Employment intensive investment programmes are widely recognised and used as effective means of alleviating poverty, furthering development, and advancing the Decent Work Agenda.

Infrastructure works make up a substantial part of national public investment budgets, with up to 70% being earmarked for this purpose in many developing countries. Employment intensive methods allow for these investments to not only bridge infrastructure gaps, but also to generate employment and contribute to poverty reduction and development.

Women’s involvement in infrastructure works has traditionally been low, excluding them from valuable income-generating and employment opportunities. The reasons for this under-representation are multiple and include, among others, women’s domestic care burden, concerns about health and safety in the sector, as well as stereotypes relating to the appropriateness of women’s participation in the traditionally male domain of infrastructure development.

Yet, thanks to measures such as the active targeting of women, capacity building programmes, changes in worker and contractor selection criteria, workplace policies and measures including provisions to allow women to combine work and family more easily, women are increasingly gaining ground. In Peru, women’s participation in the road maintenance sector is currently over seven times higher than it was in 2001 (it is 27% now as compared to 3.5% to 2001), and even in cultural contexts where road works were a domain that was previously unthinkable for women, such as Jordan, rates as a high as 16% have been achieved.

This policy brief explores the gender gaps and potential in infrastructure works, highlights good practices and promising results, and outlines measures to allow women to participate in, benefit from, and contribute to infrastructure works programmes.

Box 1: The ILO’s Employment Intensive Investment Programme

The ILO’s Employment Intensive Investment Programme (EIIP) supports ILO member States in the design, formulation, implementation and evaluation of policies and programmes aiming to address unemployment and underemployment through public investment, typically in infrastructure development.

It offers support not only in contexts of unemployment due to economic downturns, but also for helping to develop disadvantaged areas, responding to conflicts and disasters, and adapting to and mitigating climate change.

Its field programmes rely on employment intensive and local resource based approaches to the production of public assets in a range of areas such as road construction and maintenance, irrigation infrastructure, reforestation, and soil conservation. Implementation modalities range from public works programmes where individuals are hired directly to work, to the contracting of small and medium enterprises, or alternatively communities, to perform the works.

EIIP recognises the importance of involving women in infrastructure works, and has developed knowledge and guidance products to help programmes and projects with gender mainstreaming (see Key ILO resources).
1. THE GENDER GAP AND POTENTIAL

Women’s limited participation in the sector is due to some extent to the same, broader inequalities which limit women’s participation in the labour market overall. These include inequalities in treatment as well as in access to opportunities, assets and resources, and in decision-making and workload. For instance, women’s comparatively lower education levels and more restricted access to credit hampers their ability to set up businesses, including those that could be involved in the infrastructure works sector. Similarly, women’s disproportionate share of unpaid care work or other unpaid responsibilities such as collecting firewood or water inhibits their capacity to take on paid work, and in rural areas, the lack of infrastructure exacerbates this time-poverty.

In addition to these generic factors, the infrastructure works sector itself has traditionally been a heavily male dominated sector in which women’s presence has been marginal due to a number of reasons, including: stereotypical perceptions of construction as “men’s work”; doubts about women’s ability to participate in a sector where jobs typically require physical force, and negative views about women working in an almost all-male environment; biases in worker or contractor selection; women’s lack of exposure to training and experience in construction work; concerns about safety; concerns about women being able to combine work and family responsibilities when worksites are far away from the home; and, in some cases, regulatory barriers, such as the impossibility of women to obtain work permits in the construction sector in some countries.

