

**Emergency Market Mapping & Analysis (EMMA) report**

## **The Market System for Construction Labor in Port au Prince, Haiti**

**International Rescue Committee (Lead),  
American Red Cross, Haitian Red Cross, International Federation of the Red Cross,  
Save the Children, Mercy Corps, Oxfam GB, ACDI/VOCA,  
World Food Program and FEWS/NET.**

**Port au Prince, Haiti**

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## Section 1. Executive summary or brief

This Emergency Market Mapping and Analysis looked at the opportunities for earthquake-affected populations to gain employment in the construction sector. Prior to the earthquake, construction had been identified as an area of potential job growth and a priority sector for the government, however there was a mismatch between skills available in the labor market and jobs available. Professional, skilled, and semi-skilled workers were all in demand, but this demand was often filled by foreigners, in particular workers from the Dominican Republic. Now, as a result of the destruction, labor opportunities in the construction sector are anticipated to increase ten-fold.

Previously, formal training for the construction sector was provided through universities (of which four are recognized as providing a high quality education), numerous technical schools, and a few NGO training centers. However, about 40-50% of workers were trained through apprenticeships and on the job training, for periods up to two years. Quality of education varied widely across formal training options, with some estimates indicating that students were learning only 60-70% of the skills needed. Professionalism and other non-technical competencies, such as project management, were also regularly noted as being in high demand, but difficult to find.

With all four of the universities known for training engineers and many technical schools destroyed in the earthquake the options for quickly training professional, skilled, and semi-skilled workers are severely limited. *A rough estimate indicates that 100,000 people will need to be trained* to ensure Haitians have access to new jobs in the construction sector. Universities, training centers, and informal training mechanisms must be immediately supported to “build back better” if Haitians are to benefit from the increased employment opportunities in their country.

Access to heavy equipment, availability of construction credit at the household and business level, and clarity on government policies will play a large role in how quickly the reconstruction efforts can truly start and employment benefits be gained. Humanitarian efforts now are focused on transitional shelters that can be built by three people in one day. However, this shelter is only designed to last 3-4 years. The trauma of the earthquake has created a window of opportunity to change building practices and preferences, as people have direct experience of the importance of appropriate construction practices and good quality construction materials. Yet the opportunity for change is small compared to the size of the task ahead. Initial damage estimates indicate that it could take up to 10 years to rebuild to previous levels, before considering future growth.

Another barrier to employment is the fact that most employment is found through personal contacts. This means it can be difficult for individuals to get their first position and gain job experience, lack of job experience then limits job opportunities. One recommendation is to create a placement agency that can vet potential candidates and verify certifications for companies and individual engineers wanting to put together teams.

The recently passed minimum wage does not seem to be an issue for the construction sector, as market rates for nearly all positions are well above the minimum wage.

Recommendations for responses include options that address both supply and demand constraints, as well as enabling environment issues:

Demand-side responses:

- Improve communication to the public on government support for rubble removal, property rights, building permits, zoning, etc.
- Improve access to credit for construction -- with appropriate terms and conditions – for both households and businesses
- Build Social Housing

Supply-side responses:

- Short-term skills training, including masons, carpenters, electricians, etc. by NGOs
- Physical rehabilitation of training institutions
- Capacity building of management, faculty, and staff of training institutions, including upgrading skills to address natural hazards (earthquakes, hurricanes)
- Organize apprenticeships and facilitation of trainees entry into the market

Labor Market Matching

- Review of existing construction sector related curricula to include shortened training cycles and inclusion of measures to mitigate natural hazards.
- Creation of a Placement Agency for all levels of worker in the construction sector
- Creation of a virtual job board for the construction sector to match local companies with local workers as well as diaspora
- Short-term recruitment of diaspora civil engineers and technicians to promote responsible recruitment and avoid poaching qualified staff from the local private sector

Laws and Regulations

- Improving and enforcing laws and regulations for property rights and zoning
- Inspection and enforcement of building permits and improved construction norms

## **Section 2. Emergency context**

On January 12, 2010 an earthquake of 7.0 magnitude hit the island of Haiti, approximately 25 km (16 miles) west of Port au Prince. The earthquake occurred at 16:53 local time. The Haitian government estimated that up to 230,000 died country-wide in the quake, and another 300,000 were injured. According to the UN approximately 800,000 have been displaced in Port au Prince, many of whom are living in spontaneous urban camps. Approximately 38% of all buildings in greater Port au Prince have been damaged or destroyed according to the UN. WFP has distributed food to more than 2.5 million people in Port au Prince and outlying areas.

