



**TOGETHER**  
*for a sustainable future*

## OCCASION

This publication has been made available to the public on the occasion of the 50<sup>th</sup> anniversary of the United Nations Industrial Development Organisation.



**TOGETHER**  
*for a sustainable future*

## DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

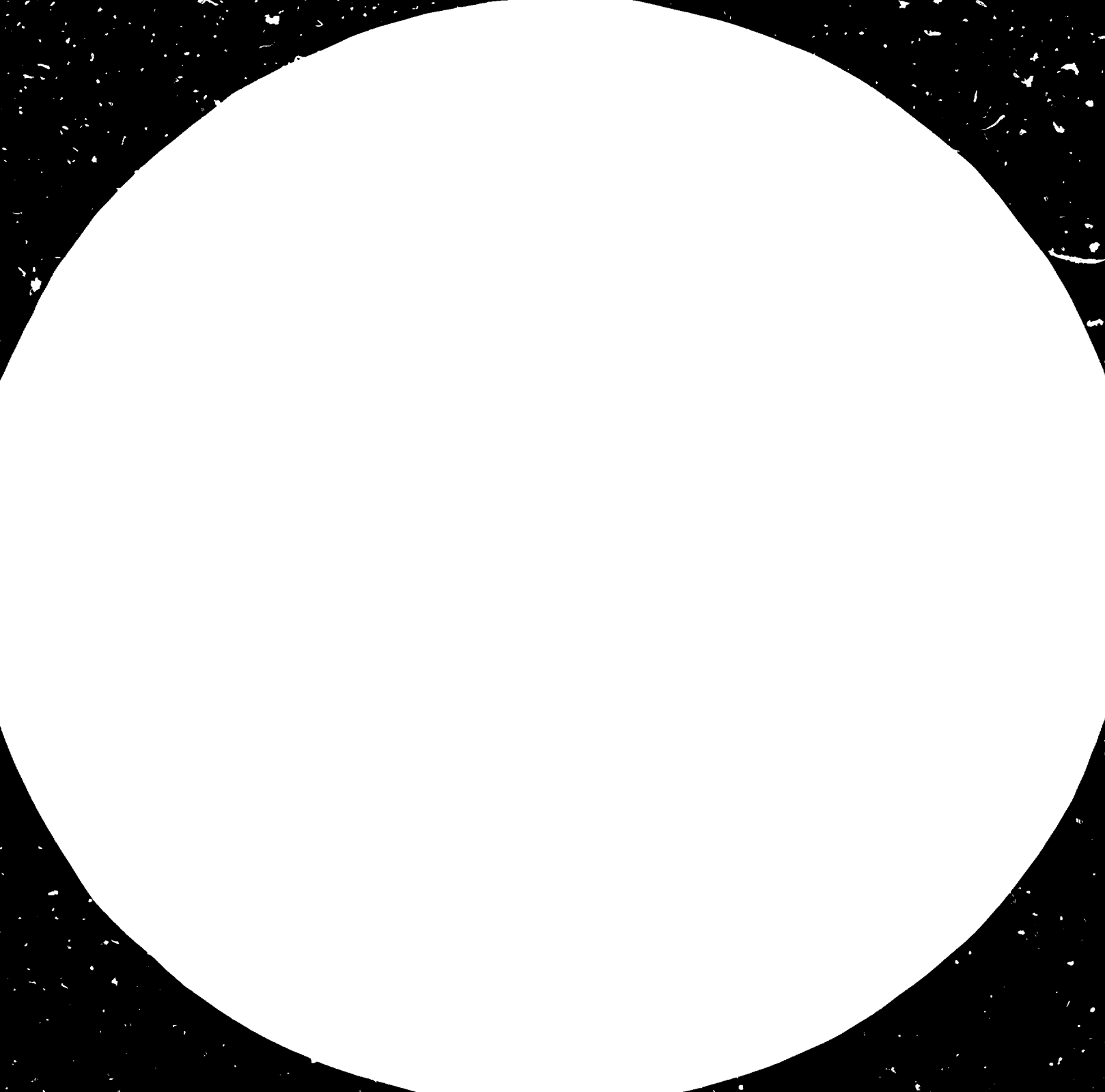
## FAIR USE POLICY

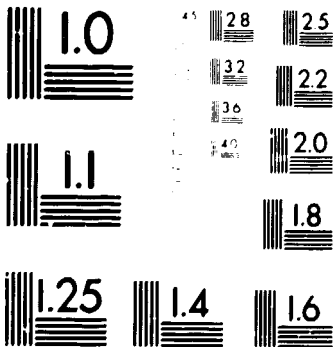
Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

## CONTACT

Please contact [publications@unido.org](mailto:publications@unido.org) for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at [www.unido.org](http://www.unido.org)





MICROCOPY RESOLUTION TEST CHART  
 NATIONAL BUREAU OF STANDARDS  
 STANDARD REFERENCE MATERIAL 1010a  
 (ANSI and ISO TEST CHART No. 2)

14202

Mechtild Petritsch  
1984

Progress achieved and obstacles encountered in promoting full participation of women, both as agents and beneficiaries, in industrial development at all levels 3039

### Overview

#### 1. Limitations on the present analysis of the issue set by the responses to the questionnaires received to date

##### 1.1 Limitations posed by the response rate

Of the 96 replies to the UNDP questionnaire (approximately 60 % of UN member states replied) only 67 Governments (70 % of those replying) answered the part on industrialization. A major obstacle to an adequate analysis of progress made by women in respect of industrialization is posed by the fact that many of the largest countries in all economic groups, i.e. developing countries, centrally planned economies and developed market economies, did not reply. Since the policies of larger countries greatly affect not only their own economies but also have spillover effects on other countries, it is very difficult to identify general trends. Therefore, the final interpretation of data - assuming that these countries eventually reply - may differ substantially from the current presentation.

##### 1.2 Limitations posed by extent and quality of replies

A factor that further limits the validity of any conclusions drawn here is that for approximately 50 % of the questionnaires received from Governments of countries in all economic and regional groupings, usable replies were given to only some of the questions. The fact that in a single questionnaire some questions were answered at length while others remained unanswered, pointed either to a lack of adequate information or to a lack of interest on the part of the office replying. For example, a "yes" or "no" reply was often given without the necessary supporting information that would have indicated that the reply reflected the true situation in the country rather than a random response.

It often appeared that answers were not based on any statistically valid sources of information but on the personal opinions and a simplified

from: E. Kötter

of the respondent. This situation seems particularly unfortunate in light of the fact that some questionnaires contained a wealth of detailed information, which indicates that, in many countries at least, the information would be available if looked for.

It is inevitable that this resumé, which is based on questionnaires that are so uneven in the extent and quality of information provided, will not present a full picture of progress and achievements made in the integration of women in industrialization.

Overall, the value of this review is limited by the lack of quantifiable data and the omission of statistical comparison with the situation at the beginning of the decade.

## 2. Progress achieved in promoting the full participation of women in industrialization: equality and development

### 2.1 Developed Market Economies

The response rate for these countries was 44 %; major countries such as the USA, Japan, Federal Republic of Germany, have not replied to date.

Advances in computer technology were seen as a major factor in industrial development in these countries by 60 % of respondents. The widespread use of micro-processors is leading to new forms of work organization; computer-assisted design and production (two countries mentioned robotics) has a significant impact on the manufacturing sector; office automation and the use of word processors affect all sectors of the economy. The effect of these changes on the labour productivity of women and men has not yet been fully analysed. However, advances are seen in the wider range of occupational possibilities opened to women by the reduction of physical strength required for many tasks, as well as possibilities for job enrichment due to the fact that machines are taking over many repetitive tasks. Although training for upgrading of skills is available to women in many countries, retraining for new fields in industrial production seems to be restricted to men. While the level of occupational skills of women has been raised substantially, there has been very little penetration by women of the higher echelons of the managerial hierarchy, nor have women's incomes risen commensurately with their increase in skills.