Even when such entry barriers can be overcome, infrastructure works do not automatically offer a decent or easy work environment for women. Studies from various countries point to the existence of gender inequalities in areas such as pay or the type of work that is accessible to women and men, reveal that harassment (including sexual harassment) is a concern in the sector, and show that women face challenges in reconciling family and work in cases where the work offered cannot be adjusted to be compatible with pregnancy, when work hours are long or inflexible and distances to and from the worksite are significant, and where breastfeeding or childcare facilities are absent. Research seems to confirm that women face discrimination in construction work in both developed and developing countries: for example, a 2017 survey by CARE Cambodia found that almost all women in the Cambodian construction sector received USD 1-3 per day less than their male colleagues (due to their work being purportedly less physically taxing) and there were reports of dismissals – rather than maternity leave – due to pregnancy, while in the UK, a survey by Randstad and Construction News revealed that 48% of women in the construction industry felt they had experienced discrimination, 73% of the people who said they felt they had been passed over for projects were women, and 47% of industry companies did not have a single woman on their board.

Yet, when designed and implemented in a way which takes into account and addresses gender issues effectively, infrastructure works can offer an avenue for women to access employment opportunities as workers hired directly or through contracting arrangements with companies or communities to perform the work. For women, this is often a first-time opportunity for work outside of the home that provides both economic and social empowerment thanks to the incomes, social protection benefits, work experience, and involvement in decision-making fora that this work entails.

Moreover, beyond this direct employment impact, by enabling better transport to and from workplaces; by facilitating access to productive inputs and end markets for entrepreneurs; and by creating indirect or induced new jobs in the infrastructures built (e.g. in the case of schools or health clinics, for instance), the outputs of infrastructure works can be of critical importance to women’s livelihoods. The infrastructure built thanks to such projects is also a means of reducing women’s disproportionate share of unpaid household responsibilities by making tasks such as water or firewood collection or childcare easier - or even redundant - through better mobility or facilities to assist with the tasks themselves.

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Box 2: The role of infrastructure in transforming gender relations and empowering women

New infrastructure can lead to the diversification of the economy and to direct, indirect, and induced employment creation as well as spin-off and development impacts: for instance, the building of a school will create jobs in the construction and maintenance work; in the backward-linked industries supplying tools, material and equipment for the construction or maintenance work; in the infrastructure itself once built and operational or in businesses supplying services or goods to it. Furthermore, infrastructure such as irrigation systems can help to improve the yields of farmers, while roads facilitate access to workplaces and jobs, and, for the self-employed, access to productive inputs and end markets. In addition to this infrastructure–jobs nexus, community-based infrastructure also influences women’s domestic care burden. Local infrastructure, like paths, small bridges, or water systems within the community have been shown to greatly improve the mobility of women, elders, and children, and to facilitate tasks such as firewood or water collection.

The impact of infrastructure can be seen both in terms of changes in women’s time use and employment: in Nepal, the average time taken to access health centres was 28.6 minutes prior to the construction of trail bridges which resulted in time savings of between 3 and more than 60 minutes, while in Bangladesh, improved rural roads led to a 49% increase in male labour supply and a 51% increase in female labour supply.

However, while the positive impacts of infrastructure can be life-changing for women, it is important to ensure that possible negative impacts are identified and prevented. For example, research in Peru found that while the rehabilitation of roads helped to improve economic prospects and the quality of life of those benefiting, it also led to increased insecurity and a greater incidence of robberies, attacks and rapes.

It is thus important, in order to ensure that infrastructure benefits women, to make sure that both needs and possible risks are properly assessed, and that interventions are tailored accordingly, including, where required, through additional gender-related activities.

4 ADB, Balancing the Burden? Desk review of women’s time poverty and infrastructure in Asia and the Pacific, ADB, Manila, 2015; María Teresa Gutiérrez, The better the road, the greater the risk: Impacts of roads rehabilitation on safety and cultural values, IFRTD, Lima, 2007.
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Source: María Teresa Gutiérrez Santayana, ¿Qué significa acceder a un empleo remunerado? Mujeres que trabajan en proyectos de infraestructura vial, Pontificia Universidad Católica de Perú, June 2005.
2. MEASURES TO PROMOTE GENDER EQUALITY THROUGH EIIPS

Regardless of the implementation modality (i.e. whether workers are hired directly in programmes, or whether works are outsourced to SMEs or communities), gender-responsiveness can be promoted through various means. Key building blocks for ensuring that infrastructure initiatives work for both women and men are outlined in the sections that follow.

