

# Individual recognition schemes in hydrography

An article by CIGDEM ASKAR, TANJA DUFEK and HARALD STERNBERG

Individual recognition schemes assess a professional against the necessary competencies for a particular profession and award the successful candidate with a certification. The professionals keep their certifications as long as they meet the requirements. In 2018, the German Hydrographic Society (DHYG) prepared a questionnaire in order

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## Introduction

When there is something that is needed to get fixed at home, you first ask a friend whether he knows a good handyman because everyone would like to get a professional service for his money. A recommendation from a friend becomes a proof of the service provider's competence in this case. In another case this proof could be a mandatory certificate or additional certifications gained by the professional.

The clients of the hydrographic services also demand a professional service and deem hydrographers with a Cat A/Cat B certificate competent in this regard. However, how could this be certain with the continuous developments in technology, is the question asked by many professionals nowadays. It is believed that the proficiency of a hydrographer is a key factor to achieve a standard quality in the industry. Some think that individual recognition schemes might be a solution to this as they directly evaluate an individual's competencies instead of certifying a study programme or training. Individual recognition schemes assess a professional against the necessary competencies for a particular profession and award the successful candidate with a certification. The professionals keep their certifications as long as they meet the requirements, one of which is to commit to maintaining continuing professional development (CPD) that encourages professionals to follow the developments in the industry and take part in events, workshops, trainings, etc.

The IBSC (FIG/IHO/ICA International Board on Standards of Competence) outlines in its standards the fundamental structure of individual recognition schemes and encourages hydrographic societies to introduce their own regional or national schemes. So far, there are only two regional schemes recognised by the IBSC, which were created by the Australasian Hydrographic Surveyors Certification Panel (AHSCP) and the Canadian Hydrographic Certification Panel (CHCP). Additionally some hydrographic societies and professional bodies provide individual recognition schemes such as »DHYG-Anerkannter Hydrograph« by the German Hydrographic Society (DHYG).

DHYG is also keen to start a multinational approach, and therefore has initiated a study concerning individual recognition schemes. This study has three phases, investigating the existing and planned recognition schemes in hydrography, comparing the investigated schemes and developing a possible multilateral recognition scheme respectively. As a part of the first phase a questionnaire was organised, which queried participants' opinions on certifications and individual recognition schemes. The questionnaire was spread among the members of the International Federation of Hydrographic Societies (IFHS).

The survey was conducted between April and May 2018, and 88 respondents from 15 countries participated. The questionnaire was structured in four parts, which query the general profile of the participants, the opinions on certifications, the opinions regarding individual recognition schemes and suggestions to improve the quality of hydrographic services respectively. This article discusses the most important results of the study with the aid of representative charts and tables.

## Analysis

The questionnaire drew in the first part the general profile of the participants regarding their occupations and years of experience in the industry. The results are presented in Fig. 1. Concerning their occupations, almost one half of the participants work in a governmental institution while the other half is employed in the private sector (left chart). This result is favourable for the purpose of the study as these two groups are involved mainly in the practical side of hydrography. In terms of experience, the participants are distributed among three groups, which are shown on the right chart: 40 % have up to 10 years of experience, almost a quarter has 11 to 20 years of experience, and more than a third has over 20 years of experience.

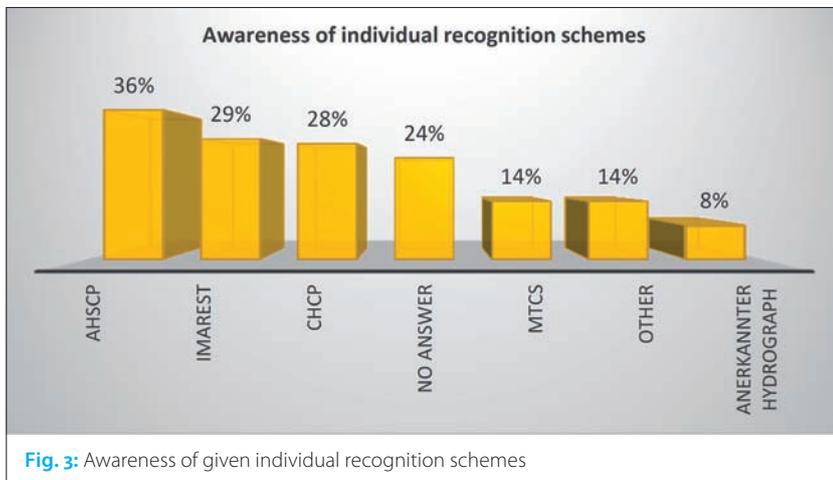
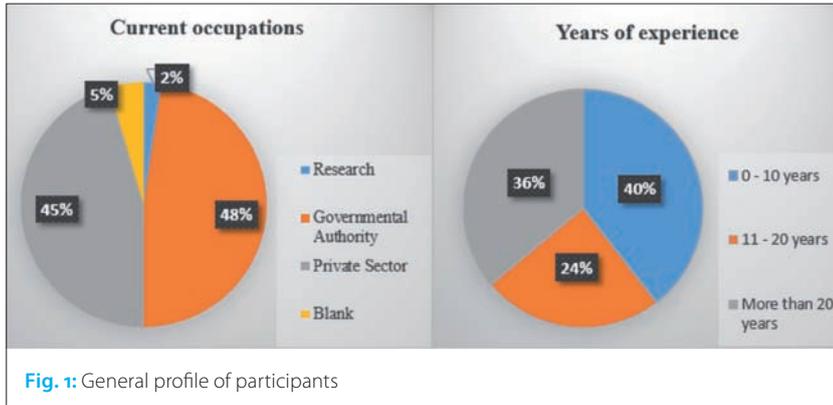
85 % of the participants stated that they had personally gained a certificate or taken part in a certified course/programme like Cat A/Cat B while 15 % gained none. Referring to this, one could say that certifications are ubiquitous in hydrography. When participants were asked if certifications are