## 2.2. Centrally planned economies

The response rate for this group of countries was 64 %, the highest of any group; no reply has been received from China.

This group of countries has a tradition of emphasizing the participation of women in a wide range of occupations. It is reported that no sexual segregation of the labour force exists.

Applications of scientific and technological advances to industrial production are seen as eliminating a large part of strenuous physical and unskilled labour and raising the productivity of both women and men, as well as further widening the range of occupational possibilities for women. Women's participation in decision-making positions in industry is reported as having risen substantially (one country reported that 20 per cent of all industrial managers were women).

## 2.3. Developing countries

### 2.3.1 Africa

The response rate for the countries of the ECA (Economic Commission for Africa) to the part of the questionnaire on industrialization was 39 per cent.

The participation of women in industry in Africa is mainly confined to those areas in which women have traditionally been active: small-scale and cottage industry, predominantly food processing, textiles, handicrafts, and domestic production of goods for family consumption and sale. It is apparent from the questionnaires that manufacturing activities by women are generally still not considered to be productive work and are thus not included as part of industrial production. Exceptions to the above pattern are found in the replies of a few countries which have recently gained their independence and which report that their women play a more equal role in society, including industrial development. Women are said to take part in a wider range of activities; mining, quarrying and chemical industry, and participate at all levels of industry, including decision-making positions. One trend that is reported is that women are engaged in producing and maintaining implements and equipment used in agriculture and light industry, which is seen as application of appropriate technology.

### 2.3.2 Asia and the Pacific

The response rate for the countries of ESCAP (Economic and Social Commission for Asia and the Pacific) on industrialization was 33 per cent. Among the countries that did not reply were China, India, Japan and Korea.

The participation of women in industry in the countries of this region can be classified in two categories: on the one hand, intensification of women's work in traditional fields of activity, such as food production and processing, and light industry (textiles, shoes, etc.); on the other hand, employment in the modern sector in redeployed manufacturing industries, often in free trade zones, in electronics assembly, etc.

Two apparently contradictory trends can be observed: one is that increasing factory automation is putting many women out of work, so they are returning to agriculture, etc. to earn a livelihood, and the other is that women are receiving more training and entering into non-traditional occupations, usually as a result of government programmes with this aim.

### 2.3.3 Middle East

The response rate for the countries of ECWA (Economic Commission for Western Africa) was 40 per cent; however, the minimal participation of women in industry in this region is reflected in the fact that only one of the six replies received contained any usable information. This reply, however, was quite detailed. In general, in this region women's participation in industry is confined primarily to labour-intensive manufacturing industries requiring little capital investment, where skills acquired by women in domestic work are utilized without being appropriately remunerated. Although the extensive reply from one country, already mentioned, reports new trends and developments in women's participation in industrial development that are comparable to those in advanced Asian countries, this single reply does not provide a sufficient basis for an analysis of general trends in the region.

### 2.3.4 Latin America

The response rate for the countries of ECLA (Economic Commission for Latin America) was 52 per cent. Most of the larger countries, except Argentina, replied.

In addition to the continued strong participation by women in traditional fields of activity, greater integration of women in the

modern sector and particularly in non-traditional branches of industry, such as electronics, chemicals and metal-working, is reported, especially by the larger countries of the region. While the range of activities has been expanded, there is no indication that women are more equally represented in management and decision-making positions, particularly at the middle and higher levels. The situation of employed women seems to be improving, including access to training and social services provided by enterprises. However, the current recession in the world economy with high rates of unemployment, apparently leads to greater participation by women in the informal sector, particularly in self-employment, where they are not protected by social legislation.

3. Major obstacles encountered in promoting the full participation of women as agents and beneficiaries at all levels of industrial development

3.1 Obstacles encountered in all country groupings

3.1.1 Failure to recognize the problem

Between 70 and 80 per cent of Governments in all country groupings replied that there were no obstacles at all. This fact represents the single largest obstacle to the achievement of greater equality and more positive impact of industrial development for women.

3.1.2 Lack of information

A dearth of data and thus of an assessment of the positive and negative effects of the changes accompanying industrial development hampered the replies and was even expressed by some of the replying offices, which makes it very difficult to promote change in a positive direction.

3.1.3 Narrow view of women and technology

In general, women were seen more as consumers of the new technologies and products than as producers.

3.1.4 Persistence of negative attitudes towards women in industry

The replies to the questionnaires reveal a reluctance to consider women as equal participants in industrial development and in society as a whole. While this problem is often labelled as persisting



traditional attitudes in society, these attitudes are themselves a reflection of the continuing marginalized position of women in prevailing economic and social structures.

### 3.2.1 Obstacles reported in industrialized countries

Major obstacles to the full participation of women were seen to include:

- (a) introduction of new technologies and their impact on specific groups;
- (b) job stereo-typing;
- (c) the conflict for many women between work and family life;
- (d) the lack of adequate support services, e.g. day care centres;
- (e) the continuing lack of appropriate training for women, specifically to allow women to enter new fields of industrial production as highly-skilled members of the labour force;
- (f) the negative effects of the current world economic recession on opportunities for employment.

### 3.3 Obstacles reported in developing countries

Major obstacles to the full participation of women were seen to include:

- (a) restriction of women producers to low-technology branches and occupations;
- (b) lack of industrial skills at all levels;
- (c) extremely limited availability of training, with the exception of some in-plant, on-the-job training, making it almost impossible for women not already in the industrial labour force to learn new skills;
- (d) social attitudes towards women's employment in general;
- (e) social preference for confining women's employment to the professional, clerical and service sectors only;
- (f) long working hours in the industrial sectors and the insufficiency of services to help women in proportion to the number of female workers in the industrial sector;
- (g) high general rates of unemployment and even higher rates of seasonal unemployment.

REVIEW AND APPRAISAL OF PROGRESS MADE  
AT THE NATIONAL LEVEL IN ATTAINING THE GOALS AND  
OBJECTIVES OF THE UNITED NATIONS DECADE FOR WOMEN

Chapter V. Progress achieved and obstacles  
encountered in promoting full participation  
of women, both as agents and beneficiaries  
of development, at all levels

Part V. H, Industrialization

Contribution by UNIDO

1. Limitations on the analysis of the issue set by the responses received to the questionnaires

(a) Limitations posed by the response rate

Seventy-six countries, or approximately 50 per cent of UN member states replied to the part of the UNIDW questionnaire on industrialization. A major obstacle to an adequate appraisal of progress made by women in respect of industrialization is posed by the fact that many of the largest countries, developed as well as developing, in all geographical regions, did not reply. This sets severe limitations on the extent and depth of analysis possible, particularly in view of the fact that the policies of larger countries greatly affect not only their economies but also have spillover effects on other countries.

By far the highest response rate was from the centrally planned economies, 7 of 11 countries, or 64 per cent. For the developed market economies it was 44 per cent; 11 of 25 countries replied. The response rate for the developing countries as a whole was 45 per cent, ranging from 36 per cent of the ECWA countries, 37 per cent of the ESCAP countries, and 45 per cent of the ECA countries, to 58 per cent of the ECLA countries. It is difficult to interpret the significance of the failure to respond to the questionnaire on industrialization. The range of possible explanations reaches from a continued lack of recognition of the fact that women represent an important human resource potential for industry, to a simple unavailability of the information necessary for a reply.

(b) Limitations posed by the extent and quality of replies received

Overall, the value of this review is limited by the lack of quantitative data and of comparative statistics reflecting the situation at the beginning and at the end of the Decade.

