TRAINING THE NEXT GENERATION OF MARINE SCIENTISTS

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Training the next generation of marine scientists does not significantly differ from the training of the former one, except for two aspects: (1) marine science and technology evidently present new challenges, largely evoked in a broad spectrum of papers in all shades from white to deep blue, and (2) policy has shifted.

Training marine scientists is essentially a three-stage process:

- Raising the awareness and sparking the curiosity of youngsters is the first challenge;
- Providing guidance to those youngsters who want to dedicate their life to the sea towards the professional horizon which will optimally meet their personal expectation, is the second challenge;
- Developing education and training schemes and opportunities towards the highest standards of science and technology, to properly match the personal expectations of youth with the expectations of Society, is the third challenge.

The key to success is to stimulate and support initiatives in each of these three stages at the right scale, at the right time, and with the right means. The optimal vehicle for raising awareness and sparking curiosity of youngsters worldwide will be a nebula of small-scale, local, largely "top-down stimulated bottom-up" initiatives, from school classes to youth organizations, sailing schools, diving clubs, etc. supported in a sustainable way by a distributed scheme of micro-funds. Guidance towards professional horizons should optimally be offered in secondary schools and undergraduate programmes by trained lecturers, seconded by networks of professionals from both science and industry. Turning research vocations into qualifications at the highest standards requires large-scale means and resources. Regional clustering and international cooperation around large facilities are inherent to this stage.

Moving from the 'grand messages' to an efficient, sustainable implementation will require a task distribution (who does what, at which level?) and pilot schemes, starting small, thinking big.