Build infrastructure that meets women and men’s needs:

A fundamental element of gender-responsiveness in infrastructure projects is the output of the initiative itself – i.e. the specific infrastructure that is to be built, improved or maintained. As mentioned in Box 2, the infrastructure needs of women and men differ, in accordance with their productive and domestic roles and responsibilities.

Whether the infrastructure that is developed benefits both women and men in terms of their employment as well as social impact depends on a range of design elements. It is essential to consider the following:

- **Information and involvement:** Both women and men should be informed of the investment initiative, and consulted with regard to their views on the likely impact and their specific needs.

- **Gender analysis and needs assessment:** A thorough gender analysis should always be carried out to understand the implications of the possible infrastructure investment for women and men, and to identify the infrastructure-related needs of both.

- **Decision-making:** The needs and preferences of women and men identified through the steps above should inform the final decision taken regarding the infrastructure projects that are selected.

Box 3: Employment Impact Assessments as guidance for investment decisions

When deciding on investments, it is of critical importance to have a solid understanding of the employment impacts that they will have. The ILO’s EIIP undertakes Employment Impact Assessments (EmpIAs) to quantify the employment potential and impacts of public investment programmes in the infrastructure sector, particularly in sub-sectors where labour-based construction methods are technically feasible and cost-effective. Such assessments help to understand how many jobs are created through the investment, who gets these jobs, and what kinds of jobs are created.

Such assessments also examine the gender dimensions of the employment that is generated. In Ghana, an Employment Impact Assessment was carried out in the social housing sector, and showed that although future investments in the housing sector could create between 68 to 154 person-years of direct employment per million USD of investment, as the involvement of women in the sector is about 0.12% of the workforce, this employment impact will not benefit women. The assessment therefore recommended to identify ways of encouraging the employment of women.

Include women in works:

As mentioned above, women have traditionally been marginal in the infrastructure works sector, and focused efforts thus need to be made to enable women to take part in infrastructure works programmes. To maximise the potential of programmes to attract women and allow them to join, the following measures should be considered:

- **Information, marketing and sensitisation:** When jobs or contract opportunities are advertised, the channels (e.g. radio, print media, internet or announcements at public gatherings) used should be ones that reach both women and men. The messages conveyed should also be inclusive: explicit statements to invite women to apply should be included and exclusively masculine language or pictures should be avoided. The use of local language is also of critical importance as women are likely to remain in their local villages.

- **Removal of restrictions:** Criteria which directly or indirectly limit women’s participation in infrastructure works should be revised. For example, in Jordan, as it was initially impossible for women to participate in construction work in the roads sector as work permits could not be obtained, the ILO has been supporting the government in revising work permits and expanding the scope of infrastructure-related activities in which women are allowed to work. In terms of indirect restrictions, in Peru it was found that a requirement for contractors to be literate and to have experience in bricklaying or construction inhibited women’s ability to apply and be selected, and the conditions were therefore removed.

- **Target/quotas:** Setting a target or quota for a minimum number of women to participate in infrastructure works has been found to be a highly effective measure to increase their participation.

- **Training:** Women and men’s respective skill levels should be assessed, and if additional capacity building is needed to bridge gaps in terms of technical or soft skills, provision should be made for it.

- **Choosing and optimising the contracting modality:** When infrastructure works projects are designed, among other criteria, women’s ability to participate under each proposed modality should be assessed and taken into account while the decision is being made. If a specific modality has already been pre-selected, it is also important to consider the gender-implications of it and make any adjustments that are necessary.
Box 4: Points to consider under different contracting modalities

Various contracting modalities in infrastructure works have different advantages and disadvantages from a gender perspective. These need to be given consideration while preparing for implementation:

Hiring workers directly

When public works programmes are introduced, households will often automatically choose the household head, usually a man, to participate. This can be overcome through the introduction of targets and quotas, as well as marketing and sensitisation efforts. Given that there is a risk that households will select women to be the workers in the scheme only in order to receive the benefits, it is important to ensure that this does not lead to adverse impacts such as increasing the overall work burden of women (or transferral of it to girl children) through appropriate workplace measures (see section below).