to conduct a survey on the need of individual recognition schemes in Germany and Europe. This article discusses the most important results of the study.

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an essential job requirement in their opinion, a great majority (81 %) replied with »yes« whereas only 19 % stated the opposite. Participants' answers to this question later linked with their occupations in a governmental authority or the private sector. There is a slightly stronger support to certifications from the professionals employed in a governmental authority (88 %) compared to their counterparts in the private sector (75 %). This might be because governmental authorities mostly give out jobs to private companies, so that certifications can be seen as a useful tool to decide whom to award to contract. Furthermore, the respondents stated their reasons (Fig.:2).

Although 17% of the respondents did not state their reasons, more than half of the respondents

think that certifications ensure the level of competency, knowledge, experience and up-to-dateness. 14% referred to the positive outcomes of certifications on the quality of the hydrographic services. According to 13%, certifications help to support the standardisation of hydrographic services internationally. In addition, 5 % stated the positive effect of certifications on the hydrographers' career. Based on that, it can be said that the quality of the service provided, competence, experience and currency are the main concerns of the professionals in the industry that emphasise the necessity of certifications.

The participants were asked to mark the individual recognition schemes or to name other schemes, which they had heard of. The given options were: The AHSCP and the CHCP, which are the IBSC-recognised regional schemes; the MTCs, which is a private company that provides professional certifications suitable for the personnel in the offshore energy companies; ImarEST, which is an international multi-disciplinary professional body that offers certifications through membership; and DHyG offers the »DHyG-Anerkannter Hydrograph« certification to hydrographers. The results are presented on a chart in Fig.:3.

The majority of the participants (36 %) have heard of the AHSCP, followed by ImarEST (29%), the CHCP (28%), MTCs (14 %), and »DHyG-Anerkannter Hydrograph« (8 %) respectively. Some of the other organisations that were named offering schemes are The Hydrographic Society of America (THSOA), The Royal Institution of Chartered Surveyors (RICS) and The Institution of Civil Engineering Surveyors (ICES). Participants were asked whether there is an individual recognition scheme in their region, however, the answers were not evaluated as a confusion was appeared concerning the definition of an individual recognition scheme. Some participants stated that there is a scheme in force in their region while the other from the same country answered the opposite. Moreover, some of the stated schemes were either Cat A/Cat B or training programme.

The participants who stated that there is an individual recognition scheme in force in their country/region expressed the advantages and disadvantages of such schemes. As reported by these participants such schemes eliminated the incompetent people in the industry, provided a suitable level of assessment, made sure that hydrographers maintain their personal development, provided one standard for that particular region and assured the quality. On the other hand, participants pointed to a few disadvantages as well. One is the broad level of experience required by these schemes and time taken to assess and approve a candidate. Some respondents think that it is difficult to achieve the experience requirements especially in a particular job like port surveying. Another is that some of these schemes are regional or national and they are not recognised by the other regions. In addition, gaining and maintaining an individual recognition re-

quires significant fees. Moreover, some respondents mentioned the lack and cost of events and publications offered by the issuer organisation.

Participants further stated their opinion on the necessity of the individual recognition schemes to improve the quality of the hydrographic services. As it is shown in Fig. 4, 65% expressed the necessity of individual recognition schemes, while 26% stated the opposite and 12% did not give an answer. Participants explained why individual recognition schemes are necessary for similar reasons shown in Fig. 2: ensuring the competence, improving the number of competent hydrographers and enhancing the quality in hydrographic services. In addition, participants rated the importance of criteria in the assessment of competence in the existence of an individual recognition scheme and named practical experience, academic qualification and training as the most important criteria.

