



## INFN Gender budgeting

By M.L. Paciello and K. Zima

*Gender budgeting (properly known as gender budgeting when referring to provisional budget, and gender auditing for final budget) is a tool for analyzing politic options towards men and women. Social positions, lifestyles, responsibilities, income levels, preferences and inclinations being different between men and women, also must be the effect of the measures implemented by management in organization and administration towards all employees.*

Budget is not a neutral tool: represents power distribution within institutions in society, and in society itself power and resources have to be reallocated. Actually, budgets in institutions are generally established without considering the several differences in the everyday life of men and women and the indicators and methods usually applied are not gender-distinctive. The socio-economical inequalities within communities are so replicated. Public expenditure is effective, besides being fair, when development is promoted and the potential of all members of institutions, both men and women, are exploited. Strengthening, modernizing and reorganizing public action (including budgeting measures) for social development are in fact, an intangible investment (in terms of skills, empowerment, resource and opportunity creation) which is absolutely necessary for an economy to be dynamic and competitive as based on education (as European Council has set in Lisbon; in July 2003 European Parliament has approved the report on gender budgeting: the establishment of public budget according to a gender perspective; we underline that in Italy the Directive of the 23<sup>th</sup> of May 2007 (G.U. n. 173 of 27.7.2007) "[Activation measures for equal opportunities between men and women in the public administration](#)" issued by the Minister for the reformation and innovation in public administration and the Minister for rights and equal opportunities, has suggested the use of gender budgeting in public administrations).

Gender-sensitive approach to economic crisis and public expenditure is absolutely necessary. Despite being a front page issue since several months, the most serious global economic crisis is still depicted by media as an emergency concern. Still for its peculiar seriousness and duration, its consequence should be studied more in depth, in order to tackle it with significant and effective measures. A gender-sensitive interpretation of the crisis effects can help in comprehending the gender-distinctive impact on the crisis of occupation, of social expenditure in time of crisis, of the reduction of women occupation as a consequence of the budget cuts in full-time school expenditure, affecting both mothers and teachers, on expenditure cuts in the health sector, and on the local cuts in social expenditure ([La crisi economica e i bilanci di genere](#)).

The analysis of budgeting measures according to the different effects produced on genders is an answer to the four aims stated by the Anglo-Saxon theory, which are standpoints for all the following national, local and institutional applications in: **equity, awareness, transparency effectiveness and inexpensiveness.**

Outside the institution, the community is certainly the main recipient of gender budgeting, this being a sort of social report by which the institution interacts with citizens. Moreover, gender budgeting is useful to all institutional, representative or social parts variously coping with the institution in a negotiation, dealing and participation perspective.

On a technical basis, the arranged objectives have to be achieved by transforming the “exceptional” occurrence of the first gender budgeting in an “ordinary” practice included in the administrative and management procedures of the institution, periodically replicated and updated. Gender budgeting is characterized by a repeating process of consultation, participation, planning, implementation and evaluation with a set of objectives, indicators and benchmarks. The regular review of these objectives, indicators and benchmarks “based on emerging experiences” constitutes the “critical factor in improving the design and implementation of the program and strengthening its impacts” (Hewitt/Mukhopadhyay 2002: 77). In this meaning, gender budgeting represents an approach focusing on strategic policy planning as well as policy outcomes and results. An interactive, consultative process involving employees has proved to be particularly effective. To be sustainable, gender budgeting is best organized by democratizing procedures determining budgets’ establishment and implementation, and giving more voice to women’s concerns.

The formulation of budget includes the analysis of public expenditure and methods for raising public revenue in a gender perspective, identifying the implications and impacts on women and girls compared to men and boys. The implication is not that a numerically equal amount of expenditure in all programs should accrue to males and females. Males and females may have different needs, warranting differential allocation of expenditure.

“Gender budgeting which is an application of mainstreaming is nothing but the (re)organization, improvement, development and evaluation of the political practices aiming at including the gender equity perspective in all policies, at all levels and stages, by all subjects usually involved in the decisional processes in politics” (CoE Gr, from *Opinion on gender Budgeting – Advisory Committee on Equal Opportunities for women and men*, May 2003).