### **Section 3. EMMA methodology**

The EMMA is a rapid market analysis designed to be used in the first 2-3 weeks of a sudden onset crisis. Its rationale is that a better understanding of the most critical markets in an emergency situation enables decision makers (i.e. donors, NGOs, government, other humanitarian actors) to consider a broader range of responses. It is not intended to replace existing emergency assessments, or more thorough household and economic analyses such as the HEA, but instead should add to the body of knowledge after a crisis.

In Haiti the EMMA team was made up of 18 staff members from 11 organizations including: International Rescue Committee (Lead), American Red Cross, Haitian Red Cross, International Federation of the Red Cross, Save the Children, Mercy Corps, Oxfam GB, World Food Program, ACIDI/VOCA, and FEWS/NET. While EMMA is designed to be used by those without economic training, this team had a mix of those with significant market experience and those with none. Approximately two days of training was provided, with additional training throughout the course of the assessment on various aspects of the tool.

Field work primarily took place in Port au Prince, with secondary sources and desk-based research used to maximize use of available information. Interviews were held with key players in the market system, as well as support players.

Challenges that were experienced by the EMMA team included: 1) the time it took to move from one location to another within the city; 2) the lack of security in some areas; 3) field days that fell during the government-mandated three days of mourning. All of these reduced the amount of time available for field work. As a result, field teams relied on fewer sources that would have been ideal, and relied more on secondary information from trusted sources.

### **Section 4. The target population**

The target population for all market chains studied through the EMMA process was earthquake-affected population of greater Port au Prince. Market chains were selected based on their applicability to the widest number of affected people.

More than 2 million people in greater Port au Prince were affected by the earthquake. The impact was spread across wealth groups, although many homes of the wealthiest were constructed in a manner that prevented significant damage. However, many assets from this group were lost, which will affect the pace of reconstruction. Middle classes invested much of their wealth in building their homes over a relatively long period of time, and are unlikely to have access to funds for immediate rebuilding. The poor and very poor had sub-standard homes and proportionally fewer investments to lose, but have suffered greatly from the loss of income. The EMMA team chose not to disaggregate the target population, due to the widespread needs across the city and all wealth groups.

The seasonal calendar below shows the timing of various activities that relate to food security, shelter, or income needs and opportunities for the target population.

	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Rains												
Road Conditions	OK			BAD		OK		BAD			OK	
Cyclones												
Lean Season												
Food Prices			highest								highest	
Education							Holidays		Education costs			
Remittances increase												
Planting Beans		Highlands					highlands				lowlands	
Harvest Corn/Beans												
Planting Rice												
Harvest Rice			small season				big season					
Holidays	King's Day	Carneval		Easter								Christmas/Marriage Season