A factor that further limits the representativeness of the data presented here is that for approximately 50 per cent of the questionnaires received from Governments of countries in all economic and regional groupings, no meaningful replies were given to many of the questions. The fact that in a single questionnaire some questions were answered at length, while others remained unanswered, pointed either to a lack of adequate information or to a lack of interest on the part of the office replying. For example, a "yes" or "no" reply was often given without the necessary supporting information that would have indicated that the reply reflected the true situation in the country rather than a random response.

It often appeared that answers were not based on any statistically valid information sources but on the personal opinions and assumptions of the respondent. This situation seems particularly unfortunate in the light of the fact that some questionnaires contained a wealth of detailed information, which indicates that, in many countries at least, the information would be available if looked for.

It is inevitable that this resumé, which is based on questionnaires which are uneven in the extent and quality of information provided, will be unable to present a full picture of the achievements and progress made in the integration of women in industrialization. In the overall assessment, recommendations

have therefore been included of three recently conducted Regional Workshops on the Integration of Women in the Industrial Planning and Development Process\*.

2. Progress achieved and obstacles encountered in promoting the full participation of women in industrialization: equality and development

(a) Developed market economies

The response rate for these countries was 44 per cent; among the major industrial countries that did not reply were the Federal Republic of Germany, Japan and the United States.

(i) Technological Developments

Most countries responding reported that the introduction of new technologies during the Decade has affected all of industry, and thus women's work in industry. Among the technological applications mentioned were:

- industries operating continuous cycles;
- assembly and large-scale production;
- handling and mechanical transport;
- printing and publishing;
- telecommunications;
- electronic data processing.

The widespread use of micro-processors is leading to new forms of work organization; computer-assisted design and production (two countries mentioned robotics) has a significant impact on the manufacturing sector; office automation and the use of word processors affect all sectors of the economy. The effect of these changes on the labour productivity of women and men has not yet been fully analysed. However, advances are seen in the wider range of occupational possibilities opened to women by the reduction of physical strength required for many tasks, as well as possibilities for job enrichment due to the fact that machines are taking over many repetitive tasks.

The negative effects of technological innovations on women reported include potential loss of employment, de-skilling, health hazards and reduced job satisfaction. In most industrialized countries, while these trends have been identified, they have not yet been quantified.

The use of modern technology in the household was reported by some countries as lessening the burden of work for women.

A number of countries reported the existence of legal measures providing for protection of the environment in connection with the introduction of new technologies.

---

\* ID/WG.422/7, African Regional Workshop on the Integration of Women in the Industrial Planning and Development Process, Harare, Zimbabwe, 9-17 April 1981  
ID/WG.423/6, Caribbean Regional Workshop on the Integration of Women in the Industrial Planning and Development Process, Georgetown, Guyana, 6-12 May 1981  
ID/WG.424/4, Asian Regional Workshop on the Integration of Women in the Industrial Planning and Development Process, Bangkok, Thailand, 9-12 July 1981

(ii) Industrial infrastructure and training

Approximately 50 per cent of countries replying report the establishment of new industrial infrastructure since 1975. In most cases it operates under national labour legislation.

Although training for upgrading of skills is available to women in many countries, re-training for new fields in industrial production seems to be restricted to men. While the level of occupational skills of women has been raised substantially, there has been very little penetration by women of the higher echelons of the managerial hierarchy, nor have women's incomes risen commensurately with their increase in skills.

(iii) Major obstacles encountered and strategies for the future

Although legal and other formal obstacles to women's full participation in industry have been eliminated to a large extent in the countries responding, other obstacles remain. These include.

- the economic recession and its effects on the labour market;
- the application of new technologies in industry and resulting changes in the organization of work;
- inadequate support services;
- insufficient emphasis on training in the skills required in future.

(b) Centrally planned economies

The response rate for this group of countries was 64 per cent, the highest of any group; no reply was received from China.

(i) Technological developments

The majority of countries reported that new technologies have been introduced since 1975 that affect women in their role as producers. This group of countries has a tradition of emphasizing the equal participation of women with men in a wide range of occupations. It is reported that no sexual segregation of the labour force exists.

Applications of scientific and technological advances to industrial production are seen as eliminating a large part of strenuous physical and unskilled labour and raising the productivity of both women and men, as well as further widening the range of occupational possibilities for women. Women's participation in decision-making positions in industry is reported as having risen substantially (one country reported that 20 per cent of all industrial managers were women).

Concerning women in their role as consumers and users of new technologies, specific policies were reported that aimed at improving the utility value of products by continual modernization and innovation, and at contributing to raise the living standard of the population regardless of sex. The facilitating of household duties is one of specific measures within the global programme which keeps in view the needs of women.

None of the countries in this group reported any negative effects of the introduction of new technologies on women, neither in their role as producers, nor as consumers/users.

Although most of the countries in this group neglected to answer the question on measures taken to protect the environment in connection with industrialization and technological change, one country replied at length, stating that:

'The siting, design, construction and commissioning of new and modernized enterprises, structures and other facilities, along with the introduction of new production processes affecting the condition of the country's water, are carried out only after the necessary steps have been taken to ensure the rational use of the waters, keeping in mind the priority need to guarantee the supply of water to the public for drinking and household needs.'

(ii) Industrial infrastructure and training

Several countries mentioned training facilities that are open to men and women equally, and that provide them with further skills in all sectors of industry.

(iii) Major obstacles encountered and strategies for the future

None of the countries in this group reported the existence of any major obstacles to the full participation of women in industrialization.

(c) Africa

The response rate for the countries of the Economic Commission for Africa (ECA) was 45 per cent.

(i) Technological developments

More than half of the countries responding reported that new technologies had been introduced since 1975 which affected women in their role as producers. The participation of women in industry in Africa is mainly confined to those areas in which women have traditionally been active: small-scale and cottage industry, predominantly food processing, textiles, handicrafts, and domestic production of goods for family consumption and sale. It is apparent from the questionnaires that manufacturing activities by women are generally still not considered to be productive work and are thus not included as part of industrial production.

Exceptions to the above pattern are found in the replies of a few countries which have recently gained their independence and which report that their women play a more equal role in society, including industrial development. Women are said to take part in a wider range of activities: mining, quarrying and chemical industry, and participate at all levels of industry, including decision-making positions.

One trend that is reported by several countries is that women are engaged in producing and maintaining implements and equipment used in agriculture and light industry, which is seen as application of appropriate technology.

Among the positive effects of new technologies reported on women in their role as producers were improved quality of products and increased production through improved inputs and implements, leading to higher income. No negative effects were mentioned.

(ii) Industrial infrastructure and training

Approximately 50 per cent of countries replying reported the establishment of new industrial infrastructure since 1975, most of which came under national labour legislation. However, women were not specifically taken into consideration in planning and implementing infrastructure development.

Training for women is provided predominantly for upgrading existing skills of women already in employment and for improved provision of subsistence needs. Much less emphasis is placed on training to enable women to participate to a greater extent in management and planning. As mentioned above, a few countries form notable exceptions to this rule and make deliberate efforts to provide training in management skills for women.

(iii) Major obstacles encountered and strategies for the future

Most of the countries replying see the major obstacles to greater participation by women in industrialization in the lack of training in general and of necessary industrial skills at various levels in particular. Further obstacles are seen in conflicts arising from women's family responsibilities, leading to lack of time and inability to work outside the home on a regular basis, the lack of support systems, such as kindergartens, etc. Protective legislation for women, such as maternity leave, is also reported as having a negative impact on women's opportunities for employment in industry. Existing socio-cultural patterns and attitudes of men and women, employers and employees, about women's role and status are seen as a further source of obstacles to women's participation in industry.