Contracting communities

When communities are contracted to perform infrastructure works, women’s participation is often easier to secure than with other modalities. The worksites are often in or close to the village so they enable women to combine domestic work with the infrastructure work, and as they work alongside community members, there is usually less resistance from the community as compared to situations where women work with outsiders. However, in many cases women do not participate sufficiently at the identification and design stages of these works when (usually male) village authorities are consulted, so the infrastructure may not meet their needs. It is therefore important to identify ways of making sure women’s voices are heard early on.

Contracting SMEs/local contractors

When private enterprises are contracted for infrastructure works, there is usually a tendency for the enterprises to be male-owned and managed, and staffed with a primarily male workforce. Women entrepreneurs (and workers in SMEs) are rare in the sector, and the limited numbers that do exist tend to be smaller, have less capital, and more likely to be informal than those owned by men, meaning it is more difficult for them to access contracts. It is therefore key to not only include targets for the contracting of women-owned SMEs, but also to provide the required support in terms of capacity building and facilitating linkages to finance. It is also key to encourage SMEs/local contractors to engage women supervisors to help attract and retain women workers and as women supervisors are likely to support the design and implementation of gender-responsive workplace policies.

Make sites into gender-responsive workplaces:

The worksite itself needs to have appropriate policies, facilities and mechanisms to enable women and men to work in an environment that is safe and healthy, allows workers to combine work and family, and is free from discrimination and violence:

- **Accommodating women and men’s lifecycle needs:** Employers should provide work that is light and safe at early stages of pregnancy when women are still at work and allow time off at later stages; allow breaks for breastfeeding; facilitate transport to and from the site or provide work close to women’s homes; allow flexible work hours; and establish crèches close to the site or provide workers with child care allowances.

- **Ensuring women and men are paid equally for work of equal value:** While many worksites have a policy of “equal pay for equal work”, attention needs to be paid to the valuation of women’s work and to making sure that even when the tasks are different, women’s tasks are not undervalued and underpaid.

- **Preventing and addressing harassment and workplace violence:** Policies and grievance mechanisms should be in place to prevent and address workplace harassment and violence.

- **Providing inclusive but safe work facilities and arrangements:** Worksites should aim to create an inclusive atmosphere; for example, worksite communication materials should avoid exclusively masculine formulations. At the same time, the facilities and work arrangements should feel safe and culturally appropriate. For instance, there should be separate rest areas and bathrooms for women and men, and, in some cases, women may prefer to work in women-only teams.
Box 5: Good practices and promising results

**Jordan:** The “Employment through Labour Intensive Infrastructure in Jordan” project has defined a minimum quota of women in its interventions; has included equal opportunity and non-discrimination clauses in the contract conditions for road works; and provides separate sanitary facilities for women workers on construction sites. It is also in the process of negotiating work permits for women workers to work in a larger set of construction-related activities (not just cleaning, which is currently allowed) with the government. The share of women among project beneficiaries is 16%, which not only surpasses the quota of 10% but is overall a significant achievement given the highly conservative context and quasi-absence of women from the sector prior to the project.

**Nepal:** The “Strengthening the National Rural Transport Programme” has facilitated women’s involvement in road maintenance work through various measures such as the adoption of a quota for women’s participation, a performance-based payment system, a zero-tolerance policy with regard to harassment, the negotiation of transport arrangements with the district transport association, and skill development programmes for female workers and internships for female engineers. As a result, women make up 70% of road maintenance group members, and report not only increased incomes but also improved confidence and bargaining power.

