

and technology programmes. This paper deals with the opportunities and chances of EU funding programmes and the transfer to the member countries of the European Union.

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Eines der Ziele der Europäischen Union (EU) ist es, den Zugang von Frauen zum Arbeitsmarkt, insbesondere zu hochqualifizierten und technischen Berufen sowie in Führungspositionen zu fördern. Aber besonders in technologieorientierten Bildungsprogrammen der EU, aber auch in Forschungs- und Technologieprogrammen werden mehr männliche, als weibliche Teilnehmer angesprochen. Inzwischen wurden konkrete Schritte gefordert, um die Beteiligung von Frauen an den zukunftsweisenden Forschungs- und Technologieprogrammen zu erhöhen. Dieser Beitrag befaßt sich mit den Möglichkeiten und Chancen von EU-Förderprogrammen sowie den Umsetzungen in den Mitgliedsländern der EU.

THE SITUATION

168 millions of women live in the European Union (EU). That means that 51 % of the population in the EU are women. In spite of their higher standard of education women are under-represented in technical and scientific professions, in management positions and in politics. There are national shaped cultural and legal differences in the 15 EU Members States, but women have in principle nearly the same problems. The three EU institutions, Commission, Parliament and Council, see their task in taking care for better prerequisites for more and better employment of women with the help of Europe-wide legislation and special programmes in the fields of education, professional training and employment.

With the Treaty of the European Community (EC) 1957 the equality between men and women was explicit established. At that time it meant only the equal payment of both sexes. In the following years the equal treatment of men and women in the fields of social security, the practise of self-employment, the access to professional training, to employment and working conditions was settled Europe-wide. For this purpose the structure-funds and the community initiatives were established. 1995 after long negotiations in the Council the fourth activity program of the Community for equal opportunities of women and men was passed. [6]

There is a long tradition of discussing equal opportunities of women and men in the European Union. Enhancement of the situation of women is one of the goals of the EU. There are less activities in treating the discrimination of other groups of the society. Only in the framework of the community initiatives for employment of under-represented groups like disabled or social disadvantaged people and migrants get support.

COMMUNITY INSTITUTIONS AND BODIES

Following States are Members of the European Union:

Belgium, Denmark, Germany, Spain, France, Greece, Italy, Ireland, Luxembourg, The Netherlands, Austria, Portugal, Finland, Sweden, United Kingdom.

The European Parliament

The European Parliament - the only democratically elected international institution - has 626 Members who exercise democratic control at European level. Parliament helps to draft, amend and adopt European laws and budget, and makes policy proposals. MEPs take a keen interest

in the defence of human rights, and Parliament has relations with all the world's democratically elected parliaments.

The Commission

The Commission consists of 20 Commissioners, is independent of national governments and acts as a college. The Commission makes proposals for European legislation and action, and oversees the implementation of common policies. The European Parliament must give its approval to the appointment of the Commission, and also has the power to censure it.

The Council of the European Union

The Council of the European Union is made up of one minister for each Member State government and for each subject (for example, the Council of Foreign Ministers is made up of the 15 Foreign Ministers). Council and Parliament adopt Community legislation, initially proposed by the Commission.

The European Council

The Heads of State or Government of the Member States, and the President of the Commission, meet at least twice a year in the European Council. The European Council decides broad policy lines for Community policy and for matters of foreign and security policy and co-operation in justice and home affairs.

RESEARCH AND TECHNOLOGY PROGRAMS OF THE EU

The first to fourth research framework programme of the EC

During the first three research frameprograms no goal-oriented consideration of women could be discovered. The result was, that a lot more men than women took part at the technological-oriented education programs and research and technology programs in spite of the openness of the programs for women and the equal opportunities statements of the EU-Council.

The programs reflected the current situation for women and consolidated the status quo. In total the promotional measure and the philosophy of the programs was oriented to that social group where the highest preparedness of participation was expected. [3]

For the 4th research frameprogram 1994-1998 the European Parliament therefore formulated wishes and recommendations to the European Commission to draw up statistics, to present concrete action plans, to use the structure-funds for women and to support the establishment of networks. [5].

The fifth framework programme of the European Community for research, technological development and demonstration activities (RTD)

"A multiannual framework programme for all Community activities, including demonstration activities, in the field of research and technological development, hereinafter referred to as the "fifth framework programme" is hereby adopted for the period 1998 to 2002. The fifth framework programme shall, in accordance with Article 130g of the Treaty, comprise four Community activities:

- a) Implementation of research, technological development and demonstration programs (RTD);
- b) Promotion of co-operation in the field of Community research, technological development and demonstration with third countries and international organisations;
- c) Dissemination and optimisation of the results of activities in Community research, technological development and demonstration;
- d) Stimulation of the training and mobility of researchers in the Community.