The analysis made by EU in its triennial report, shows several examples of gender discriminations in European countries in different sizes.

The application of gender budgeting in the scientific organizations needs an analysis of the gender differences during the entire process of resources allocation and management. We pay attention to gender in the analysis of the source of funding, in the allocation process and its results, but also in the criteria and processes for allocation and management of spaces and times.

The attention to the collection of data from a gender perspective is transversal to all the elements introduced, as essential aspect for the acquisition of knowledge on the subject of differences and discrimination and as a prior phase of a process of organizational change.

In this perspective, the methodology of gender budgeting, adapted to the specific characteristics and requirements of scientific organizations, allows to collect data to answer the questions above, gain awareness of inequity and therefore to program change strategies. It is a clear methodology, comprehensive and concrete that can be used by the leaderships of scientific organizations as a tool for the overall improvement of the environmental conditions of employment for all and ensure greater effectiveness and efficiency.

For these reasons introducing the GB in the TAP of GenisLab is particularly relevant.

## General organization of gender budgeting

The practical organization<sup>1</sup> of a gender budgeting initiative can take several forms:

### *Political location*

- at national, regional, or local levels of government
- inside government departments, organized by officials and ministers
- in elected assemblies, organized by elected representatives
- outside government, organized by researchers and civil society organizations

An interactive, consultative process involving all of the above has been found to be particularly effective. To be sustainable, gender budgeting is best organized in ways that democratize the procedures through which budgets are made and implemented, and give more voice to women's concerns.

### *Coverage*

- the whole budget (rarely attempted, to date)
- expenditure of selected departments or programs
- expenditure on new projects
- implementation of new legislation

The expenditures and revenues to be covered are generally selected in the light of analysis of the pattern of gender inequality, women's priorities and government policy on gender inequality in the country concerned.

### *Presentation of analysis*

Results of gender analysis of expenditures and revenues may be presented in different ways and by different actors:

- at a number of points in the main budget and/or evaluation report
- in a special annex to the main budget report and /or evaluation
- in press releases and in research publications
- in submissions to government task forces, planning groups, inquiries etc.

Consideration needs to be given to the most effective way of presenting the analysis from the point of view of accountability, transparency and democratic participation in budget processes.

Budgeting is an effective strategy because:

- budget gives a good impression on allocations between women and men and gender disparities in research
- budget allows to monitor equality
- budget allows targeted intervention

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<sup>1</sup> Reviews of gender budgeting worldwide (e.g. Budlender, Elson, Hewitt and Mukhopadhyay , Gender Budgets Make Cents, Commonwealth Secretariat, London, 2002)

And:

- money is always a substantial argument

In the preliminary work we followed the diagram below to implement the methodology of gender budgeting for INFN

### **TAP: INFN organisation of gender budgeting**

#### **Details of actions related to specific objectives**

Following the actions defined in the INFN TAP for Output 1.1.1.

#### **1.1.1 System in place and working to monitor gender inequalities trends**

##### **a) in relation to access to funding**

<b>Name action 1</b>	<b>Fund allocation to research groups: Gender analyses of beneficiaries</b>
<b>Objective</b>	To analyse the fund allocation to research groups focusing on the following dimensions: <ul style="list-style-type: none"> <li>- Gender composition of research groups</li> <li>- Funded research groups</li> <li>- Gender analyses of groups' leaders</li> </ul>
<b>Methods</b>	Board approval of data query Data query to the database service Data analyses Publication and discussion of data Identification of strategy to change distribution of funds to improve gender balance in fund allocation
<b>Expected Output</b>	Collection, analyses and discussion of gender data concerning: <ul style="list-style-type: none"> <li>- composition of research groups</li> <li>- Funded research groups</li> <li>- groups' leaders</li> </ul> <p>At the end of the 2013 some seminars will be organised to present and discuss the results of gender data analysis.</p>
<b>Person in charge</b>	Institutional supervisor: Speranza Falciano (V.President) GenisLab team members: Paciello, Zima
<b>Human resources involved</b>	GenisLab team, human resources department, Information System
<b>Other resources needed</b>	
<b>Timing</b>	Data query by March 2013 Data acquisition by April 2013 Data analysis by September 2013 Data publication by December 2013; data discussion by March 2014 Organization of some meetings to increase personnel awareness on data collection and on results of the first year gender analyses. Results will be discussed with board of directors.
<b>Process indicators</b>	Time elapsed from data query to data acquisition. Time from data analyses publication and discussion with the board of directors. N. of seminars organized/ n. of seminars scheduled. N. of people attending the seminars. N. of women/n. of men attending the seminars.
<b>Results indicators</b>	Gender analyses of research groups fund allocation by December 2013.