### Section 5. Critical market systems

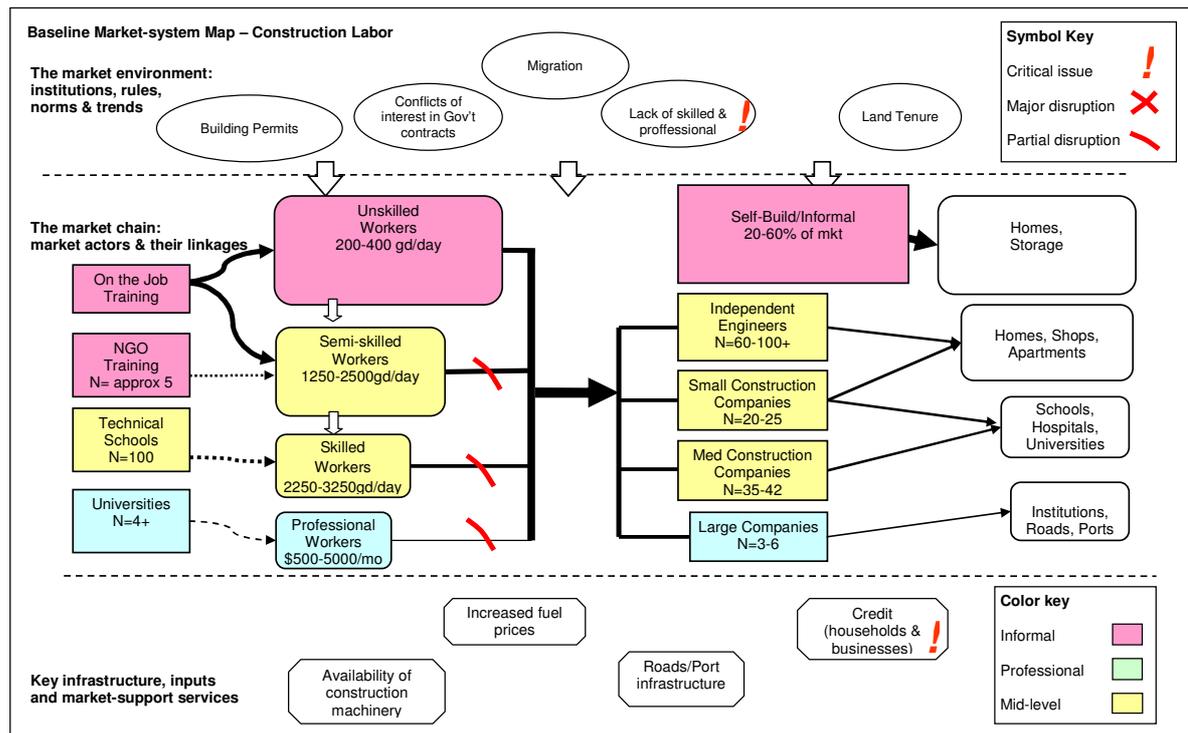
The market systems selected were chosen because they affect large sections of the target population. Participants were asked prior to the start of the EMMA to identify markets that they felt would be important to consider. On the second day of the EMMA training, a brainstorming session began with these initial suggestions, followed by additional suggestions from the participants. The group looked at market systems that fell into three categories: emergency needs, income potential, and longer term livelihood support. Six market systems were shortlisted: beans, rice, water vendors, construction labor, shelter materials, and cooking fuel.

Due to the size of the group it was necessary to select only four markets to analyze. After much discussion, and with Participants considered the market systems that would be of greatest interest to their organizations, and after much discussion, two food markets were selected (beans and rice), one income market (construction labor), and one type of shelter material (corrugated iron sheeting (CGI)). This report refers to the construction labor market, but the findings are naturally linked with those of the shelter materials group. The Key Analytical Question that this report addresses is: *What are the opportunities for affected populations to gain employment in the construction sector?*

### Section 6. Market-system maps

During this study nearly all actors in the construction labor market reported being at a standstill, with construction work limited to repairs of structurally sound buildings. Training schools and institutions, whether formal or informal, have suffered from a loss of their students, professors, and infrastructure. Large companies are “waiting for the contract” – although they have staff and equipment that can be used for reconstruction, they too have suffered losses. And average homeowners do not yet seem ready to think about rebuilding, despite the pressure off the approaching rainy season; early indications are that people are purchasing materials for repairs, but not for rebuilding.

The baseline map below shows that even prior to the earthquake there was a shortage of semi-skilled, skilled, and professional workers. Dotted lines show where the supply of qualified students is not enough to meet industry demands, whereas the width of the line indicates the relative volume of the flow of workers. Relative number of workers or businesses in each category is represented by the size of the boxes. The extremely conservative nature of the Haitian banking system also meant that very few people took loans for building or purchasing their homes, although several banks do offer loan products specifically for these activities.