The first Community activity shall relate to the following four themes:

1. Quality of life and management of living resources;
2. User-friendly information society;
3. Competitive and sustainable growth;
4. Energy, environment and sustainable development.

The second, third and fourth Community activities shall relate to the following three themes respectively:

1. Confirming the international role of Community research;
2. Promotion of innovation and encouragement of participation of SMEs (small and medium-sized enterprises);
3. Improving human research potential and the knowledge base.” [2]

The fifth frameprogram has a budget of 16 billions EURO (R 96 billions), but the expressions ”equal opportunity” or ”mainstreaming” are nowhere to find. In the foreword of the fifth frameprogram it is said: ”... Whereas the Community equal opportunities policy must be taken into account in implementing the fifth framework programme whereas, therefore, participation of women in the field of RTD should be encouraged;”. This aspect is picked up in the annex of the frameprogram: ”Particular account will be taken of the need to encourage the participation of women in the field of research and technological development”. This is not enough to push through equal opportunity.

WOMEN AND SCIENCE

The Communication from the EU Commission ”Women and Science” Mobilising women to enrich European research was adopted 17 February 1999. With the conclusion of this communication the following concept is presented [7]:

An European Union who would like to stay in the service of the citizens has to set targets in accordance with the general principles to realise equal opportunities of men and women in research, technological development and demonstration activities. In view of the current under-representation of women the goal is to increase their participation in European research. These efforts are necessary at European and national level. The Commission will support the debate and the exchange of experiences between the Member States.

The Commission will pay attention to information politics so that women are better informed about programs and actions which are established to increase the participation in scientific research.

The Commission oblige themselves to undertake relevant efforts to increase the participation of women in common research programs: With the fifth RTD framework program the share of women participating at the Marie-Curie-Grant, advisory assemblies and expert committees should be in average at least more than 40 %.

The Commission will establish one department and one working group "Women and Science" so that the measures to support women in European research could be co-ordinated.

Research from, for and about women

The support of women in research has to be done in three levels: The research from, for and about women.

With the advancement of research **from** women female scientists shall be supported in different stages during the development of the fifth RTD framework program. Further it has to be regarded that the EU financed research fulfils the necessities of male and female citizens in a similar way , that means research **for** women has to be supported. For this watchfulness by working out the programs and a detailed analysis of the gender question in all fields of research are imperative. Research **about** women is the possible contribution of research to develop the gender question, the relations between the sexes among themselves and the exposition of the consequences of this question to the European community.

The Commission's conclusion

For the Commission the fifth RTD framework program is a way to facilitate the access of women to European research.

Due to the actions presented in the communication the Commission creates the prerequisites for an increasing participation of women in scientific research. These efforts will be unsuccessful if not all institutions co-operate actively. Therefore it is very important to co-ordinate the behaviour among the institutions and to pay attention to the necessities of research institutions, enterprises and female scientist.

The Commission will evaluate the actions which are carried out on grounds of the communication and will present a report to the European Parliament and the Council. The commission is confident concerning the results of the process which is started. It is important to create a new face of research for the next millennium.

OVERVIEW ABOUT THE EFFORTS OF INDIVIDUAL EU MEMBER STATES TO SUPPORT THE ROLE OF WOMEN IN SCIENCE

Belgium

The advancement of women in science in Belgium is carried out mainly by the development and support of women's studies at universities. The university of Antwerp in Flanders for example established 1994 a postgraduate course for women's studies.

Denmark

1997 Jytte Hilden, minister for research and information technology, presented an action plan with 11 points. The action plan covers the fields of: equal opportunity, tasks of management, more female professors, increasing consideration of equal opportunities in job advertisements, balanced selection bodies, support by tutors and mentors, annual reports about the progress of equal opportunities in science, higher status of gender studies, state owned research institutes in the field of equal opportunities, financial assistance for child-caring for young women and men, better compatibility of family and profession and equal opportunities in all situations of life.

At the End of October 1998 a body chaired by the Ministry of Research published a report with proposals to this subjects. These proposals are scrutinised at the moment.

Germany

The number of women in science and research increased in Germany since 1990. Nevertheless the share of women is still very low. 1996 5 % of the professors were women.