The governing council is the institute's decision-making body. It consists of the chairman and the executive board, the four national laboratory directors and 20 division directors, representatives from the Ministry of Education, Universities and Research (MIUR), the Ministry for Economic Development, and representatives from the staff of INFN (of which 31 are men and only 4 are women). Council decisions are implemented, as appropriate, by the chairman, executive board or laboratory directors and those regarding local activities by division directors, all with the support of directors based at Administrative HQ. Scientific activities are managed by five National Scientific Committees (CSN) that act as advisory bodies to the governing council. Each CSN is concerned with a specific line of research:

- subnuclear physics (CSN1)
- astroparticle physics (CSN2)
- nuclear physics (CSN3)
- theoretical physics (CSN4)
- technological and inter-disciplinary research (CSN5)

Leadership of each CSN (also named research national groups) consists of one president and of local division's coordinators. Each CSN consists of several experiments and/or specific projects which each have respectively a local and national experiment's leaders. Building on decades of experience, the INFN has developed an organisational structure that achieves a good balance between centralised and decentralised management. One can find further and better clarification on the INFN home page<sup>2</sup>.

It has to be noted that INFN employees and also, as a priority, University researchers, by specific collaboration, conduct the Institute's research activities and are included in the following analysis together with the INFN employees with both permanent and fixed-term contracts. This has been done to have accurate analysis of budget per research group and to get a full picture of gender composition of groups.

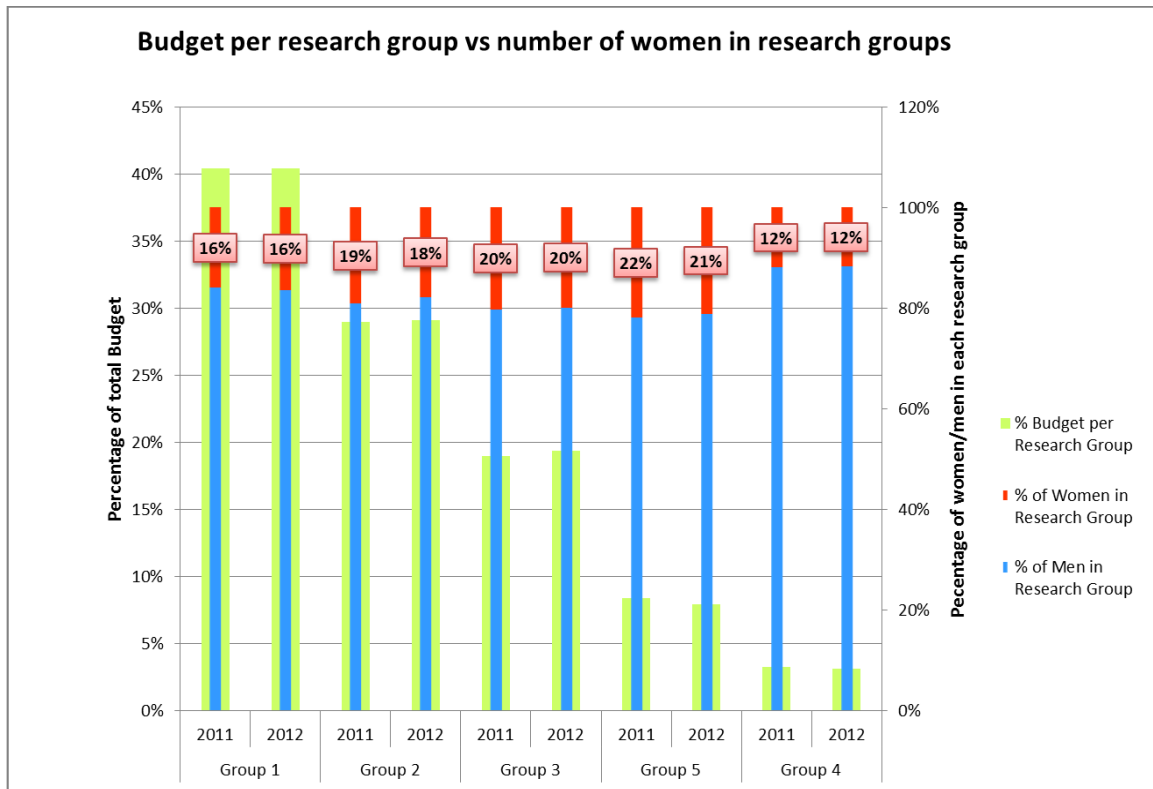
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<sup>2</sup> <http://www.infn.it/index.php?lang=en>