(d) Asia and the Pacific

The response rate for the countries of the Economic and Social Commission for Asia and the Pacific (ESCAP) on industrialization was 37 per cent. Among the countries that did not reply were China, India, Japan and Korea.

(i) Technological developments

The participation of women in industry in the countries of this region can be classified in two categories: on the one hand, intensification of women's work in traditional fields of activity, such as food production and processing, and light industry (textiles, shoes, etc.); on the other hand, employment in the modern sector in redeployed manufacturing industries, often in free trade zones, in electronics assembly, etc.

Two apparently contradictory trends can be observed: one is that increasing factory automation is putting many women out of work, so they are returning to agriculture, etc. to earn a livelihood, and the other is that women are receiving more training and entering into non-traditional occupations, usually as a result of government programmes with this aim.

Most countries of this region reported the introduction of new technologies since 1975, and that these had had an impact on the conditions of life for women, both in their roles as producers and as consumers/users of these technologies, whereby these roles cannot be separated from each other.

It is reported that these technologies have had a positive impact on the conditions of women inasmuch as women have become active agents of production. By growing field crops (e.g. subsistence food crops, or assisting men in the cultivation of cash crops), raising poultry and livestock using improved farm technologies, undertaking home-based industries (food processing or handicrafts) women are able to earn supplementary income while at the same time fulfilling their household responsibilities.

Some of the specific technological innovations that have been introduced that affect women, both as producers and consumers, include: sand water fillers for household water supply; fuel efficient low-cost cooking stoves such as the Lorena stove; extraction of medicines from local herbs; hydraulic ram pumps for domestic water supply; water-pumping windmills for domestic water supply and possible low head irrigation use; cow manure biogas production; solar water heating; low-cost windmills in rural areas; hot springs for power generation; solar air conditioning; food preservation/processing techniques; fruit picking devices; a combination dryer and charcoal producing device; and a palay grain dryer.

None of the countries reported on negative impacts on women arising from the introduction of new technologies. No specific measures for protecting the environment in connection with industrial technology were reported.

(ii) Industrial infrastructure and training

Most countries reported that new industrial infrastructures have been established since 1975 and in most countries this operates under national labour legislation.

In approximately 50 per cent of the countries, training is considered to be an important means of integrating women into changes in industry. This includes technical training, re-training, and further training, both in-plant and in training centres.

In Asia a relatively high percentage of women (up to approximately 30 per cent) are trained in supervisory and management skills. Nonetheless, it is reported that many training programmes for women tend to do little to alter women's traditional status and, in some cases, may further actually reinforce this status. Training for women is usually directed towards promoting women's responsibility in family matters or at improving skills in traditionally female activities. The same thing might be said of female employment programmes involving the manufacture of handicrafts and garments or food preservation. These programmes also limit women to the role of supplementary income earners.

(iii) Major obstacles encountered and strategies for the future

Among the major obstacles to full participation by women in industrialization the following are listed:

- general and seasonal unemployment;
- conflicts between women's role in the family and employment;
- stereotypes, status and traditional values.



(e) Latin America

The response rate for the countries of the Economic Commission for Latin America (ECLA) was 58 per cent. Most of the larger countries, except Argentina, replied.

(i) Technological developments

Approximately 50 per cent of the countries of this region which replied reported that new technologies had been introduced since 1975, and that these technologies had had an impact on the conditions of life for women. In addition to the continued strong participation by women in traditional fields of activity, greater integration of women in the modern sector, and particularly in non-traditional branches of industry such as electronics, chemicals and metal-working, is reported, especially by the larger countries of the region. However, the current recession in the world economy with high rates of unemployment, apparently leads to greater participation by women in the informal sector, particularly in self-employment.

The positive impact on women as producers was seen in greater employment opportunities and higher family income as a result of women's entry into the labour force. The situation of employed women seemed to be improving, including greater access to training and social services provided by enterprises, including medical care, meals, etc. Many previously unemployed women have become self-employed, primarily as processors of locally available materials: food processing, handicrafts, etc. While the range of activities has been expanded there is no indication that women are more equally represented in management and decision-making positions, particularly at the middle and higher levels.

Some of the technological innovations mentioned in the questionnaires which had a positive impact on women as consumers/users of technology were: electrical domestic appliances, to which some sections of the population had access, and intermediate or appropriate technology, such as solar heaters and dryers, aerobic energy, biomass converters and Lorena cookers. The positive effects on women were seen in that these technological innovations relieve physical strain and save time, freeing women for training or entry into the labour market.

None of the countries reported on specific environmental protection policies in connection with the introduction of industrial technologies.

(ii) Industrial infrastructure and training

Almost all countries of the region which replied reported the establishment of new industrial infrastructure since 1975, operating predominantly under national labour legislation.

Training facilities for women exist, including in-plant training, training in training centres or institutes, mobile training units in rural areas, fellowships in other countries and in centres for management training. The content of these training programmes is adapted to the requirements of industry, particularly industries such as carpentry and cabinet making, shoe making, tailoring, plumbing, automobile repair, and the repair of domestic electrical appliances.

(iii) Major obstacles encountered and strategies for the future

Major obstacles to full participation by women in industry which were reported include:

- the current economic crisis and resulting high levels of unemployment;
- continued restriction of women's employment to a narrow range of occupations in most cases;
- preference given to male workers in training and promotion;
- special protective labour legislation for women;
- continuing socio-cultural prejudices that discriminate against women in all stages of preparation for and entry into the labour market.

(f) The Middle East

The response rate for the countries of the Economic Commission for Western Africa (ECWA) was 36 per cent; however, the low participation of women in industry in this region is reflected in the fact that only five replies were received, of which only one contained very detailed information. Although this one reply reports new trends and developments in women's participation in industrial development that are comparable to those in more industrially advanced Asian countries, this reply alone does not provide a sufficient basis for an analysis of general trends in the region.

(i) Technological developments

In general, in this region women's participation in industry is confined primarily to labour-intensive manufacturing industries requiring little capital investment, where skills acquired by women in domestic work are utilized without being appropriately remunerated.

Only two countries reported that the introduction of new technologies has had a positive impact on the conditions of life for women in their role as producers. These countries also reported that new technologies had a positive impact on women as consumers/users, mainly by raising the economic level of households.

The negative impact of technological changes on women was reported on at length by only one country. The effects were seen mainly to lie on a personal level: conflicts arising for employed women between their role in the family and at work, the difficulties for women to fulfil their professional ambitions in their society, and alienation within the families and industrializing communities.

(ii) Industrial infrastructure and training

One country reported the establishment of new industrial infrastructure during the course of the Decade.

This country also reported the existence of training programmes which included women. In general, training facilities for upgrading women's skills to meet the requirements of new production processes are almost non-existent. As mentioned above, industry uses the skills informally acquired by women.

(iii) Major obstacles encountered and strategies for the future

One country reported the following obstacles to full participation by women in industry:

- the social attitude towards women's employment in general;
- for women who are employed, the social preference for confining their employment to the service, clerical and professional sectors only;
- the long working hours in industry and the insufficiency of services to help women in proportion to the number of female workers in the industrial sector;
- the negative effects of the introduction of modern technology on the conditions of life for women.

3. Overall assessment of the findings of the questionnaire on industrialization

In evaluating the situation of women at the beginning and end of the Decade in respect of their participation in industrialization, it becomes evident that while some progress has been achieved in many areas, obstacles still remain in both developed and developing countries. These are summarized below.

(a) Obstacles to the full participation of women of particular concern to developed countries

Major obstacles to the full participation of women in industry in developed countries were seen to include:

- - introduction of new technologies and their impact on specific groups;
- job stereotyping;
- the conflict for many women between work and family life;
- the lack of adequate support services, e.g. day care centres;
- the continuing lack of appropriate training for women, specifically to allow women to enter new fields of industrial production as highly-skilled members of the labour force;
- the negative effects of the current world economic recession on opportunities for employment.