In co-operation with the state governments in Germany a comprehensive university program is implemented. This program started 1991 and contains several special measures to support women in science. The second section of this program is financed with 365.000 EURO (R 2.2 millions) to increase the share of women in science and research especially in executive positions. Approximately 100.000 EURO (R 600 000) are reserved for special women's grants, for child care, special programs and for temporary jobs to give women the chance of lecturing qualification. The universities employ women and equality representatives and drew up plans for equal opportunities to fix obligatory goals to increase the share of women.

Greece

To support equal opportunities for women and men in scientific research the department of research, technology and development, part of the Ministry of Industry, does several analysis to get an overview about the current situation in Greece.

The analysis should be concentrated to the following questions:

- The problems female scientists are confronted, if they apply for a job in the national research centre;
- The problems in context with the test procedure;
- The problems in context with the selection procedure.

Spain

In Spain the share of women in research is also insignificant. The share of female professors is less than 10 %.

After the fourth world women conference in Beijing the government of Spain presented a program of studies "Women and Gender". The plan for equal opportunities (1996-2000) covers following measures:

- More models of education to facilitate the access of female pupils in natural science and technology;
- Special possibilities for women to get access to scientific and technical professional training;
- More possibilities for unemployed women to get careers guidance;
- The support of research in all fields which are in special interest for women;
- The support of specialisation of women in professions which offer future-oriented and innovative jobs.

France

The Ministry of Labour and Social Affairs affiliated an office for women rights and for professional training. The tasks of this office are the co-ordination of measures, the advancement of women rights and equal opportunities of women and men.

For the office the presentation of awards for scientific training is in the moment the most important measure of support.

Ireland

The protagonists and their activities who influence the participation of women in natural science in Ireland are:

- The organisation "Women in Technology and Science" (WITS): "Role model-days"; development programs for executive positions, programs to support equal opportunity, talent networks, the book "Star Shells and Bluebells", in which Irish women are portrayed;
- The Ministry for Education and Science: intervention project in physics and chemistry, research project "Equal opportunities for Girls and Boys in the Primary School Curriculum", lesson modules "girls in technique", guidelines for teachers;
- Single education institutions and their initiatives: professional training and employment of women in natural science and technique with different pilot projects;
- The Higher Education Authority (HEA) and Higher Education Equality Unit (HEEU): the advancement and development of measures and methods to combat the inequality at universities in Ireland.
- The department "Justice Equality and Law Reform" with the Employment Equality Agency: the achievement and observation of laws concerning equal opportunities at workplaces.

Italy

The Ministry of University and scientific and technological Research established 1997 a working group "Culture of Disparity between the Gender and Women Studies at Universities". The task of this group is to enhance equal opportunities of men and women and to facilitate the access of women to university education and to science.

The work program is founded short-term on statistical investigations and on the inventory of initiatives in the field of women studies and women centres.

The working group will long-term:

- draw up a report about the development of the share of women at universities and gender research;
- support successful methods with the help of financial participation and active advancement;
- organise a forum in the frame of "Livelong Learning" about women and gender studies.

Luxembourg

In Luxembourg a university does not exist. The government however started several measures in school education:

- Instructional work at primary and nursery school;
- An evaluation of job and women descriptions in school books;
- The project "Horeca" to sensitise more girls for technique;
- Establishment of a network of equality representatives.

The Netherlands

The share of female professors in 1997 was 5 %. Besides hierarchic differences there are also relevant technical differences: in technical and natural sciences women are more rare.

1997 a law was passed for equality of women in executive positions. According to that schools and universities have to fix goal-oriented quantities and to draw up plans to reach this goals. This law was passed in the same time with a law to modernise the structure of universities. This second law seems to be contrary because it supports the decentralisation of universities.

In the moment some institutions develop other measures to support equality in scientific executive positions for women. These institutions are: the advisory board of scientific and technological policy, the association of co-operating universities and the national research institution.

Austria

The goal of the federal equal right law is, to enhance the share of women in all positions up to 40 % in public services. The quota depends on qualification. The goal should be reached by preferring women with employment, advancement, professional training and further education.

1995 the Ministry of Science presented a first action plan of positive measures for women. This action plan is a very efficient means of legal redress and was extended in 1998.

Portugal

A recently carried out analysis came to the conclusion, that on grounds of the activities during the last 20 years women today are well established in lower positions of science: 53,4 % of lecturers are women, but only 6,7 % of professors.

To increase the rare share of women in natural science the comprehensive action plan for equal opportunities provides following measures:

- The change of the curriculum at schools;
- Guidelines for female pupils;
- The encouragement of young persons to participate on experimental education programs;
- The inclusion of sociological and economic aspects in programs to support research, technology and development.

