). This production line had not been under operation for long, despite a huge demand for Historic Centre buildings repair.



Likewise, the project made it possible to repair and start-up 28 pieces of equipment, thereby increasing production capacities. Repair works included mainly 3 extruders for mud processing at tile and brick factories. They were undertaken by outstanding local innovators at newly established cooperatives.

In an effort to ensure sustainability, EPROMAC now has a mobile shop with a toolkit for equipment maintenance and repair.



On the other hand, installed capacity has been enhanced with the procurement of 3 tractors with front loaders and rear tippers. They are essential for carrying resources from local deposits. The local industries also re-powered 3 means of transportation of EPROMAC for the transfer of materials, mainly cement.



At the same time, the project facilitated support for local building-materials quality-control laboratories at EPROMAC. It supplied over a dozen pieces of laboratory equipment and inputs, specifically for concrete and ceramic production lines. This is a key contribution made by the project, due to the need to control materials resistance to earthquake and hurricane risks in Santiago de Cuba.



The project also gave top priority to working conditions. Protection means were supplied to all staff members facing extremely hazardous conditions at work. Likewise, technicians, workers, specialists, and executives were trained and given manuals on the use of equipment for the production of ceramic elements, channel slabs, joists, plaquettes (small slabs), and French roof tiles. They also received working tools and equipment to improve working conditions.

Average staff salaries at this company moved from 450 Cuban pesos up to 780 Cuban pesos a month, and they will be further raised later this year to reach 813 Cuban pesos. A total of 300 new jobs have also been created.

The project was significantly supported by local authorities. Over 500,000 Cuban pesos in counterpart funds were implemented with a view to expanding CPLMCs and procuring inputs to increase production.