(b) Obstacles to the full participation of women of particular concern to developing countries

Major obstacles to the full participation of women in industry in developing countries were seen to include:

- restriction of women producers to low-technology branches and occupations;
- lack of industrial skills at all levels;
- extremely limited availability of training, with the exception of some in-plant and on-the-job training, making it almost impossible for women not already in the industrial labour force to learn new skills;
- social attitudes towards women's employment in general;
- social preference for confining women's employment to the service, clerical and professional sectors only;
- long working hours in the industrial sectors and the insufficiency of services to help women in proportion to the number of female workers in the industrial sector;
- high general rates of unemployment and even higher rates of seasonal unemployment.

(c) Key policy areas for measures designed to promote participation by women in industrialization, both as agents and beneficiaries of development on equal terms with men

In the course of the evaluation of the situation of women at the beginning of the Decade, the disadvantaged position of women in comparison to men in industry was recognized. Just as industrialization plays an essential role in countries' economic growth, so does improving the position of women in the industrialization process represent an important element in the overall improvement of the economic and social situation of women, and of society as a whole.

The full participation of women in the industrialization process, both as agents and beneficiaries of development, in its ideal form, would mean that women participate equally with men at all levels, in all branches of industry, and at all stages of industrial production. It would also be essential for women to be included from the beginning in new and growing industrial sectors. If measures promoting the full participation of women in industry are to have a lasting, positive impact, they must be integrated into the major strategies and priorities of a country's industrial development policy.

While a wide variety of measures is necessary to this end, many of which have been undertaken with varying degrees of success during the Decade, the following have been identified as key areas for action.

(i) Collection and dissemination of information

In most developing countries there exists an inadequacy of statistical data and other information about women's existing role and conditions of participation in industry, and the impact of industrial development and technological change on women. The availability to policy makers and planners of reliable data on the existing and potential contributions of women to the industrialization

process is necessary to promote change in a positive direction. There is also an urgent need for improved information flows at national, regional and international levels to facilitate the process of integrating women in industrial development.

(ii) Training and technology

The attempt to measure the progress achieved in promoting the full participation of women as agents and beneficiaries in the industrialization process with special attention to equality and development, must give particular consideration to two aspects: training and technology.

Promoting greater participation of women in industry does not mean merely employing more women as industrial workers, particularly as low-cost labour in unskilled jobs; it means taking measures to upgrade women's qualifications and to provide women with greater access to the skilled and professional positions where they are still under-represented, as well as including more women in the decision-making processes in industrial policy formulation, planning and management.

Training opportunities for women in industrial production skills are insufficient and are largely limited to traditional occupations. Further, existing training programmes do not fully take into account the special needs and interests of women. In the light of this situation and the need to increase women's involvement in key professional, managerial and technical roles in both industrial and development organizations in public and private sectors, it is a matter of priority to devise strategies and programmes at local, national, regional and international levels to increase the number of trained and qualified women at all levels in industry and at the same time to provide improved vocational guidance and careers counselling to women students;

The impact of technological change on the role and conditions of women should be closely monitored so as to anticipate and ameliorate any adverse impact on women. Thus far, women have too often been overlooked as users and agents of change in science and technology; women's needs as users, in such fields as labour-saving devices, technologies for humanity and basic needs, and other quality-of-life improving fields should be taken into account in designing industrial end-products or production processes; women users should be involved in product testing and development. Proven industrial applications of conventional (e.g. food processing) or non-conventional (e.g. solar driers) technologies should be made more widely and readily available to women, especially those living outside the main urban concentrations.

Women themselves should be involved in planning and decision-making processes in science and technology so as to ensure that they benefit from the available technologies and that any adverse effects are minimized. Women are more vulnerable to displacement from employment by the introduction of new technologies, so that every effort should be made to anticipate such changes and facilitate the process of transition for the work force involved, as far as possible at plant level. In rural areas small-scale industries provide income-earning opportunities for women who have lost traditional earning activities through technological change or the modernization of agriculture.

Greater attention must be paid, both in developed and developing countries, to the relation between industrial technology and the environment. This is an area of special concern to the female population, particularly in developing countries, where women traditionally have the responsibility for supplying their families with water and energy.

(iii) Changing stereotyped views of women and women's roles

The replies to the questionnaires reveal a reluctance to consider women as equal participants in industrial development and in society as a whole. Women were generally seen more in their role as consumers/users of the new technologies and products than as producers.

Women's organizations, trade unions and other non-governmental organizations should monitor national policies and planning activities and assess their impact on women. Women's organizations should actively represent women's interests and concerns to policy-makers, planners and employers so that such decision-makers are fully aware of women's multiple roles, real conditions and existing contribution to society. Women's organizations also have a vital role in the creation of consciousness and awareness amongst the women of the protective legislations operative in the country and the rights and facilities flowing to them as a result, so that women are not deterred from departing from traditional roles and from seeking entrances into higher positions of responsibility and influence.

INTERORGANIZATIONAL EVALUATION STUDY  
OF WOMEN'S PARTICIPATION IN DEVELOPMENT

Contribution by UNIDO

June 1984

TABLE OF CONTENTS

	<u>Page</u>
Introduction ... ..	1
I. BACKGROUND INFORMATION ... ..	2
A. The integration of women in industrial development ... ..	2
B. Integration of women in industrialization within the framework of UNIDO's technical Co-operation activities ... ..	3
II. EVALUATION OF SELECTED INDUSTRIAL DEVELOPMENT PROJECTS ... ..	4
A. Findings applicable to all projects ... ..	4
B. Project descriptions and evaluations ... ..	7
1. Haiti ... ..	7
2. Indonesia ... ..	10
3. Rwanda ... ..	16
4. Yemen ... ..	20
III. RECOMMENDATIONS ... ..	23
A. General Recommendations ... ..	23
B. Specific Recommendations .. ... ..	26



Interorganizational Evaluation Study of  
Women's Participation in Development

Contribution by UNIDO

INTRODUCTION

This report is UNIDO's contribution to an evaluation study of technical co-operation activities with regard to the participation of women in development undertaken by those organizations of the United Nations development system that are significantly concerned with women's role in development. The purpose of the study is to evaluate the effectiveness of efforts to promote women's participation in development and to provide a basis for formulating recommendations for improved strategies to ensure that technical co-operation activities enhance women's participation in development and the benefits they derive therefrom.

The evaluation study will comprise country case studies of four countries: Rwanda, Indonesia, Haiti and Democratic Yemen, with sectoral studies of a number of main areas, including industrial development, for each country and evaluations of selected projects in each sector.

Data for the present report were collected by means of an evaluation questionnaire that was jointly designed by ILO and UNIDO and which was sent to the four countries covered by this study. The format followed in the project evaluations is based on this questionnaire.

I. BACKGROUND INFORMATION

A. The integration of women in industrial development

An evaluation of technical co-operation activities promoting women's participation in industrial development must begin by considering what is meant by the integration of women in the industrialization process. Ideally, this would mean the inclusion of women as equal participants with men in industry, at all levels and in all stages of industrial production.

In order to have a lasting positive impact on women's situation, measures promoting the advancement of women must be an integral component of the major priorities, strategies and sectors of industrial development of a country. While it must be recognized that there is a need for specific strategies, policies, measures and actions to overcome women's present disadvantaged position and to enable them to participate actively in industrialization, the goal of integration of women can best be achieved by ensuring that projects designed to employ women are not isolated from the larger process of industrialization. This is not merely a question of employing greater numbers of women workers in industry, but of taking measures to upgrade women's qualifications, to integrate them in training programmes for skilled and professional positions where they are traditionally under-represented, and to allow them access to industrial employment at all levels.