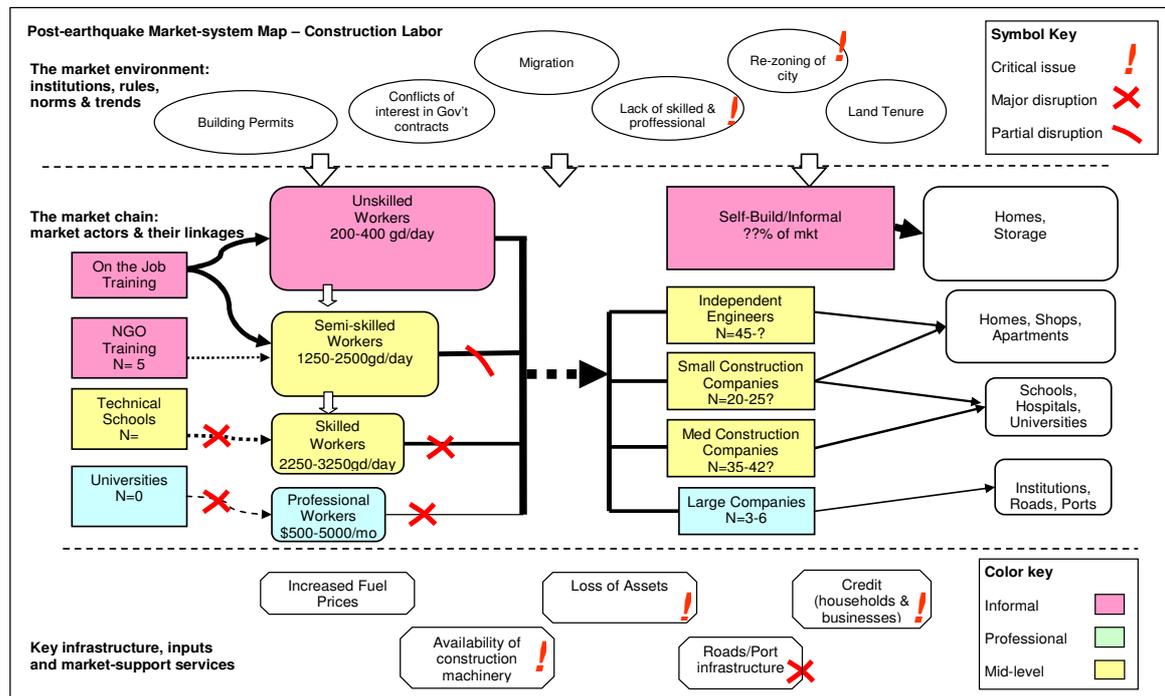
In the table above, unskilled workers the lowest level workers (*ouvrier*), who report to a semi-skilled worker (*manoeuvre*) these are, for example: bricklayers, carpenters, tilers, glaziers, or head painters. Surveyors, masons, plumbers, electricians, etc., fall into the category of skilled workers, and engineers and architects are considered to be professionals. An average-sized 2 bedroom house would employ around 60 people for various periods over a four month timeframe.

As the map above shows all skill levels are needed to make a team, and therefore all skill levels are represented in the various types of firm, with independent building being the obvious exception. In the case of independent builds, it is unusual for any professional help to be hired, due to the cost. Usually engineers assistants or another skilled technical person will be consulted during the building process, leading to a wide variance in the quality of the build.

The total number of firms represented in the map above is lower than shown in previous value chain analyses (AMAP/USAID), but is based on conversations with AHEC (Association of Haitian

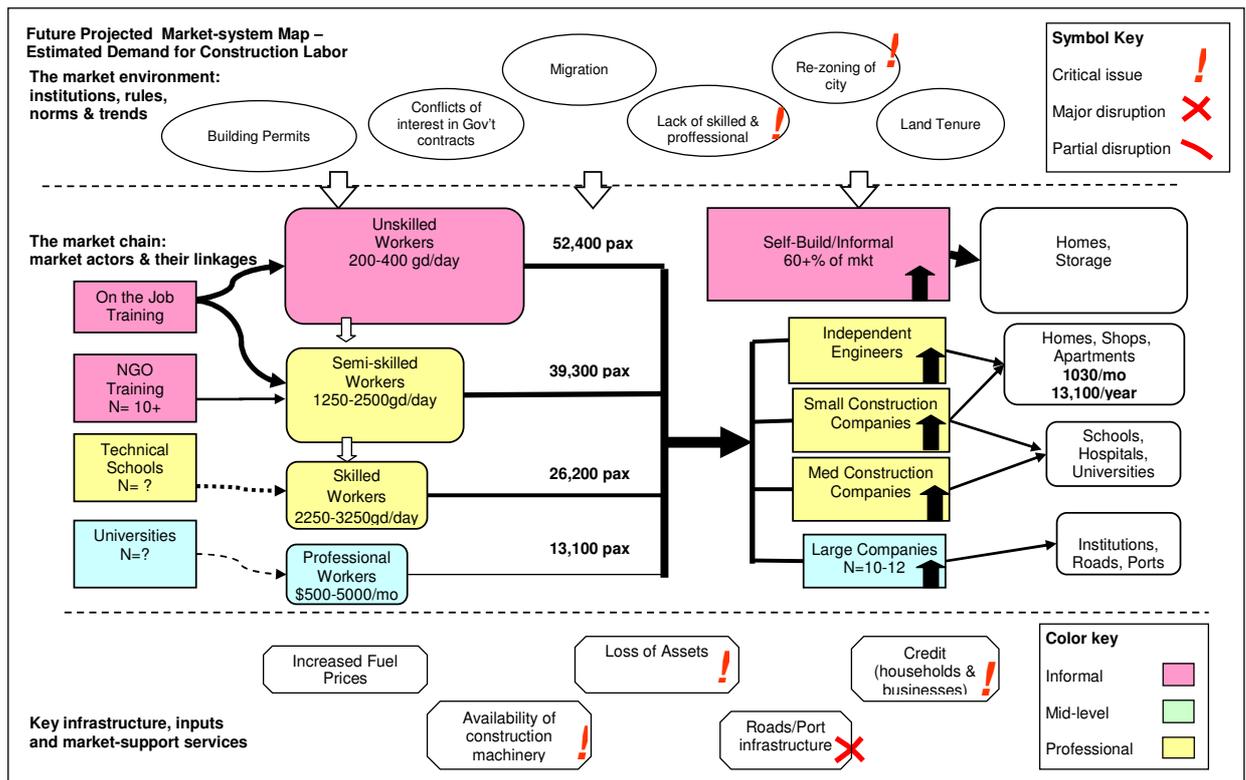
Construction Enterprises) and key informants in the construction sector. It represents those business that are considered “established” with a capacity to do significant work, and excludes those businesses that have limited capacity to undertake contracts or are not operating on a regular basis.