Moreover, the participants stated how important whether or not a recognition scheme being approved by FIG/IHO/ICA. The majority of the respondents think of it as very important or important whereas only 5% rated as the least important. On the other hand, 57% of the participants stated that it would be equally important for them if another international body such as the International Federation of Hydrographic Societies (IFHS) ap-

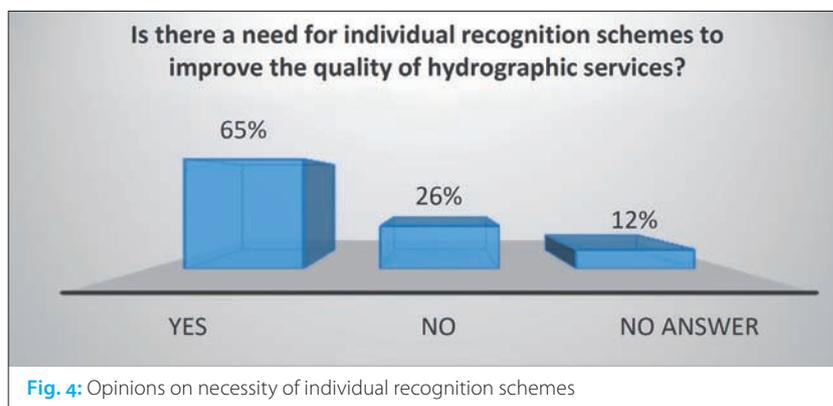
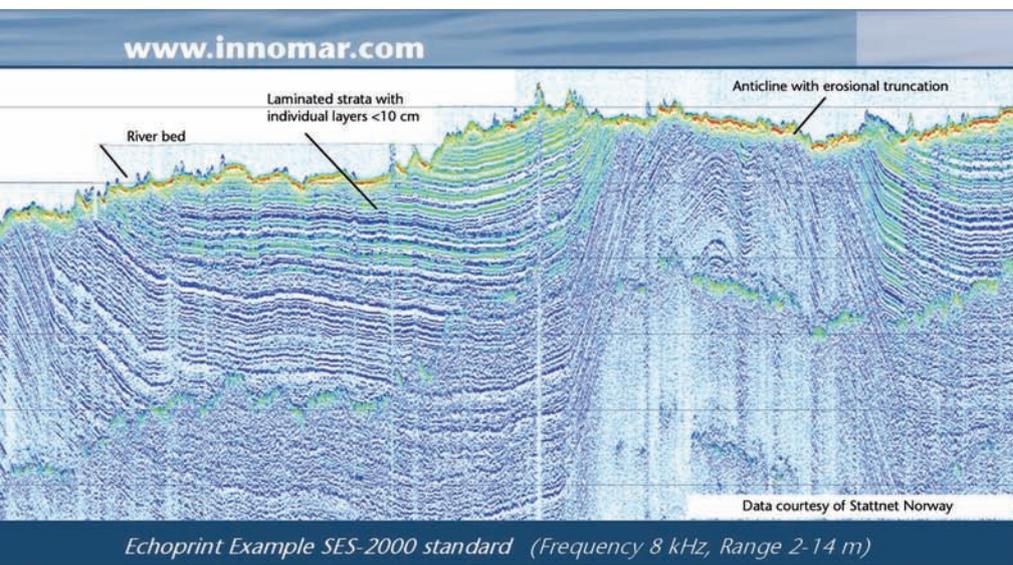


Fig. 4: Opinions on necessity of individual recognition schemes

proves a recognition scheme. Nevertheless, 40%, which is a big margin, stated the opposite.

Concerning the form of management individual recognition schemes, the majority of the participants pointed to an international management form while 29% favoured a national management form. There is no clear majority on whether an individual recognition scheme should be managed by a governmental authority or a non-governmental authority. The results are shown on a chart in Fig. 5.

Most participants think that a hydrographic individual recognition scheme should also include neighbouring maritime disciplines. The participants' opinion on which of the disciplines should be in-



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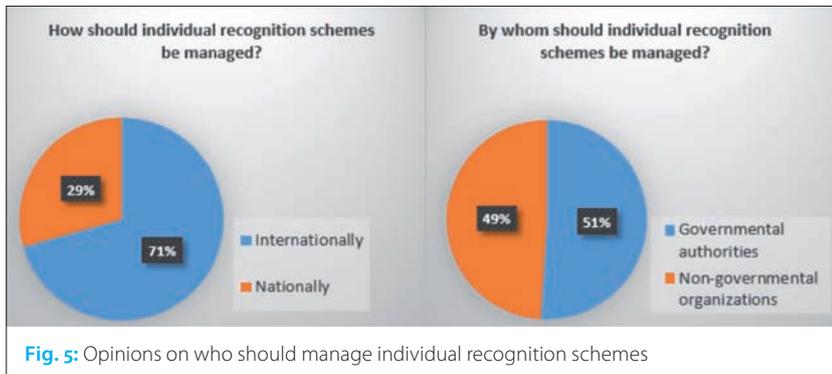