**Peru:** In Peru, the “Provias Rural” programme which was implemented between 2001 and 2006 addressed the limited participation of women in roads works through a range of measures, including the setting of a quota for women’s participation, capacity building, and the revision of the procure for the formation of road maintenance microenterprises. Thanks to these measures, the participation of women increased generally, and women also entered the decision-making sphere, with the share of women occupying a managerial position in road maintenance microenterprises reaching 8% in 2006.\(^6\)

**Tanzania:** The public works component of the “Productive Social Safety Net” programme in Tanzania has set a target for women’s participation, and provides flexible working hours and differentiated tasks to enable women to work within the programme. Some programme locations even provide child care facilities. The proportion of women among beneficiaries is 70%, and in addition to impacts relating to employment and incomes, women also report an increased bargaining power and reduced marital conflicts, among other positive changes. Women’s participation in the selection of infrastructure projects has also led to infrastructure decisions that support their needs (for instance, initiatives which facilitate water collection).

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6 María Teresa Gutiérrez, 2006, op.cit.
Mainstream gender into the project/programme cycle:

In order to be able to undertake the substantive measures to promote gender equality that are mentioned above, the project or programme cycle overall needs to be gender-responsive. Gender issues should be taken into account at each step of the project cycle, and in terms of key elements such as budgets and staffing:

- **Analysis**: A thorough gender analysis needs to be carried out before any project or programme; particular attention should be paid to the specific infrastructure-related needs of men and women as well as the respective capacities of women and men to participate in infrastructure works.

- **Design**: The project or programme design needs to factor in any gender-related gaps found in the analysis, and formulate objectives and design activities to address them.

- **Staffing**: Projects or programmes need to make sure they have sufficient capacity for effective gender mainstreaming. This may require hiring extra, specialised staff or the capacity building of non-specialist project staff, or both.

- **Budgets**: The measures foreseen to promote gender equality (including activities, staffing decisions, etc.) need to be budgeted. This does not always mean that extra resources need to be made available; it may simply imply a re-programming of resources.

- **Monitoring and evaluation**: It is important that data on the project or programme’s progress and impacts is sex-disaggregated. However, this alone is usually not sufficient, and specific indicators to measure gender-related impacts should also be included in M&E frameworks.
Box 6: Factoring in context-specific gender concerns in infrastructure development

When designing employment intensive investment programmes, contextual factors also need to be kept in mind as they influence the measures that may be required to ensure gender equality, as these examples from two of the ILO EIIP’s intervention areas show:

**Green works and climate change**

Climate change impacts women and men differently, and, the roles that they play in combating it may also differ. When deciding on climate change adaptation and mitigation measures and infrastructure-related considerations, women and men’s respective situations need to be taken into account. For example, in relation to droughts and increasing water scarcity, it is important to consider whether any infrastructure-related decisions address both women and men’s needs in terms of the potential impacts on women and men’s productive work (if women and men farm different crops, do women’s crops benefit equally from irrigation solutions?) and unpaid family or community responsibilities (if women are responsible for sourcing water, do scarcity-related measures take into account and address this?).

In addition to assessing and addressing needs and minimising the risks of negative outcomes, opportunities for involving women in climate change mitigation should also be harnessed. For example, women entrepreneurs involved in the production of green building materials (such as Compressed Earth Blocks, which are not only environmentally-friendly, but also an easier start-up option for women as compared to cement blocks or burnt bricks as their production is less capital- and energy-intense and relies on local materials), should be integrated as a priority into infrastructure project supply chains through appropriate measures such as training and financial support.

**Fragility, conflicts, disasters and situations of forced displacement**

Both natural disasters and conflicts can exacerbate gender inequalities, while reconstruction efforts present opportunities to build a more gender-equitable future. The destruction of infrastructure as a result of conflicts or disasters causes livelihood losses as workplaces lose their operation capacity, as entrepreneurs lose productive assets and as transport gets disrupted. For women who remain in such settings, damaged roads and bridges or schools and crèches often mean an increased domestic burden as the fetching of water or firewood is made more difficult, and as the responsibility for caring for children falls back on women.