In the post-earthquake map (current situation), one can see that the greatest changes are the severe disruption to the supply of trained professional and skilled workers, as a result of the destruction of many technical schools and all four of the universities with significant engineering programs. The loss of life in these institutions, as well as at private construction firms will seriously impact the supply of highly skilled labor available for the reconstruction efforts.



In addition, the lack of heavy machinery (and skilled drivers to use it), the government’s plans for re-zoning the city, and the conservative terms and conditions of loans currently available for construction will all have an impact on how quickly reconstruction of Port au Prince can begin. Without addressing these issues, the construction labor market will not grow quickly, or be able to provide income to those who have lost their jobs or the 70% of the population that was unemployed prior to the earthquake.

In an effort to determine the scope and scale of actions that need to be taken by the international community to create jobs quickly and begin early recovery, the EMMA team has provided very rough estimations of the number of people required at each skill level to rebuild Port au Prince. The estimates are based on government figures of Feb 15, which show a total of 131,000 destroyed or damaged buildings. Estimating 18-20sqm needing to be repaired/rebuilt over a 10 year period, the workforce below would be required. Since many buildings are significantly larger and more complex than this, we believe this is a conservative estimate.



As the map shows, the number and/or size of all companies is expected to increase, as is the number of people who self-build or use informal methods to rebuild. Government regulations, and more importantly their enforcement, will be essential to ensuring that a disaster of a similar nature does not happen again.

## Section 7. Key findings – results of the gap and market analyses

### The gap analysis results

The EMMA process normally provides a “gap analysis” which identifies the “gap” faced by the targeted population with regards to a particular commodity (need - resources available = gap). With an income market selected, the gap obviously takes the form of income before as compared to after the crisis.

We know from FEWS/NET baseline survey of 2009 that the very poorest have an average income of 9500-12500 Gourdes per month, and that they do participate in casual construction labor. This is likely to equate with the unskilled workers identified in our market mapping. Poor households in Port au Prince make 12500-17,500 Gds per month and also participate in casual construction labor. This is also likely to be represented in our maps in the unskilled labor category. Middle income households, according to FEWS/NET make 17,500-25,000Gds per month, and are likely to hold positions categorized as semi-skilled on our maps. While nearly 31% of the Haitian population receives remittances, in fact, the poorest are the least likely to receive them because they have never been able to afford to educate family members abroad or send them overseas. Initial estimates show that households are facing a 60-70% drop in their income. This gap will obviously continue until household livelihoods can be renewed, which will depend upon how quickly households are able to rebuild their assets, and the strength of the

market overall. Once the situation has stabilized it will be important to do a full HEA or baseline study to gather more in depth information on the household income, expenditures, coping mechanisms, and recovery strategies.

The Emergency Food Security Assessment (EFSA) of WFP will provide qualitative information on livelihoods pre and post-earthquake, as well as information about coping mechanisms. Therefore this information, when available should be used to build on the information provided by the EMMA.