## Gender composition of research groups and funded research groups

The first results of the analysis of funds allocation to research groups, respect to the percentage of women present in the experiments and in the scientific committees, are:

FIG. 1



Research Group	Group 1		Group 2		Group 3		Group 5		Group 4		TOTAL	
Year	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
Number of researchers	1,280	1,291	1,120	1,023	831	731	1,282	1,067	1,066	929	5,579	5,041
% of Women	16%	16%	19%	18%	20%	20%	22%	21%	12%	12%	18%	17%
% of Men	84%	84%	81%	82%	80%	80%	78%	79%	88%	88%	82%	83%

The green column shows the percentage of the overall budget for the first five research groups assigned for each group. The red and blue columns show the percentage of women and men in research groups (the percentages shown are those regarding women)<sup>3</sup>.

The data shows a relationship between a relative proportion of women present in a given experiment and their relative obtained research funding. Experiments where women are relatively well represented are not systematically those where the gender gap in success rates in obtaining experiment funding is the smallest. Research groups where women are least present, on average spends the largest budget.

It is important to note that in the committee 4 (theoretical physics) the women are almost absent and for this reason it is isolated in this picture!

<sup>3</sup> Source: Sistema Informativo INFN

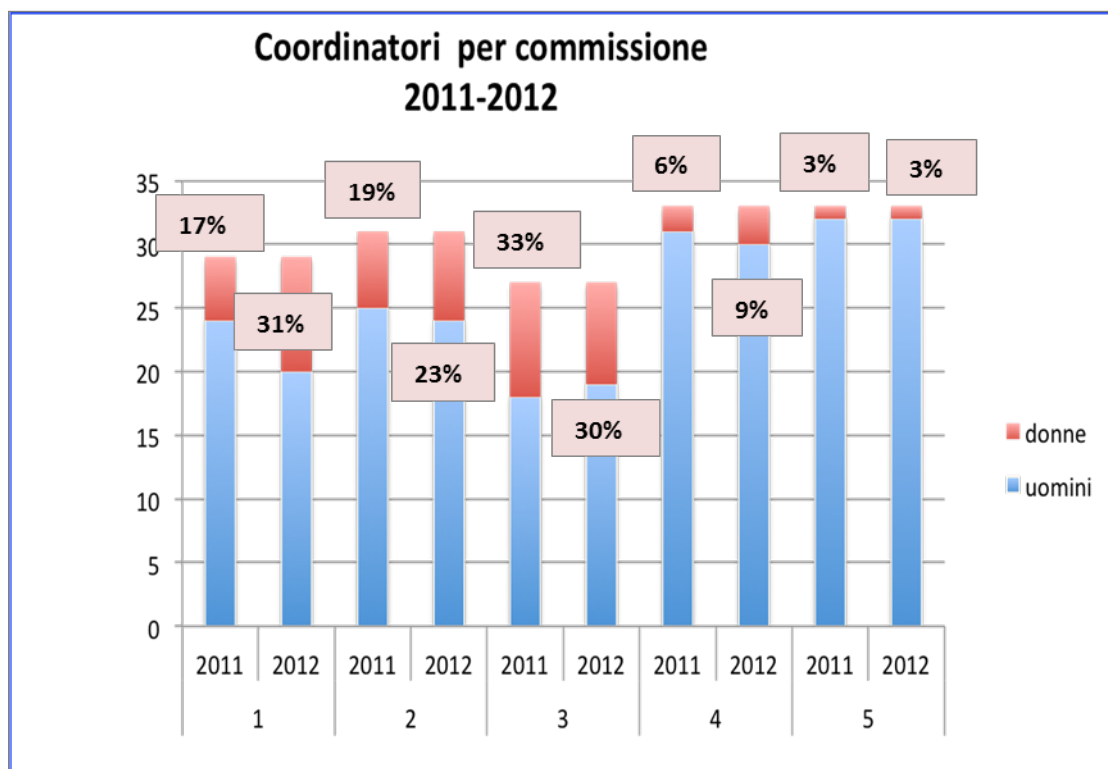
This table is almost similar to the analog analysis in the EU report “She figures 2012”<sup>4</sup>. The methodology to quantify the observed negative relationship between the level of spending on R&D per capita researcher and the proportion of female researchers is perhaps *different* from that used in this report, but the proportion of female researchers is negatively correlated with the level of R&D expenditure. Besides their actual presence in the different fields of science and their propensity to apply for research funds, women’s success in obtaining funding might also be determined by the overall level of R&D expenditure in the different research fields.