Integrating women's activities in the larger industrialization process could also help to eliminate some of the deficiencies frequently seen in small-scale industrial projects designed for women, e.g. that the goods produced by women in such projects are of marginal importance to the national and/or local economy with the result that low priority is attached to such activities. Other factors that often reduce the effectiveness of such efforts to integrate women in industrialization are low productivity and efficiency, often due to low levels of investment in machinery and equipment and inadequate technologies, low pay relative to men doing comparable work, low

profitability, low technical and vocational skills, and lack of bargaining power owing to the low value placed on the activity. A better way of designing such projects could, for example, involve the employment of women in certain stages of processing raw materials or in producing intermediate goods as inputs in industrial production or in producing and repairing implements used in industry and agriculture.

B. Integration of women in industrialization within the framework of UNIDO's technical co-operation activities

UNIDO's technical co-operation activities related to women in industrial development can be divided into two categories. The first category consists of projects where women are not the major target group but which can have a decisive impact on the employment and advancement of women; the second comprises projects specifically tailored to promote the integration of women in development. The latter projects are often designed to promote the establishment of small-scale industries, particularly in rural areas, taking into account the composition of the labour force in these areas.

## II. EVALUATION OF SELECTED INDUSTRIAL DEVELOPMENT PROJECTS

### A. Findings applicable to all projects

Before presenting the individual project evaluations in the four countries, some of the characteristics revealed by all the questionnaires received should be noted.

#### 1. Attitudes of Planners

A major constraint to progress in the integration of women in industrialization can be found in the attitudes of many planners, their limited information on the subject and the small importance given by them to the question of women in industrialization. The unwarranted assumption that women will be automatically included as full and equal participants as the industrialization process advances, which is not borne out by the experience of the industrialized nations, acts as a further barrier to the adequate consideration of women and women's interests in the planning and implementation of industrialization programmes and projects.

## 2. Women in planning

It appears that to ensure that women's interests are adequately considered in industrialization programmes and projects, it is essential that women participate actively in planning from the outset.

From the information received in the project evaluation questionnaires, it can be seen that women are rarely included at any stage of programme design, project planning, implementation or evaluation. It can be further observed that the failure to involve women in the planning process correlates with a lack of recognition of women as participants in the industrialization process. The potential economic contribution of women is ignored. The assumption that is sometimes expressed that women are implicitly included and that specific provision for their participation is therefore unnecessary is not borne out by experience.

In the projects reported on, when women were involved in project design and implementation, it was always on the national side, in a ministry, etc., thus indicating a greater willingness on the part of Governments than by the UN system to include women in the planning process.

## 3. Potential Detrimental Effects of Industrialization Projects on Women

The questionnaire inquired about the potential direct and indirect detrimental effects of the project on women. This question was invariably answered with "none" or "not applicable". The inability to foresee the possible negative effects of industrialization projects on the female population remains one of the major obstacles to overcoming them, as they can only be avoided or at least alleviated if recognized in time. The assumption made by planners that all eventualities have been taken into account in planning appears unlikely in the light of the available literature on this subject. The lack of information and data

relating to women used in planning the selected projects can be taken as an indication that the answer "not applicable" is based on a failure to recognize the complex interconnections between economic and socio-economic variables that can be observed to play a role in determining the effects of industrialization on women's situation and on the entire affected population. The recognition of possible detrimental effects does not mean that such projects should not be carried out but that additional provisions should be made in order to counteract the negative effects.

4. Data collection as a basis for project planning, preparation and evaluation so as to promote the integration of women in industrialization

If technical co-operation projects for industrial development are to enhance women's participation and the benefits derived by women from industrialization, an essential part of the preparatory stage of project design must be the collection of data on socio-economic variables relating to women. This was not observed in any of the projects reported on.

Data that are essential for planning for the social change that accompanies industrialization include both data on socio-economic variables that are important for the entire population and data on variables that are particularly vital in planning for women, such as patterns of land and property ownership and inheritance, control over all sources of income, household and family structures, time budgets of women and the existence of support systems for employed women (health-care facilities, etc.) to mention only a few.

The collection of such data is a pre-requisite for an effective quantitative and qualitative evaluation of projects with regard to aspects concerning women, which appears to be lacking in all projects reported on.

B. Project descriptions and evaluations

1. HAITI

The two projects selected for evaluation in Haiti were "Integrated Stone Development" (HAI/79/C07) and "Production of Simple Agricultural Implements" (RP/HAI/82/008).

(a) "Integrated Stone Development"

(i) General information

This project, funded by UNDP, with UNIDO as the responsible executing agency, was started in 1979 and is scheduled to last 60 months, with the possibility of extension.

(ii) Project focus

The objectives of the project include the identification and evaluation of major stone resources in Haiti with a view towards the industrial and artisanal exploitation of these resources, a pre-feasibility study on marble and the preparation of promotional material for potential investors.

The direct target group are national personnel involved in stone quarrying. The eventual beneficiaries include inhabitants of remote areas who may find employment in the exploitation of local stone resources. According to the project evaluation questionnaire, this can also include employment opportunities for marginal groups of the labour force of both sexes.

(iii) Project activities related to women

There is no component for women in this project.

(iv) Organization, leadership and staffing

No women were involved in the planning, preparation and implementation of the project.

(v) Outcome, results, recommendations

While the employment generated by this project, which will include different levels of skilled and unskilled labour, could well benefit women as well as men, no provision has been made for any organizational components that would encourage the active participation of women. It is evident that women were simply not considered in the course of planning this project.

(b) "Production of simple agricultural implements"

(i) General information

This project, funded by UNIDO's regular budget for technical co-operation, was begun in June 1983 and December 1984.

(ii) Project focus

The objectives of the project are the production and testing of locally made prototypes of simple agricultural implements with a view toward eventual mass production of these tools in order to fulfill the needs of farmers, rural artisans and rural households. The project budget does not include any particular component for women.

Although the objectives do not mention women specifically, the fact that the target group includes rural households means that women are directly affected, not as producers but as consumers of the tools produced.

(iii) Project activities related to women

The only mention of a women's component in the project is a training programme for home-makers. This reflects a view of the role of women as confined to the home and tasks related to it, that is, women's reproductive functions and not productive functions. There is no perception of any negative impact on women.



(iv) Organization, leadership and staffing

Women were not involved at any level of planning, preparation or implementation of the project.

(v) Outcome, results, recommendations

There is every reason to expect that this project will have a favourable effect on women as eventual beneficiaries by lessening the physical burden of work and time spent on it and by increasing their productivity and their incomes. The evaluation questionnaire enumerates that this positive impact will affect women's participation at all stages in crop cultivation and processing, transport and marketing.

However, there is no indication that these effects have been planned for specifically. Technical co-operation projects directed towards increasing women's participation in industrial development would have to take into account women's potential for active involvement in the design, production, maintenance and repair of agricultural implements in a rural society. This project apparently represents a missed opportunity for advancing the major goal of integration of women in industrialization.

## 2. INDONESIA

In Indonesia four projects were selected for evaluation, "Assistance to the Industrial Development of Building Materials Manufacture" (INS/74/034), "Assistance in Identification, Preparation and Implementation of Industrial Projects in Selected Regions (INS/78/002), "Assistance to the Development of Small Industry" (INS/78/078), and "Comprehensive Investment Profiles for Selected Regions" (INS/078/003).

(a) Assistance to the Industrial Development of Building Materials Manufacture

(i) General information

This project, funded by UNDP and executed by UNIDO, was started in July 1983 and is scheduled to last 48 months. No component for women is budgeted.