### **The market analysis results**

Prior to the earthquake, Haiti's unemployment rate was over 70%, and a disproportionate number of youth were among the unemployed. Training was seen as essential to addressing this problem. A workforce analysis done by USAID in 2007 recommended that "a very strong emphasis should be put on the strengthening of the informal market, where there is apparently the greatest short term potential". It went on to say that basic commercial skills and a professional attitude were in high demand in both the formal in and informal sectors. The study showed construction to be one of the top three sectors with potential for employment. Many respondents in this same study commented that within the construction sector there was a need for practical techniques and skills, rather than specialized and advanced skills.

The construction labor market was selected for the EMMA because of the anticipated potential growth in that sector given the number of buildings destroyed and the need for reconstruction. However, it should be noted that with regards to home construction, two factors that pre-earthquake were very common in home construction: However, it was very common for people to build their house slowly over time, as they were able to earn money, rather than borrowing funds to build the house all at once. This practice may be reinforced as people are unwilling to take loans when they are not certain what will happen next. As one informant put it: "Why would they take loans? Their house could fall down again and then they wouldn't have house, but they would still have a debt."

The second factor is that prior to the earthquake approximately 60% of the households built their home "informally" without hiring any professional help in the form of engineers or construction companies. While it is possible that many households will now seek professional help in rebuilding to reassure themselves that seismic-resistant measures have been used in construction, many will not be able to afford to hire professional help. IOM's shelter plans for Phase II (starting in May) call for building "transitional shelters" intended to last 1-3 years. While this provides adequate time to properly rebuild homes, it may delay the opportunities for increased employment.

The loss of so many training facilities – universities, vocational schools, NGO facilities – means that both infrastructure as well as individuals must be supported. But in interviews with a variety of different actors the EMMA team was told that this was an opportunity to change the educational system so that it could better met the needs of the private sector.

An educational reform was ongoing prior to the earthquake. However, in the last few days a government-led committee has met to review building norms and standards, a panel of experts with experience in serious natural disasters has reviewed the curriculum and advised on changes that need to be made. These changes are expected to be enacted in the next 6 months, and include: consulting with other earthquake and hurricane affected countries on best building practice; reviewing the relevant curricula and; reinforcing support for Provincial level structures.

There is no question that there will be increased opportunities in the construction sector for the next 10 years or more. The challenge is to ensure that Haitians are able to fill the new jobs and perform them to a high standard. Without outside assistance and technical support, it is clear that the existing training mechanisms will not be enough to meet the demand for labor in all categories.

At the moment, people are still very hesitant to begin reconstruction. There are several issues at the household level that impact their ability to begin rebuilding. First, households do not have the estimated \$5-6000 required to hire the heavy machinery to remove their destroyed home. Even if they did, fear of repeating natural disasters makes them hesitant to invest. Many still fear entering buildings. Yet there is a window of opportunity now to “build back better” people understand with terrible clarity the need for quality building materials and improved building standards.

However, having lost their assets and sources of income, they have no resources from which to rebuild. Therefore the exact way that an increased construction labor market will develop is difficult to predict, given that a number of critical factors determining the environment (e.g. construction rules and regulations) in which reconstruction will occur remain uncertain for present. Once there is evidence of momentum in rebuilding, it will be important to re-evaluate the market -- through a more detailed labor market survey for example -- to determine if initial programming has had a positive or negative impact on the market and the extent to which Haitians are being engaged in the increased demand for labor.

## **Section 8. Recommendations and conclusions**

### ***Response logic***

The responses below are a mix of both direct and indirect activities to support Haitian participation in the construction labor market. Because the solutions are inter-linked and mutually supporting, it is recommended that implementers and donors consider a range of options rather than implementing stand alone activities.

There is tremendous opportunity to create jobs in the construction sector, and if resources are well-targeted there is an opportunity to support activities that meet immediate needs, as well as supporting the longer term development of Haiti.