### Gender analyses of scientific groups’ leaders

The following charts show representation of women in leadership. We have analysed all levels of leadership (local division's coordinators, local experiment leaders and national experiments leaders)<sup>5</sup>.

First chart (FIG.2) shows the distribution of women division's coordinators for each research group for years 2011 and 2012. Percentage is based on all local division's coordinators.

FIG. 2



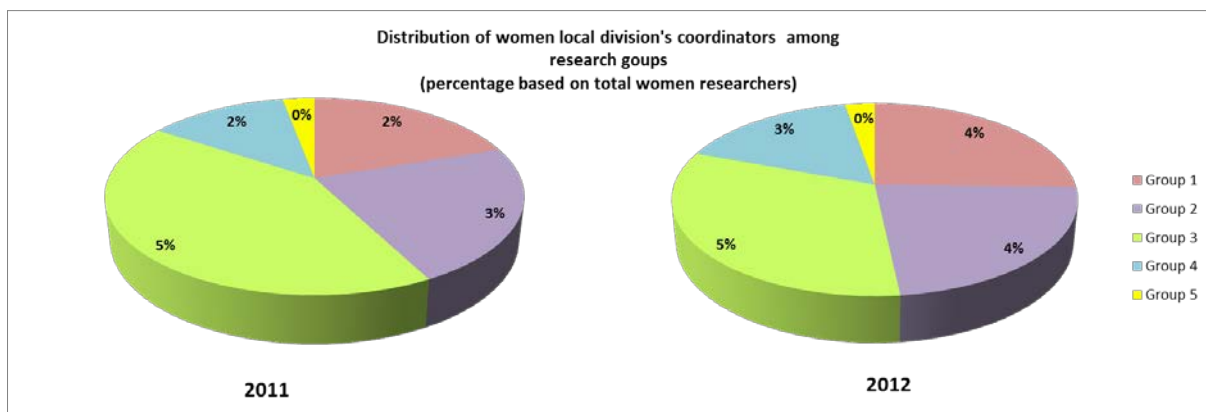
4 [http://ec.europa.eu/research/science-society/document\\_library/pdf\\_06/she-figures-2012\\_en.pdf](http://ec.europa.eu/research/science-society/document_library/pdf_06/she-figures-2012_en.pdf)

5 We note that there is one president for each scientific group and all five presidents are men

Division's Coordinators						
Research Group	2011			2012		
	Number of Women	Number of Men	% of women	Number of Women	Number of Men	% of women
CSN1	5	24	17%	9	20	31%
CSN2	6	25	19%	7	24	23%
CSN3	9	18	33%	8	19	30%
CSN4	2	31	6%	3	30	9%
CSN5	1	32	3%	1	32	3%
<b>Total</b>	<b>23</b>	<b>130</b>	<b>15%</b>	<b>28</b>	<b>125</b>	<b>18%</b>

Pie charts below (FIG. 3) show the distribution of women local division's coordinators based on all women population of researchers.