(ii) Project focus

The objective of the project is to develop small local building materials industries in connection with low-cost housing construction activities.

The target group are the producers of building materials, specifically those in small (family) enterprises.

It is estimated that women form approximately 15 per cent of the 100 people directly reached by the project. Eventually all small-scale producers of building materials should benefit from this project, as well as some construction entrepreneurs. There are 1,2 million persons involved in the building materials industry.

(iii) Project activities

There is no specific women's component in this project, but the evaluation questionnaire states that women may benefit from

training activities, for example training in the production of clay roofing tiles and bricks, as well as from assistance in the economic management of family enterprises and co-operatives. No negative effects on women are perceived.

(iv) Organization, leadership and staffing

No women were involved in planning this project. Of the 23 people employed in project implementation, one associate expert and two clerks are women.

(v) Outcome, results, recommendations

This project is expected to have an overall beneficial effect on socio-economic conditions in rural communities engaged in the production of building materials. As the project evaluation questionnaire points out, there is a tradition of women's involvement in small industries. Whether this involvement becomes stronger or not depends on the course of development in rural society.

(b) Assistance in Identification, Preparation and Implementation of Industrial Projects in Selected Regions

(i) General information

This project, funded by UNDP and executed by UNIDO, began in 1980 and is scheduled to take 57 months. No women's component is budgeted.

(ii) Project focus

The objectives of this project are:

- the development of industry in the provinces outside Java;
- the establishment of a suitable institutional framework for on-going activities, and
- the development and training of national staff to continue the project.

The target group includes:

- local entrepreneurs;
- Department of Industry staff;
- selected national staff as team members;
- local consulting firms.

Eleven of the 41 national staff who are team members are women (approximately 25 per cent). The eventual beneficiaries of the project include local entrepreneurs and workers who will find employment in the industries established. No indication was given of what percentage of these might be women.

(iii) Project activities related to women

There is no component for women planned for inclusion in this project and it is not foreseen that any of the project activities will be of particular benefit to women, nor that they will have any detrimental effect on women, either directly or indirectly.

(iv) Organization, leadership and staffing

One woman was involved in the design of the project, a ministry official, and 7 of 50 (14 per cent) people employed in implementing the project are women, one associate expert, one national expert, two national counterparts and three clerical staff members.

(v) Outcome, results, recommendations

No information was given in the evaluation questionnaire on this subject, and there was insufficient data in the other parts to draw any conclusions.

(c) Assistance to the Development of Small Industry

(i) General information

This project, funded by UNDP and executed by UNIDC, was started on 10 August 1981 and is scheduled to take 37 months. No women's component is budgeted.

(ii) Project focus

The objective of the project is to assist in the planning and implementation of the programmes of the Ministry of Industry for the development of small-scale industry in Indonesia. The project is expected to:

- train extension personnel of the Ministry of Industry both at national and provincial levels;
- help existing entrepreneurs to upgrade their existing production, and
- identify new industrial opportunities amongst potential entrepreneurs.

Of those persons reached directly by the project, 20 per cent of the 500 extension workers and a similar percentage of the 100 entrepreneurs are women.

The eventual beneficiaries of the project include an expected 1.5 million persons who will be employed in newly created industrial units, approximately 20 per cent of whom will be women.

(iii) Project activities related to women

No specific component for women has been included; however, it is recognized that women form an important proportion of the entrepreneurs in Indonesia and it is expected that female entrepreneurs will benefit equally from the project.

Project activities which will be particularly beneficial to women include:

- the identification of new industrial opportunities;
- the assistance to existing small and cottage units now functioning;
- the training programmes both for extension staff and entrepreneurs.

No detrimental effects for women are expected.

(iv) Organization, leadership and staffing

One woman, a Government official, was involved in project design, and two female experts are involved in project implementation.

(v) Outcome, results, recommendations

This project, which links industrial development planning and implementation on the macro- and micro-level, is apparently employing an effective method of integrating women in the industrialization process, expanding upon existing skills and experience of women in economic activities.

(d) Comprehensive Investment Profiles for Selected Regions

(i) General information

This project, funded by UNDP and executed by UNIDC, was started in March 1981 and is scheduled to last 48 months. No women's component is budgeted.

(ii) Project focus

The project objectives are:

- assessment of physical, human and economic resources;
- identification of potential sub-sectors in terms of comparative advantage;
- identification of project ideas for their investment potential;
- preparation of comprehensive investment profiles, and
- designing network system for implementation.

All of these might benefit women. The persons directly reached by the project include provincial authorities, Government functionaries interested in promoting investment, and private sector persons interested

in investment, 10 per cent of whom are women.

The eventual beneficiaries are all those who will find employment in newly established enterprises. 30 per cent of these are expected to be women.

(iii) Project activities related to women

Although there is no specific women's component, many of the project ideas are found in the fields of agriculture (food crops, cash crops, livestock, dairy, poultry) and agro-industry where many women are employed, making women both primary and secondary beneficiaries.

(iv) Organization, leadership and staffing

The project design included a female ministry official and the implementation included female national counterparts.

(v) Outcome, results, recommendations

In the evaluation questionnaire for this project, it was recommended that more women be hired as experts in technical fields. It was indicated that national counterparts would be very willing to accept women in such positions. The importance of including women, both as project personnel and in the target groups, from the very beginning, in the project planning stage, was emphasized.

### 3. RWANDA

The two projects selected for evaluation in Rwanda are "Assistance to the Industrial Promotion Office" (DP/RWA/75/011) and "Production of Medicine based on Medicinal Plants" (RWA/80/003).

#### (a) Assistance to the Industrial Promotion Office

##### (i) General information

The project, which is funded by UNDP and executed by UNIDO, was started in 1978 and scheduled to continue until the end of 1984. No component for women was included in the budget.

##### (ii) Project focus

The project objectives were: industrial development in Rwanda, the creation of industrial employment and the improvement of external assets (foreign exchange). The target group comprises Rwandese counterparts in the Ministry of Industry, Mining and Craft and national and foreign investors and industrialists. There is no indication that any of these persons are women.

##### (iii) Project activities related to women

While no specific women's component was included in the project, it was stated that the new industrial enterprises set up with the help of the project could create employment for women.

No detrimental effects for women were perceived.

##### (iv) Organizations, leadership and staffing

No women were involved in designing the project. Of the 21 persons involved in implementing the project, the only women are three female clerical staff members.



(v) Outcome, results, recommendations

As women form 48 per cent of the labour force in Rwanda, it would be essential for industrialization programmes to take them into account from the outset. This project fails to do so. In order to promote the integration of women in industrial development several measures were mentioned as being necessary in the project evaluation questionnaire:

- Specific measures to create employment for women in new industrial enterprises (not just the assumption that women will be included among those employed);
- Training for women in industrial management, market research and other skills needed in industry at all levels;
- Training women as national counterparts, in the Ministry of Industry, etc., in the techniques of project identification, design, implementation and evaluation.

(b) Production of Medicines Based on Medicinal Plants

(i) General information

The project, which is funded by UNDP with UNIDO as the responsible executing agency, is being carried out by the Centre Universitaire de la Pharmacopée et la Médecine Traditionnelle (CURPHAMETRA) of the National University of Rwanda at Butare. It was begun in 1980 and scheduled to take four years.

(ii) Project focus

The objective of the project is to set up a pilot plant for the production of medicines using locally grown medicinal plants, which should have the following positive effects:

- promote research and treatment using these medicines;
- reduce imports;
- create employment;
- raise local income;
- modernize production methods;
- train personnel in production, research, etc.

No provision has been made for including women among any of the direct or eventual beneficiaries of this project.

(iii) Project activities related to women

There is no specific component for women in the project, nor any indication that women would be included in any of the project activities.