**Table 1. Response options and recommendations**

<b>Option</b>	<b>Implementation Methods</b>	<b>Advantages</b>	<b>Disadvantages</b>	<b>Feasibility &amp; Timing</b>	<b>Indicators</b>
<b>Demand-side levers for the labor market</b>					
Improve access to credit for construction with appropriate terms and conditions	To be determined – products/methods will be different for private sector business and households, etc.	Prior experiences in other developing countries International Finance Corporation a potential supporter of such policies and programs	Banking sector may not be willing to change their practices Households’ aversion to the use of credit for housing Uncertain demand given impact of earthquake on physical assets Complexity of measures Costliness	Within 12 months	Number of businesses obtaining credit for construction
Improve communication to the public on: support for rubble removal, property rights, building permits, zoning, etc	Government announcements, NGO information distribution channels	People will be able to plan and act; increase stability/predictability	None	Within one month (before start of the rainy season)	Number of radio announcements Number of survey respondents aware of measures
Build social housing	Government or NGO construction	Increase employment Provide resettlement option for urban camp residents	Costliness Appropriate location Potential to draw people back to PaP	1-2 years or more	Number of social housing units built
<b>Supply-side levers for the labor market</b>					
<b>Training</b>					
Short-term training (NGOs)	Training of masons, carpenters, electricians, etc. by NGOs (VSO for instance; Habitat for Humanity International provides training) Linking training to follow-on options (apprenticeship, small business loans, etc.)	Increase in the supply of skilled and semi-skilled labor responding to gap in the market Curriculum adapted to circumstances Potential to upgrade skills of informally workers Could focus on special groups, ie. Young, older workers	Potentially unsustainable parallel training with adverse impacts on existing training institutions	Immediately Certification should be recognized by Govt (Min of Ed, INFP, etc)	Number of individuals trained in skills in demand by the private sector Number of apprentices Number of start-up loans

Support to existing training institutions:	Capacity building by NGOs	Build long-term capacity of existing institutions	High cost	Start in next three months, continue 3-6 years	Number of buildings rebuilt
1. Rehabilitation and reconstruction of facilities	Collaboration between foreign trade organizations, NGOs, the INFP, and local educational institutions such as <i>Les Salésiens</i> and <i>Centre pilote</i> .	Reinforce local skills	Multi-faceted implementation	Requires government's involvement thru long-term reform of training policies	Number students demonstrating competencies in upgraded curriculum
2. Capacity building for management, faculty, and staff of local institutions (in relation to changes in application of anti-seismic norms)		Match supply of skills to demand	Long-term and large-scale investment from donors		
3. Apprenticeship and facilitation of trainees' entry in the labor market			Limited short-term impact		
Update curriculum for skilled and professional training to take into account impact of earthquake	Review/revise current reform process for training institutions	Skills match needs	Potential to slow down certification process	Start immediately	Number of curricula updated
<b>Labor market matching</b>					
Short term recruitment of diaspora civil engineers and technicians to avoid drawing skills out of local private sector	NGO recruitment internationally	Access to skilled workers having familiarity with the local context	Needs to be carefully monitored to ensure that local labor market is not negatively affected	immediately	Number of diaspora civil engineers and technicians involved in NGO response
Virtual job board for the construction sector to match local companies with both local workers and diaspora		Existing base with <a href="http://www.jobpaw.com">www.jobpaw.com</a> Low cost	Potential irrelevance in the local context where personal contacts determine recruitment	Feasible using existing web site	Number of hits Survey of human resources personal
			Dependent upon behavioral change in recruitment methods		

Placement agency for all levels of worker in the construction sector	Physical sites and virtual sites	Existing base with <a href="http://www.jobpaw.com">www.jobpaw.com</a> Virtual placement has low cost Provides alternative to personal contacts system for finding jobs Employers express interest and willingness to use	Need trusted vetting system or certification recognition	6-12 months	Number of job placements
<b>Laws and regulations</b>					
Improving and applying law and regulations for land property rights and zoning	Encourage Parliament to adopt law allowing separate ownership within one building (previously in process) Coordination by stakeholders on how to address unclear land tenure	Potential to increase available housing and rational use of space	Needs minimum regulations in place	After elections	Passing of law on multiple ownership rights
		Transparency on procedures	People have lost identity documents and title documents	Immediate	
Inspection and enforcement of building permits and anti-seismic construction norms	Government to improve and apply existing requirements	Increase quality, safety, and longevity of buildings and houses, better disaster preparedness Better urban planning and delivery of public services (water, sanitation, etc.) Higher demand for technicians Use of anti-seismic cyclone-resistant norms	Requires change in behavior of builders and government officials Increase in building cost Increase in land use for construction/urban sprawl and loss of arable land	Medium to long term  Public support providing window of opportunity	Norms and regulations are clear to companies Number of inspection per building permit awarded