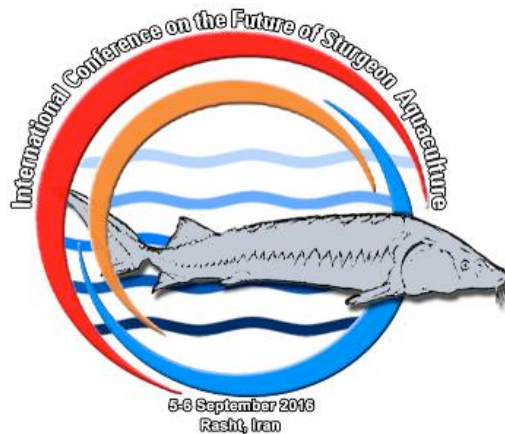


International Conference On The Future of Sturgeon Aquaculture ICSA-2016



**Rasht- Iran
5-6 September 2016**

Steering Committee

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INVITATION

The International Sturgeon Research Institute and the Iranian Fisheries Science Research Institute in collaboration with the World Sturgeon Conservation Society, the Iranian Fisheries Organization, Universities and International Organizations, invite you to attend the

International Conference on the Future of Sturgeon Aquaculture in 2016 (ICSA-2016).

This conference will bring together sturgeon scientists, experts, biologists, students, commercial and industrial interests to review the latest discoveries in sturgeon biology, ecology, genetics, physiology and biochemistry, aquaculture, hygiene and diseases, processing technology of sturgeon products, marketing and other fields related to sturgeon aquaculture.

Interest in sturgeon farming is rapidly growing while the practical experience is limited when compared to other branches of aquaculture which have a long-standing tradition (in some cases for centuries). While in several traditional countries the expertise is based on some extended hatchery programmes to release fish in order to support the dwindling stocks in the Caspian Sea and elsewhere, the scenario for commercial aquaculture is developing rapidly, mostly over the past two decades, while undergoing rapid and drastic changes in both technology and in the marketing scenario.

The Conference intends to address these changes in an attempt to gain a better understanding on both the true potential and serious limitations this aquaculture branch may face in the near future. Therefore, a limited number of priority subject areas has been selected that could be effectively dealt with during the two day Conference. The Conference will be linked to excursions and site visits to allow participants to share and discuss hands-on experiences.

The steering committee and sponsors of the ICSA2016 look forward to welcoming you to Iran in September 2016. We are assured that your participation will help to make this event a great success.



Shahrdari Square of Rasht city

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Conference programme

The programme will be held in Rasht, Iran, from 5 to 6 September 2016 and includes **five topical sessions** with oral presentations, **four Round Table Workshops** and a **Poster Session**.

Sessions

Each of the five sessions listed below can accommodate 4-6 oral presentations while posters presented on each subject will be summarized by the session chairs at the beginning of the session. At the end of each session, the audience can engage itself in a half hour round table discussion with all presenters and session chairs.

Time available for each oral presentation will have to be flexible and need to be adjusted in line with the paper submissions received and the number of accepted papers.

Applied Genetics

Future developments in modern aquaculture will require a more intelligent approach to broodstock planning and genetic stock structure control than was practiced in the past. New tools have become available that are promising to assist in proper selection of performance traits such as good growth and disease resistance. Genetics will have an Important role, together with other technologies (e.g. isotope composition and concentrations) which also may provide a tool in identifying the origin of caviar, both for the detection of illegal provenance, and to guarantee of the conservation of the species-specific gene pool while avoiding outbreeding depression. Further topics to consider may include chromosome set manipulation, sex reversal, development of molecular markers as tools for broodstock selection as well as genetic tag development to monitor the origin of parents, follow hybridizations, and observe gene cloning and gene expression.

Nutrition and feeding

Feeds are the major cost item in aquaculture. Several sources of feed ingredients are heavily utilized and alternative sources need also to be tested as to their suitability in sturgeon feeds. To make the evolving industry more sustainable, proper feed formulation can help to improve the profitability of sturgeon farming, tacking also into account the specific raw materials available in the region which have not been tested in any other region. New feed formulations are important also to obtain the best quality of the final products, both for farmed meat and caviar. Product quality traits relate specifically to taste, colour and consistency.

The conference will focus on Caspian Sea native sturgeons with valuable growth performance, considering the nutrient requirement of each local species and different age classes. Special needs on feed formulations are needed when considering new farming systems such as cage farms in the Caspian Sea but also for inshore and land-based farming systems, improved feed qualities suitable for these modern farming systems are needed. Additionally, the potential effects of feeds on taste and final product quality needs urgent attention.

The addition of specific marker substances can may also have potential for certification purposes to identify the origin of the caviar (brand recognition). This item will be of particular importance to distinguish between products of cultured and wild origin so that customers can be assured and illegal trade be effectively combated.

Pathology and diseases (with focus on prevention, e.g. vaccination)

Disease prevention is of key importance for successful aquaculture. Sturgeons are certainly no exception, although epidemic outbreaks so far were limited, Nevertheless, several specific diseases causing massive mortality in incubation and larval rearing are known and available preventive measures are limited. There is a need to more vigorous develop also of hygienic standards and preventive measures to minimize risk of losses. Diseases will be considered in a wider context, including environmental stress in culture systems that affect the performance of the species. We anticipate that contributions will also include research results from the application of pre-biotics and pro-biotics in order to enhance immune system responses, thereby minimizing the need for antibiotic usage.