FIG. 3

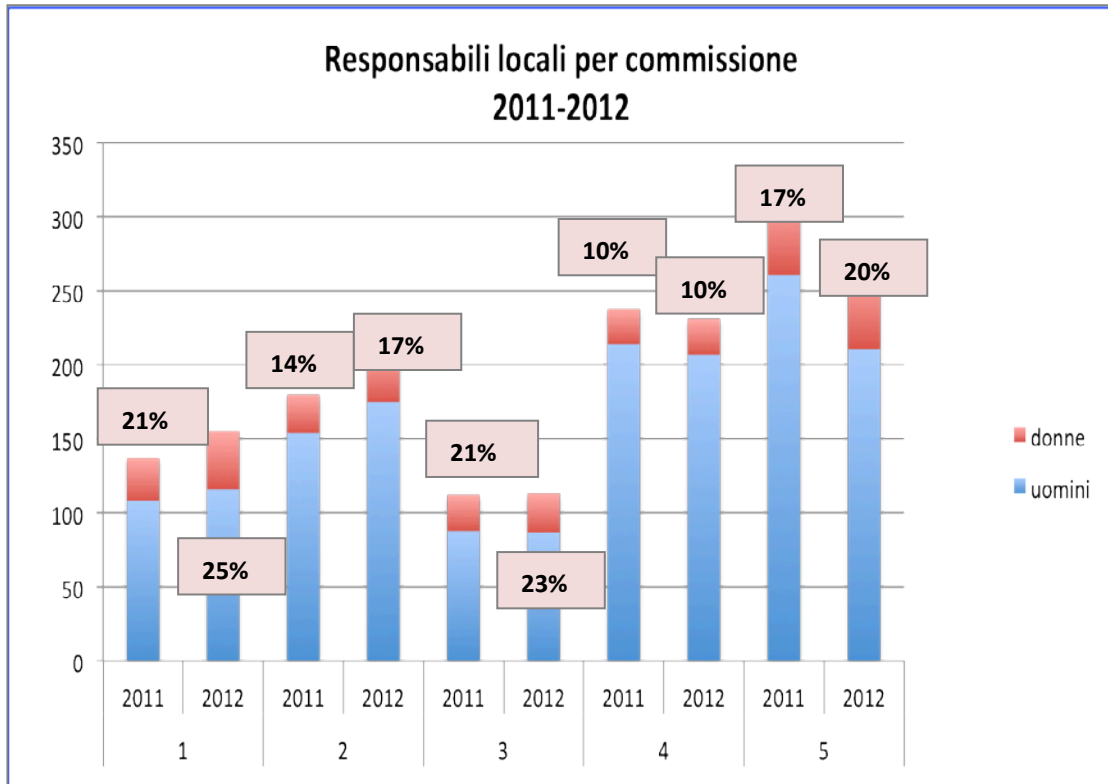


Distribution of women local division's coordinators based on all women population of researchers				
Research Group	2011		2012	
	Number of women researchers	Women division's coordinators	Number of women researchers	Women division's coordinators
CSN1	208	2%	220	4%
CSN2	220	3%	189	4%
CSN3	177	5%	153	5%
CSN4	129	2%	112	3%
CSN5	281	0%	226	0%
<b>Total</b>	<b>1,015</b>	<b>2%</b>	<b>900</b>	<b>3%</b>



The next chart (FIG. 4) shows the distribution of women local experiment leaders for each research group for years 2011 and 2012. Percentage is based on all local experiment leaders.

