

Foreword

The Coordinating Committee of the Scientific Council

The present report highlights the activities and main scientific and technical achievements of ITN in 2010 and references the publications and data concerning the human, technical and financial resources of the institution.

Overall ITN shows a good vitality, measured by the scientific productivity indexes, the capability to obtain research funding and the number of post-graduation students.

These figures are high and show a steady increase in the number of papers published in international journals (204), book contributions (20), conference proceedings (152), Ph. D. or M. Sc. theses concluded (20) and oral or poster contributions, compared to previous years. Considering only the output in the first three types of publication vis-a-vis the number of researchers (81) and students (83), it translates into a productivity of 2.3 publications per research personnel.

Moreover, the strong involvement of ITN with institutions of the Portuguese higher education system and in international courses within the framework of IAEA, was maintained. Roughly 20% of the ITN research staff is currently responsible for courses as invited lecturers in Universities or Polytechnic Institutes, and about half of the scientific staff collaborates in teaching activities at higher education level. The responsibility in professional courses is also significant.

The number of research projects supported by external financing agencies was 114 which correspond to more than 1,160 thousand Euro of income or an average of 7 thousand Euro per research personnel (salaries and current expenses excluded).

The transfer of know-how to society however, shows less satisfactory results: Income obtained from analysis, consultancy or the supply of equipments amounts to less than 400 thousand Euro and only one patent application was filed. It is understood, however, that the improvement in these areas can only be possible with a strong and coherent government policy promoting the transfer of technology to social and economic sectors.

For a proper assessment, however, of these numbers we need to analyze the conditions in which the work was produced. On the positive side, from 2005 ITN has received modern experimental equipment through the Program for Scientific Re-equipment. Although the last equipment only become operational in 2009, most of these equipments has already been the basis of a good number of

publications. In a few cases, however, the results are still minimal. Along the years ITN has also made a substantial investment on neutron diffraction equipment and, in 2009, on a new ICP-MS equipment dedicated to provide services. Until now, however due to a lack of a consistent scientific strategy and investment criteria, ITN has not been able to secure the remaining investments needed (a small fraction of the amount already invested) to make these equipment operational. ITN has also experienced an influx of new research staff (19) hired through the Science 2007/8 programs. Last year this staff had an average productivity of 4 publications/year, higher than the overall average. The first batch of contracts, however, will end in 2012 and it is not yet clear what will happen beyond that.

In contrast with this, the overall financial situation of ITN has deteriorated. The investment budget was slightly above 600 thousand Euro, representing a marked reduction of 500 thousand Euro from 2009, a clear consequence of the deteriorating economic situation of the country and the present policy of suppression of institutional funding with the exception of current expenses, mainly, personnel. After spending for urgent expenses, very little was left to implement any strategic goals of ITN and most of the research activities depend on external funding.

The research activity in ITN suffers from other constraints among which the following need special attention:

- A lack of technical personnel, with a ratio of 3 research personnel per support staff. Nevertheless it is worthwhile to mention the signing of 14 new contracts for technical staff, most of them already in ITN since 2005 with fellowships or temporary contracts;
- The situation of the mechanical workshop and technical support is of concern. The lack of personnel and the obsolescence of equipment significantly affects research work and potentially compromises the quality of related activities;
- Finally, the administration of project funds has not shown the swiftness required by research work and needs improvement.

In terms of the activities of the Scientific Council, the end of 2010 witnessed the election of a new Chair and Coordinating Committee, ending an

interregnum of 2 years in which no Coordinating Committee was appointed.

In the short period until the end of the year the new Coordinating Committee contributed to different issues of importance to ITN namely, the assessment of the activity reports of tenure researchers, the evaluation of the financial situation of ITN and improving the exchange of information between the Directive Board of ITN and the researchers. The first task had been on hold since the resignation of the previous Coordinating Committee and is part of the obligations under the research career law. Although in the present law this evaluation has no practical consequences, the fulfillment of this obligation was considered a way to dignify the research career, assessing the quality of individual work by internal and external peers, in a moment where a reform of the career law is expected and when other forms of work contract of lower stability are being promoted.

In contrast to this and to the scientific productivity shown, the career situation of the scientific staff remained stagnant with no progress either through the opening of positions or promotion on the basis of merit. As a consequence, ITN only has one researcher on the top position of the career ("Coordenador") vs. 28 as "Principal" and 53 as "Auxiliar" or its equivalent.

As a closing remark it is worth mentioning that notwithstanding the many difficulties encountered, it was possible to develop work of quality. The following year will probably be even more harsh. In spite of the expected difficulties, however, it is our firm conviction that the best way to deal with the problems is a scientific approach, looking at our own deficiencies and finding ways to overcome them. In this way, the campus of Sacavém will be able to continue a tradition of excellence among the national scientific and technical infrastructure mainly due to the quality and motivation of its scientific staff.