Farm management (planning, design and operation)

While sturgeon farming was initially done by trial and error, adapting technologies from other conventional commercial aquaculture systems, modern sturgeon farming does face several problems, often related to scale-up of units and differences in operational modes with multi-year class holding and quite complex logistics for broodstock management. The conference intends to address the pertinent issues and invites farm managers and scientists to present case studies and discuss future requirements on system design and operation. This holds for both, commercial aquaculture and culture strategies for release to support natural populations.

Induced Reproduction (methods leading to success)

Because of their longevity and the slow and late maturation (long inter-annual reproductive resting period) of sturgeons, it becomes important to properly control reproduction ones the fish reach maturity. Despite past attempts to develop standardized assessment to optimize reproductive success new strategic approaches and protocols in captive breeding are still warranted. Furthermore, different and innovative methodologies of egg incubation should be tested for both biomass production and quality of fitness for restocking purposes. We invite contributions dealing with “decalage” in reproduction time; genetic characterization for building a matrix for best cross breeding methods and for prophylactic treatments controlling the most critical environmental problems in farming systems such as fungal infections. Further, methods to shorten the time for maturation and improved technologies to manage broodstocks should be discussed at the season.

Round table workshops

1- Sturgeon farming technologies – cage culture (September 5 afternoon)

This workshop will allow to discuss specific questions raised from the audience as it regards to practical experience of farm managers and workers at sturgeon farms as well as with scientists. This will provide the opportunity for scientists to understand the practical needs of farm management. It is anticipated that the discussions will lead to the formulation of some respective research needs, particularly in relation to scale-up problems and other pertinent issues that may arise during the discussions. Special attention will be given to the problems of farming juveniles for restocking purposes.



2 - Current and future of sturgeon and caviar markets (September 6 afternoon)

The worldwide number of countries participating in sturgeon farming and caviar production is rapidly increasing. The number of large-scale production units is also drastically increasing. As one may expect with increasing supplies, the prices and the profitability of sturgeon farming is decreasing, the limited groups of traditional customers is either constant or also slightly declining.

On the other hand, new customer groups willing to purchase the less expensive but still high and unpopular prized “mass market caviar” are not growing at the same rate as the production increases. Therefore, a strong competition among producers will grow, making it difficult to recognize the differences in products and product quality, competing also with a huge production of imitations and substitutes of the true caviar.



New marketing strategies are needed targeting not only the niche markets but also entire new customer groups. One has also to recognize that there is a lack of “cultural knowledge” of the present customer groups that do not value the traditions in the same way as previous generations. Strategies are needed to create a wider awareness for specific niche markets and beyond to assure that profitable the sturgeon aquaculture, for both meat and caviar can be maintained despite the growing supply on international markets. Specific contributions to all of these topics are invited from the farming industry and marketing businesses.

3 - Processing and product diversification (September 6 afternoon)

The proliferation in the last 30 years of sturgeon farming was mainly supported by the idea to enter in the very lucrative caviar market. In several countries sturgeon meat was seen as a by-product with a very low value and in many countries a market for the sturgeon meat was not created. This has led to difficulties to sell and consequently prices fell noticeably. To compensate for the reduced profit margins of caviar it becomes now imperative to consider the entire fish as a potential resource for a variety of products and exploit components which were in the past considered wastes. Besides caviar, sturgeon farming can offer meat, fresh and processed, skin for leather goods, chemical substances and new molecules for pharmaceutical and cosmetics products. All these products can



greatly contribute to the profitability and viability of sturgeon farming also reducing the pay-back period. Also, while caviar production focussed on female culture, today males will increasingly gain importance in the productive cycle. We are inviting contributions from science and industry to present experiences to exploit so-called “wastes” for new products and discuss the potential options for future development.

4 - Applied Genetics (September 5 afternoon)

Future developments in modern aquaculture will require a more intelligent approach to broodstock planning and genetic stock structure control than was practiced in the past. New tools have become available that are promising to assist in proper selection of performance traits such as good growth and disease resistance. Genetics will have an Important role, together with other technologies (e.g. isotope composition and concentrations) which also may provide a tool in identifying the origin of caviar, both for the detection of illegal provenance, and to guarantee of the conservation of the species-specific gene pool while avoiding outbreeding depression. Further topics to consider may include chromosome set manipulation, sex reversal, development of molecular markers as tools for broodstock selection as well as genetic tag development to monitor the origin of parents, follow hybridizations, and observe gene cloning and gene expression.



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Exhibition

An Exhibition will be organized to provide industry an opportunity to demonstrate their goods and services on aquatic resource utilization and management to the Conference Audience. The exhibition offers a unique opportunity for a variety of industries, private and public organizations to exhibit their products, ideas and program on sturgeon aquaculture, sturgeon processing, product quality control and trading.

Accommodation

Lodgings for conference registrants will be arranged in Rasht at addresses below:

1) www.kadus_hotel.ir

<http://www.iran-booking.com/en/hotels/kadus-grand-hotel-rasht>

2) www.shabestanhotel.com

<http://www.iran-booking.com/en/hotels/shabestan-hotel-rasht>

3) Pardis Hotel

<http://en.hotelyar.com/hotel/1118/pardis-hotel-rasht>

<http://en.hotelyar.com/city/112/rasht-hotels>