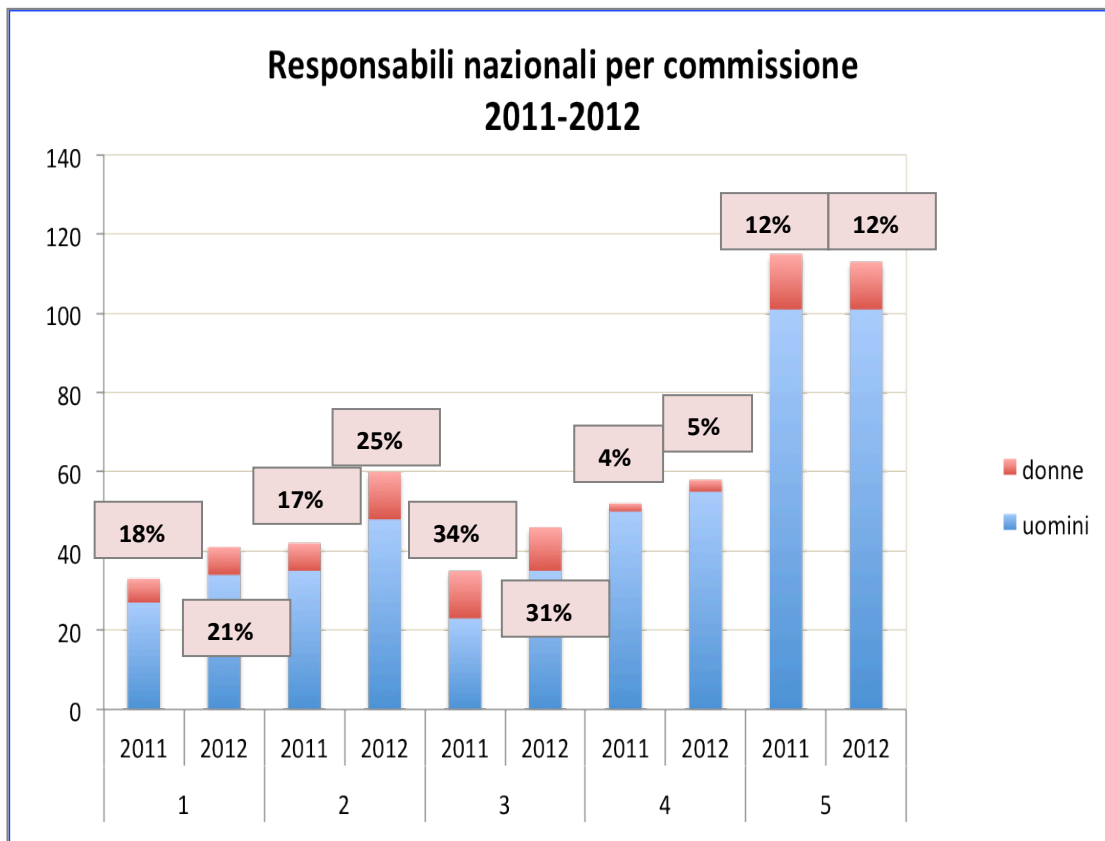
FIG. 4



Distribution of women local experiment leaders based on all local experiment leaders				
Research Group	2011		2012	
	Number of local experiment leaders (Men+Women)	Women local experiment leaders	Number of local experiment leaders (Men+Women)	Women local experiment leaders
CSN1	137	21%	155	25%
CSN2	180	14%	210	17%
CSN3	112	21%	113	23%
CSN4	238	10%	231	10%
CSN5	314	17%	264	20%
<b>Total</b>	<b>981</b>	<b>16%</b>	<b>973</b>	<b>18%</b>

The last chart (FIG. 6) shows the distribution of women national experiment's leaders for each research group for years 2011 and 2012. Percentage is based on all national experiment's leaders.

FIG. 6



Distribution of women national experiment leaders based on all national experiment leaders				
Research Group	2011		2012	
	Number of national experiment leaders (Men+Women)	Women national experiment leaders	Number of national experiment leaders (Men+Women)	Women national experiment leaders
CSN1	33	18%	34	21%
CSN2	42	17%	48	25%
CSN3	35	34%	35	31%
CSN4	52	4%	55	5%
CSN5	115	12%	101	12%
<b>Total</b>	<b>277</b>	<b>15%</b>	<b>273</b>	<b>16%</b>

From this analysis women's representation in leadership:

- has increased more than their proportion of the researchers' body
- corresponds nearly to their presence in committees

For women seems easier to assume responsibilities in scientific committees than to reach high career positions as researchers (Heads of Research: Grade A in the EU framework).