Fig. 5: Opinions on who should manage individual recognition schemes

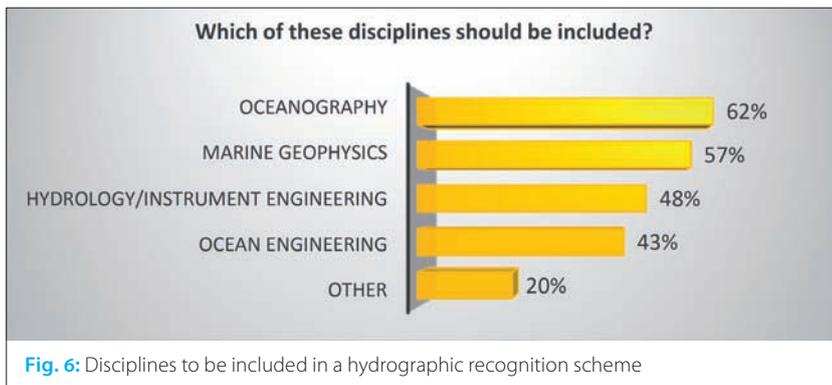


Fig. 6: Disciplines to be included in a hydrographic recognition scheme

cluded is represented on a chart in Fig. 6. According to this, 62 % chose oceanography, 57 % marine geophysics, 48 % hydrology/instrument engineering, 43 % ocean engineering and 20 % others. Marine biology, informatics engineering, meteorology and marine geology are some of the other disciplines named by the respondents. This chart reveals the advantages of gaining proficiency in neighbouring disciplines to become a competent hydrographer.

In the last part of the questionnaire, participants stated their suggestions regarding the improvement of hydrographic training and quality of hydrographic services. The common view is the lack of training in the field. Regarding that, some participants suggest planning a few weeks of field training for graduates and some point to cooperation with private companies and other organisations to provide more trainings. Furthermore, the promotion of hydrography as a career and a unified approach internationally are other notable suggestions made by the participants.

### Conclusion

This questionnaire was the beginning step of a study concerning individual recognition schemes that is conducted by DHyG. It aimed to gather opinions of the industry's professionals to see what they think about such schemes. In this regard, it revealed a few important results.

Firstly, certifications are one of the essential job requirements as they improve the quality of the hydrographic services, increase the number of competent and up-to-date hydrographers, bring a common understanding of the hydrographic services internationally and bolster the career opportunities for hydrographers. Competent hydro-

graphers are the key factor to improve the quality of the services and to follow the improvements in the industry. Certifying a programme does not automatically mean that all graduates will be competent whereas individual recognition schemes assess individuals in the terms of knowledge and experience. Therefore, individual recognition can be considered as a useful tool to determine competent hydrographers in the industry.

Secondly, practical experience and academic qualification should be two significant criteria to assess candidates in an individual recognition scheme's existence because the competencies are believed to be gained primarily through hands on experience of related knowledge. Moreover, staying up-to-date with the developments in the industry is vital as well as gaining the necessary competencies. Therefore a record system, continuing professional development (CPD) that encourages professionals to participate in the vocational activities and reviews achieved records, is required.

Thirdly, a possible individual recognition scheme should be managed internationally rather than nationally. Contrary to an internationally managed scheme, a nationally managed scheme would be valid only in a particular region and make professionals feel compelled to gain a recognition in every region they work. In addition, an internationally managed recognition scheme would standardise the hydrographic services. In this regard, IFHS might be an ideal organisation to lead a project for a recognition scheme with the cooperation of its member societies in the future.

Besides the statistical results, this questionnaire has revealed the fact that there is a confusion about the definition of »certified programme«, »recognition scheme« and »training«/»course«. When the participants were asked to name the individual recognition schemes that they have heard of, many of the respondents stated the name of some certified Cat A/Cat B programmes or training/courses. This shows the need for defining clearly, what an individual recognition scheme is.

Concerning the revealed results, this questionnaire was a successful study to review hydrographic professionals' views. However, the success of the questionnaire would be improved if there were a better homogeneity of countries in terms of the number of participants. Although gathering 88 responses from 15 different countries was a good achievement, some of the countries were represented by only few participants while the others by a greater number of participants. However, this was the first research in this subject in Germany and it provided significant outcomes. It might be interesting if another organisation would conduct a new survey in close connection with other hydrographic societies to increase the participation and compare the results of the two questionnaires. Next on DHyG's agenda is escalating the subject to the IFHS Board in the search of possibility for a multinational individual recognition scheme. //