Finland

Since the beginning of the eighties measures are established to support equality of men and women in science and at universities. The measures cover on one hand the observation and advancement especially concerning the position of female scientists and professors and on the other hand the support of women and gender studies.

1987 the law of equal rights was passed. The goal was to prohibit discrimination and to support equal rights for men and women. 1995 the law was changed and a fixing of quotas has been established. In public bodies 40 % of the members have to be women. Another change concerns the planning of equal treatment. Universities, research institutions and similar institutions have to pay attention in their staff and training plan on measures to support equal rights of men and women at workplaces. Sanctions do not exist.

Sweden

In Sweden the share of women in science is very low too. At university women nearly do not exist at the top of the hierarchy. In 1997 only 10 % of more than 2000 professors were women. In other fields of the public sector the share of women is significant higher.

1997 the government decreed, that universities have to draw up plans to reach equality with concrete targets for all university institutions. For each university an approximate value was fixed for the appellation of female professors from 1997 to 1999. If the targets are not fulfilled, one part of the budget for appellation could be frozen.

United Kingdom

It is request of the government to guarantee, that talents and prowess of men and women should be used optimally. For this reason the department for equal opportunities was established. Task is to co-ordinate and to encourage the work of many existing technical bodies and organisations which are active in the fields of women support in natural science and technique and also equal opportunity. The department is working in the fields of public relations, access to career guidance, successful employment methods, networks and evaluation. [2]

MORE RUDIMENTS TO SUPPORT WOMEN IN THE EU

The fourth action program of the European Community

The fourth action program of the Community is valid for the years 1996-2000 and has a budget of 30 millions EURO (R 180 millions). The most important catch-word of that program is "mainstreaming". That means the inclusion of the dimension of equal opportunities in all political fields and actions Europe-wide, but also on the national, regional and local level. New is the better consideration of the chance in the economic structures. Special attention applies new workplaces, which are connected with the information society. Additional consultancy and information centres should be extended. [4]

The establishment of mainstreaming does not have to lead short and medium term to the abolishment of women projects. Mainstreaming covers long term activities and the goal to get rid of women discrimination is not reached from today to tomorrow. To continue the initiatives and the preparation of money in the field of women politics parallel to mainstreaming activities is very necessary. [1]

The structure-funds and the community initiatives

The structure-funds and the community initiatives hold an economic and social Europe together. The EU-budget is normally unimagined special for women, but the more and more active participation of women and the positive consequences of the situation of women are important for the success of the programs. It is the result of the force of the European Parliament, that 1993 the principle of equal opportunities for women and men on the labour market was established. This means concrete, that equal opportunities in all phases of preparation, carrying out and evaluation have to be considered in all from the funds co-financed actions. The proposers are committed to say with the request of a project, in which way the measure will lead to equal opportunities.

For women important in the frame of the structure-funds is the European Social Fund (ESF) to improve the possibilities of employment in the Community and to combat long-term unemployment.

Following women have a profit from the ESF:

- Women without or with insufficient professional qualification,
- Women who lost their place of employment,
- Long-term unemployed women,
- In profession recommencing women and single parents,
- Women in professions where they are under-represented,
- Women who are treated by unemployment (migrants, disabled women, women who have committed a criminal offence),
- Employed women in small and medium-sized enterprises who are treated by unemployment,
- Female teachers, technicians and instructors in special regions.

Relevant for women projects are the four community initiatives NOW (New Opportunities for Women), HORIZON, INTEGRA and YOUTHSTART. Special women projects in the field of RTD do not exist. [4]

NOW is the only specific women program of the community initiatives. NOW is goal-oriented to realise equal opportunities in the fields of employment and professional training. The main focus is on the qualification in future-oriented professions, the advancement of job prospect and a better compatibility between family and profession.

HORIZON is established for unemployed disabled persons and supports measures of qualification, integration and employment. Disabled women and girls should be considered particularly.

INTEGRA turns to female and male migrants and social disadvantaged persons (for example persons addicted to drugs, released from imprisonment, homeless persons, single parents).

YOUTHSTART is arranged for disadvantaged and foreign young persons under 20 years, who have little chances to start in profession.

CONCLUSION

There are many reasons to look for more involvement of women in research activities in Europe:

- Promotion of equal opportunities for men and women, one of the Union's general political objectives, in the research sector, where women are traditionally under-represented;
- The benefits to be derived from harnessing the enormous potential of half the population for research and scientific excellence;
- The key contribution which women can make, given the increasing trend to focus the European Union's and Member States' research policies on meeting economic and social needs.

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