Several reasons can perhaps explain this phenomenology;

- ⤴ the committees' local coordinators are elected by researchers of the correspondent scientific field and they are not selected by the management. Instead, national laboratory directors and division directors are directly appointed by the INFN Executive Board (among a tern proposed by the Division's employees). They can be selected among Heads of Research or Full Professors (Grade A in the EU framework) and they have the real decisional power of the divisions.
- ⤴ a phenomenological analysis in the INFN (not properly a statistical study) showed women work harder and with much more attention to the efficiency and the defense of funding for the groups to which they belong. They are more supportive of men, who often work more for their career than for the group: in fact often, thanks to the "coordination work", women publish less than men do, but with no differences in quality.
- ⤴ respect to the smallest women presence between the theorist researchers, EU research policy today is encouraging the scientific community to engage in a debate on the problems of *defining and measuring scientific excellence*, considering in particular whether the achievement of women and men scientists are assessed on the same basis, and think in a more systematic way about promoting a research environment free from gender bias<sup>6</sup>. Regarding the issue of the excellence (a guideline of the project is dedicated at this item) here it seems relevant to cite a quantitative study<sup>7</sup> of this problem, published in Plos One in 2013 by Canadian scientists Jean-Michel Fortin and David Currie of the Ottawa-Carleton Institute of Biology, suggests that strategies targeting diversity, rather than excellence, are likely to be more productive. The problem is not only to finance researchers known today as excellent. Instead, what matters is to give a chance to develop those who will become tomorrow's excellent scientists, but are currently merely good quality researchers. The question would be easier to identify research projects that will lead to important discoveries, if it were possible to know the future. Unfortunately this is not the case. So rather than speculating as to what might happen in the future, we should first of all understand what has happened in the past.<sup>8</sup>

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6 See EC, DG for Research Gender and excellence in the making (2004)

7 <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0065263>

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## Action 2: Gender provisional budget and research composition for each of the 5 national scientific committees

<b>Name action 2</b>	<b>Gender provisional budget and research composition for each of the 5 national scientific committees</b>
<b>Objective</b>	To introduce gender data concerning research teams and funded projects in the provisional budget (2014).
<b>Methods</b>	Introduce gender variables in the provisional budget 2014
<b>Expected Output</b>	Gender data on research teams composition and funded projects in the provisional budget.
<b>Person in charge</b>	Financial Dept. Director: Anna Sirica; GenisLab team: Paciello, Zima
<b>Human resources involved</b>	GenisLab team, personnel in financial department and in Information System.
<b>Other resources needed</b>	
<b>Timing</b>	By the time provisional budgets are usually set (October).
<b>Process indicators</b>	Discussion with the board of directors about the introduction of gender data in the provisional budget.
<b>Results indicators</b>	Introduction of gender data in the provisional budget

The objective is to introduce gender data concerning research teams and funded projects in the provisional budget (2015). On the base of the results of the action 1 we can choose the items sensible to the gender dimension to introduce gender data concerning research teams and funded projects in the provisional budget (2015).

## Action 3: Gender pay gap

<b>Name action 3</b>	<b>Gender pay gap</b>
<b>Objective</b>	To analyse gender pay gap through the following two variables: - key rewarded tasks/services/responsibilities - financial support for missions
<b>Methods</b>	Gender data collection, analyses, publication and discussion
<b>Expected Output</b>	Report on gender data analyses on key rewarded tasks/services/responsibilities (appointed nationally or locally) and on internal and external financial support for missions
<b>Person in charge</b>	Financial Dept. Director Anna Sirica; GenisLab team: Paciello, Zima
<b>Human resources involved</b>	GenisLab team, HR and Financial Depts., Information System
<b>Other resources needed</b>	
<b>Timing</b>	Data collection by October 2013, Data analyses by December 2013, Data publication and discussion by March 2014.
<b>Process indicators</b>	Report on gender data analyses
<b>Results indicators</b>	Report on gender pay gap in key rewarded tasks/services/responsibilities (appointed nationally or locally) and on internal and external financial support for missions

Respect to the pay gap or better to gender analysis of remuneration and bonus system, (another action defined in the INFN TAP for Output 1.1.1) it is necessary a specific introduction because the analysis of the gender pay gap needs very complex methodologies (moreover there were proposed several). To obtain a reliable results more sophisticated approach is necessary to study in detail numerous data needed. The results and the discussions of the action 3 are described in the separate document (see INFN Pay Gap analysis.pdf)