The deaths, injuries or out-migration of men, or families getting separated when fleeing as refugees or when internally displaced mean sudden shifts of responsibilities, with women needing to find ways of sustaining their dependents. For refugee women, the situation is particularly dire, as they do not have access to extended family support, do not possess the assets required for self-employment, and may face double discrimination in accessing wage employment (such as the difficulty of obtaining work permits as both refugees and as women). On the other hand, the entry of refugees into national markets can exacerbate an already challenging situation and put stability at risk. By targeting vulnerable men and women (for example, ex-combatant and/or single parent-headed households), infrastructure programmes are an invaluable mechanism for providing incomes, social protection, social cohesion and a sense of self-worth.

Improving the economic opportunities of women through immediate employment in such settings is a crucial goal because of its intrinsic importance and because of its contribution to programme success in building peace. For instance, it lessens the risk of women becoming victims of armed groups, and, as women have been found to allocate a greater proportion of their economic dividends to family well-being and community recovery, it contributes positively to overall welfare and peace outcomes. When designed with both women and men’s needs in mind, the infrastructures themselves can also pave the way to more gender-equitable communities and to recuperate livelihoods by for example prioritizing the reconstruction of the productive space in the house.
3. KEY TAKEAWAYS

The experiences of employment intensive infrastructure programmes provide important lessons in terms of women’s involvement:

- Gender-responsive infrastructure works do not only mean works where women participate and obtain employment. It is equally important to ensure, by providing women the opportunity to engage in planning and design that the infrastructure investments themselves respond to women’s needs.

- In terms of employment, infrastructure works do not automatically benefit women, whose presence has traditionally been very limited in infrastructure works. However, when women do participate, these works provide access to employment, social protection, and a sense of empowerment for women, often for the first time.

- Stereotypes and assumptions that infrastructure work is inappropriate for women can and have been successfully overcome, as demonstrated by, for example, the case of Peru where women’s participation increased from a marginal 3.5% in 2001 to almost 30% now. Even in cultural contexts where women’s employment options outside of the domestic sphere are very limited and where road works have been an exclusively male domain, change is possible, as the Jordan case – where women’s participation rates have reached 16% – shows.

- Infrastructure works also provide an opportunity to promote the career development of young skilled, professional women, as they can inspire girls to enter the programmes in order to improve their skills or to work as supervisors or in other managerial functions.

- Cases where women’s participation has been successfully increased show that a combination of several substantive measures, as well gender-responsive project management, are required. It is not sufficient, in terms of substantial measures, to simply decide on a quota for women; complementary measures to attract and retain women, including measures which take account lifecycle needs and family responsibilities, are required for such quotas to be realistically attainable. Similarly, in terms of project management, it is not sufficient to carry out a gender analysis and to set gender-related objectives for a project - budgets and staff capacity are needed for operationalising the gender-related measures through which such objectives can be met.

- When advocating for gender equality in infrastructure works, it is important to highlight the win-win dimension of women’s participation in terms of greater productivity at the worksite, and better outcomes in terms of development, poverty reduction and wealth creation more broadly.

- Attention also needs to be paid to preventing possible adverse impacts - such as girl children being drawn into childcare work when mothers work, or increases in domestic violence when gender role changes appear sudden and threatening - early on and in an effective manner.

- Apart from generic measures applicable to infrastructure works broadly speaking, challenging implementation circumstances such as situations of fragility or conflict have their own, specific gender dimensions which need to be addressed and harnessed for responses that work for all.
Key ILO resources


Maria Teresa Gutiérrez and Maria Kuiper (with inputs from Jennie Dey de Pryck), Women in infrastructure works: Boosting gender equality and rural development! FAO, IFAD, ILO, 2010.


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For more information on the Employment Intensive Employment Programme’s work on gender equality and women’s empowerment, please visit our website: