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Helping Europe strive for excellence

In the first of a two-part exclusive for *International Innovation*, Dr Ángeles Rodríguez-Peña highlights the unique contribution that COST has made to the European Research Area, by supporting research mobility and enabling scientists to relay the benefits of their research back into society

COST is an intergovernmental framework for European Cooperation in Science and Technology. How was COST initially conceived and what were the main objectives?

The intergovernmental framework was established in 1971 by countries eager to network nationally-funded research activities. Then, in 1974, when the European Community had laid the foundations for a more integrated research policy, COST was already a forum for cooperation between Member States of the European Community and non-EC member countries. With its operational flexibility, COST became an integral part of the European science policy in its own right and with its own specific character. It was, in fact, the ease with which topics for COST projects (called COST Actions) could be initiated by the researchers directly which made the programme unique at the time. This bottom-up opportunity contributed to innovation and investing in human capital through networking activities long before these terms became fashionable.

Since then, COST has evolved considerably while adapting to changing political, economic and societal backgrounds. COST has contributed to the European Research Area (ERA) and will continue to play a key role. It now includes 35 COST Member States and Israel as a cooperating state, all represented in the COST Committee of Senior Officials (CSO), the main decision-making body responsible for the strategic development of COST. These 36 COST countries are guided by the Ministerial Conferences which take place every five years. The COST CSO establishes the programme's strategy and decides how to fulfil the programme's objectives.

When I became President of the COST CSO in June 2010, it was clear to me that my role would be to successfully guide COST through the second half of the programme's lifespan under the 7th Framework Programme (FP7) while at the same time preparing it for a hopefully bright future beyond 2014. In doing so, I will follow the tradition of COST, which is to be mindful of the changes in the international research field and be ready to help the scientific community answer the challenges ahead.

How important is the collaborative nature of COST? Are there any issues with regard to the differing needs and demands of the cooperators?

Collaboration is at the very core of COST. Our COST Actions range from small networks of researchers (ie. with a minimum of five COST countries

involved), scientists and industry-representatives, to large pan-European or even global networks which last far beyond the four-year lifespan of the Action. COST's main characteristics are its operational flexibility and its international nature with a global perspective.

Streamlined procedures allow COST to facilitate innovative, precompetitive research; the networks help scientists and researchers bring the benefits of their work back to society. Cooperation in COST is multidisciplinary and always open to the world. Currently, we have 459 institutions from 38 non-COST countries participating in 143 of over 200 running Actions. This global perspective allows COST Actions to address efficiently an array of different arising needs, societal concerns and research-driven demands.

Can you elaborate on the nature of your reciprocal agreements with Argentina, Australia, New Zealand and South Africa and what value has this attributed to the programme overall?

I stress again that COST has always been – and continues to be – open to non-COST countries regardless of whether they are one of the four reciprocal agreement countries, fall under our special policy towards neighbouring countries, or are countries that do not belong to these two instruments.

The four reciprocal agreements in particular are an answer to a concrete need from these countries' scientific communities to obtain easy access to collaboration with European researchers. Each agreement is an equal partnership between COST and the country concerned. Both parties have earmarked specific budgets for scientists and researchers involved in COST Actions to gain experiences from their colleagues on the other side of the world.

In 2007, the COST CSO approved two pilot reciprocal agreements with Australia and New Zealand. After one year, these pilot schemes were extended and the available funding from Australia and New Zealand increased. Meanwhile, colleagues from South Africa and Argentina were interested in setting up similar agreements which came into force in July 2009 and June 2010 respectively. By the end of 2010, COST had funded 34 researchers for a short-term scientific mission to Australia, while eight colleagues visited New Zealand. South Africa received two visitors in 2010, the same number of COST



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researchers currently scheduled to visit newcomer Argentina under this scheme in 2011.

The success of this scheme really serves as an example of how Europe can cooperate with other key partners. In our experience, everyone benefits from the fact that scientists can join a COST Action – on the basis of mutual benefit – and establish networks with institutions from around the world to tackle common challenges. The topics addressed by these COST Actions have no geographic boundaries!

Moreover, the international scientific exchange visits (STSMs) we facilitate are a valuable tool for all our COST Actions and approximately 1,200 young scientists embark upon them each year.

Do you believe that your international partnerships will aid the sharing of knowledge and trade in the scientific community? Could this lead to further international collaborations and the growth of COST into a true, global framework?

Definitely and, as mentioned previously, COST is truly global to a large extent already. COST is also European and has the ambition to contribute to the development of the European Research Area that was proclaimed to be open to the world. We believe that COST is the easiest and most effective way to make this openness a reality for the benefit of all.

We do not want to rest on our laurels, however, but focus our attention in the next few months on assessing carefully how COST can further develop its international activity. The world faces challenges that have to be addressed globally and we know that many of the solutions will come from still unknown breakthroughs. COST – with its openness to allow scientists to propose their own solutions – can, and will be, of great value.

We believe that the experiences gained from a global COST will allow policy makers to make sound decisions based on solid data and develop more ambitious programmes.

COST has placed particular emphasis on support for young researchers. Was this one of the initial objectives of the strategy? Is there a current lack of support for Early Stage Researchers (ESRs) and if so, how far does this threaten a widening gap in the knowledge and training of our future scientists?

The first dedicated COST strategy for ESRs was adopted in 2007 and updated to include a family-friendly policy in 2009. COST wanted to create a favourable environment for ESR support and development because our future is in their hands. Also, we expect that the current economic downturn affects young researchers the most, particularly in countries with very restricted budgets.

Without specific programmes for them or support measures like the COST strategy, we risk seeing a continued brain-drain from those countries, as well as an increase in a more general phenomenon that is already an issue: students' 'demotivation' to pursue scientific careers, and young researchers leaving science to find a different, more sustainable way of making a living. We cannot afford to lose these talented future scientists. The Innovation Union can only be achieved if their number increases steadily and we need to have the best and most motivated scientists involved.

COST will continue to support ESRs and I hope that other key players such as the European Research Council will reinforce their support for

young scientists as well even if – and I realise I am being provocative in saying so – this has to be done at the expense of the advanced grants for established scientists. Established scientists usually tend to have more financial means anyway and are therefore less affected by the current economic downturn.

What is the nature of COST's collaboration with EUREKA and the EU framework programmes, and how do the various frameworks complement one another?

From a purely financial point of view, the COST programme is now funded by the EU Seventh Framework Programme (FP7) and from an operational point of view, COST is often seen as a sister programme to EUREKA since we are both considered intergovernmental initiatives that provide synergy between FP7 and Article 185 initiatives. In practice, the programmes complement each other.

In general, COST Actions are often initiators of – or provide exploratory grounds for – new scientific activities with a direct input into the FP priorities or other EU Programmes. Related to the FP, we know that COST Actions often cover topics that are not (yet) FP priorities – 'COST Action B24: Laboratory animal science and welfare' made an important contribution to formulating the specific objectives of FP7 in the field of animal science and welfare – or tackle existing FP priorities from a different point of view.

While there is a clear complementarity and added value between the COST Actions and the FP, I would not restrict COST collaboration to the FPs but rather open up to other European initiatives. Joint Programming is of particular interest to COST since this new process – like COST – also combines a strategic framework, a bottom-up approach and high-level commitment from Member States and Associated States in partnership with the European Commission.

I feel very strongly about the relationship between COST and EUREKA. Both are bottom-up initiatives, although we have a slightly different definition of what these 'bottoms' are. In EUREKA's case, ideas sprout from companies and research institutes, whereas COST collects bright ideas from scientific and technologic communities. Therefore, in my opinion, cooperation between COST and EUREKA should really be about making sure that we know what each programme is working on and collaborating where we can, as and when these bottom-up priorities come onto the agenda. Our past collaboration on Aquaculture, or more recently the collaboration with EUREKA's EuroAgri FoodChain for a workshop on Animal Nutrition and Health, for example, was really successful. We are planning regular meetings that will allow us to fully explore and exploit synergetic activities and define common outputs where possible.

As you can see, one of my priorities as COST CSO President is to seek more intense collaboration with EUREKA and other European Union Programmes, and not only with the current and future Framework Programme.