(iv) Organization, leadership or staffing

Women have not been involved in the planning, preparation or implementation of the project.

(v) Outcome, results, recommendations

The failure to include women at any stage in this project is particularly noticeable since women form a large proportion of the agricultural work force (96 per cent of working women are involved in agriculture), since women are most often directly involved in the health care of the family (caring for the sick, taking family members to the clinic or doctor, if available, administering prescribed

medicines or other remedies), and since production of medicines is a type of light industry which often employs women in many countries.

4. YEMEN

Project evaluation questionnaires were received for only two of the three projects selected in Yemen. These two projects were "Training in Management and Performance Improvement in Industries" (DP/PDY/81/006) and "Installation of Machinery for National Tanning Factory" (RP/PDY/83/001)

(a) "Training in Management and Performance Improvement in Industries"

(i) General information

This project, funded by UNDP, with UNIDO as the responsible executing agency, was begun in June 1982 and is scheduled to continue for 48 months.

(ii) Project focus

The objectives of this project include the improvement of management and economic performance of existing industries as well as increasing the institutional capability of the Ministry of Industry and improving its management.

The target group for this project is national staff from 12 selected industries, high and middle level executives and technical staff of various categories. Of the 200 people the project will reach directly, 60 (30 per cent) are women. The eventual beneficiaries, employees of these industries and consumers of industrial goods, will include women as well as men.

(iii) Project activities related to women

Although the project does not mention any specific women's component, it is reported that training and technical assistance providing higher skills, increased productivity and better work

conditions affect women as well as men. No detrimental effect for women is perceived.

(iv) Organization, leadership, staffing

No women were included in the process of project design. The implementation of the project, however, includes one female national counterpart and one female clerk.

(v) Outcome, results, recommendations

In addition to the 30 per cent of those directly affected who are female, mentioned above, positive effects for women are expected from the assistance in organizing specialized training centres for women in leather, shoes, knitting, etc. and assistance to improve working conditions in female-dominated industries such as textiles, food processing, shoes, etc. Thus, this project appears to approach the task of involving women in industrial development in an integrated way, on the one hand, by including women in the professional staff directly addressed, thus raising their capacity to participate in industrial production and management, and on the other hand by including particular measures to ameliorate deficiencies particular to industries employing a high percentage of women, such as lack of training in specialized skills, etc.

Persistent obstacles to reaching more women are seen in the low numbers of women active in all categories of employment.

(b) "Installation of Machinery for National Tanning Factory"

(i) General information

This project, funded by UNDP and executed by UNIDO, was started in September 1983 and was scheduled to take three months; it is part of a series of projects contributing to setting up the tannery.

(ii) Project focus

The objectives of the project are to increase production capacity and improve product quality. The target group are the factory management and supervisors in the production department. The eventual beneficiaries include all personnel in the production department, 30 males and 8 females (20 per cent).

(iii) Project activities related to women

No component specifically for women has been included, but training and technical assistance leading to improved skills and increased productivity as well as better working conditions affect both women and men employed in the factory. No detrimental effect on women has been perceived.

(iv) Organization, leadership and staffing

No women were involved in the process of project design. The only woman employed in the project implementation is a female clerk.

(v) Outcome, results, recommendations

The introduction of new technology to the tannery leads to higher skills and increased productivity of the female employees, thus following the stated goal of Yemen to promote the employment of women in an expanded number of fields of activity, including those where women are not traditionally involved.

### III. RECOMMENDATIONS

#### A. General Recommendations

1. All industrial development projects, existing and planned, should be reviewed to determine their potential impact on women and modified where necessary to ensure that women and matters of concern to women are given adequate consideration. It is essential that women's interests be considered at all stages in the project cycle: identification, design, implementation and evaluation.

2. Adequate financial resources should be allocated for projects that promote women's participation in industrial development in a positive way. In the process of project selection priority should be given to those projects that enhance women's participation in industrial development.

3. Governments should be provided with a clear statement of the policies and procedures of organizations in the United Nations system relating to technical co-operation in the area of integration of women in industrial development to encourage further co-operation in this area.

4. Every effort should be made to include women as active participants in the process of identification, design, implementation and evaluation of industrial development projects to ensure that the participation of women in such projects is not confined to men's ideas of appropriate roles for women.

5. The capacity of United Nations Headquarters and field staff to assist Governments in the planning and implementation of industrialization programmes and projects so as to integrate women in a positive way should be strengthened by providing them with relevant information, e.g. by organizing seminars and training courses to create awareness of the topic and the ability to utilize the information provided.

6. Appropriate socio-economic data on women: their activities, employment, productivity levels, etc., as well as data about health, nutrition, sanitation, household structure, etc. should be collected into a data base so that for every mission to a country relevant data can be provided. This data base should be centralized and updated regularly and supplied to all organizations, so that they all have access to the latest data.

7. Stronger co-operation between the organizations of the U.N. development system in the exchange of information on women should be promoted.

8. A set of guidelines for the integration of women in technical co-operation activities should be developed and distributed to those involved in all stages of the project cycle.

9. Projects for the promotion of new technologies that involve women as equal participants should be implemented so as to increase the productivity and efficiency of women's labour, both in those industries in which they are traditionally employed and in non-traditional fields of production.

10. Components for women should be included in industrialization projects on all scales and in all sectors so as to ensure that women's participation is not confined to small projects in a few industrial branches but is integrated into the over-all development of countries and regions.

11. Technical co-operation activities should be planned following an integrated, inter-sectoral approach, taking into consideration both economic and socio-economic factors. Projects must be designed so as to be economically viable; at the same time provisions must be made to compensate for changes in methods of production and the use of resources so as to reduce potential



negative impacts on nutrition, health, etc. and increase possibilities for positive effects on the well-being of the population in terms of increased income, improved infrastructure, etc.

12. A continuing evaluation programme should be instituted to review ongoing projects with regard to their impact on women. This should include regular missions for on-the-spot evaluation of projects in the field.

B. Specific Recommendations

1. Training

- 1.1 Women should be recruited as national counterparts for technical co-operation activities and trained in the process of identification, design, implementation and evaluation of projects.
- 1.2 Greater participation by women in fields such as engineering should be promoted by setting quotas or targets of numbers of women to be included in training courses for further education in these fields.
- 1.3 Equal participation by women in the labour force should be supported through training elements that benefit women, including
  - on-the-job training,
  - mobile training units to provide continuing training programmes in rural areas,
  - seminars promoting exchange of experiences and ideas between women at all levels,
  - fellowships for training women at interregional technical centres.

2. Expanding the Range of Women's Activities in Industries

- 2.1 Existing potential for further industrial development should be identified by means of:
  - market research to determine unfilled demands, where women could share in the production of needed commodities;
  - surveys of resources and existing technical capabilities among the female population;

- detection of existing production units that can be expanded upon.

- 2.2 Manuals identifying project possibilities and containing guidelines for the establishment of small-scale industries should be compiled and distributed in order to promote entrepreneurship and facilitate the organization of production units.
- 2.3 Assistance in project identification, assessment of risk, feasibility studies, market research, preparation of project proposals, securing access to credit, registration of enterprises, participation in trade fairs especially regional and international.
- 2.4 Improved access to information on production technologies, markets, both domestic and export, supplies of raw materials, sources of technical assistance.
- 2.5 Guidelines, advice and model contracts should be provided to women entrepreneurs and women's co-operatives to assist them in obtaining favourable conditions for the transfer of technology, etc.
- 2.6 Projects should concentrate on upgrading existing skills in the female population with a view towards equipping women for secure, regular wage employment rather than only training them for self-employment, which tends to be more subject to fluctuation of market demand and thus less secure.
- 2.7 Supportive services should be provided for employed women, where possible, connected to the place of employment.

