



Food and Agriculture Organization
of the United Nations



ISPARTA UNIVERSITY of APPLIED SCIENCES International Webinar on Medicinal Leech Sector (24-25 February 2021)

Prospectus

1. Introduction

The medicinal leeches are among the organisms that are considered endangered. Their international trade is carried out within the scope of “the Convention on International Trade in Endangered Species of Wild Fauna and Flora” (CITES). In addition to their complementary roles in medicine, medicinal leeches are also effectively used in veterinary to treat some animal diseases, while the enzymes secreted from leeches are used in the cosmetics and pharmacy sectors as a raw material of creams and various drugs. Leeches have been widely used in folk medicine throughout history. The fact that the existence of nearly 105 bioactive substances secreted into the human body by leeches during the application (hirudotherapy), their medical benefits and success in both treatment and drug production has been proved with evidence-based scientific methods, enabling leech therapy to take place in modern medicine. Medicinal leeches require detailed emphasis due to several factors such as the role of their enzymes in some cancer treatments, increasing patent applications of hirudotherapy procedures and price jump up to \$18/leech. Currently, there is high pressure on the wild populations of medicinal leeches due to high demand. The degradation of aquatic habitats because of the climate changes increase the treat on the leech populations in both Europe and Turkey. Turkey has a big share with 80% in the leech trade. Although the increasing demand and the weakening wild leech populations have led to an increase in leech aquaculture facilities, knowledge gaps in technical difficulties in breeding, juvenile rearing and on-growing may prevent leech farms from producing at a profitable level. This situation may cause meeting the increasing demand through illegal trade.

The webinar, which will be held by the Isparta University of Applied Sciences, will provide a forum to discuss the status of and treats on the medicinal leech populations, leech trade, products extracted from the leeches and challenges for medicinal leech aquaculture systems.

2. Objectives

The objectives of the webinar are to:

1. Raise awareness on overexploitation and illegal trade of medicinal leech,
2. Share best practices and country experiences with varying approaches to exploitation of medicinal leech,
3. Provide an understanding of medicinal leech aquaculture from a business viewpoint,
4. Address the threats to a sustainable exploitation of the medicinal leech populations,
5. Elaborate the exploitation areas and commercial production possibilities of leech enzymes.

The main expected output of the webinar is a webinar summary report.



3. Process

The webinar will be conducted virtually. The participants will be provided with a webinar ID and password to attend the webinar. The two -day webinar will include comments, suggestions, and discussions on the current situation of countries, problems, and solutions. All background documents and reports (if the preparation is requested) will be shared with the participants.

Meeting URL: <https://fao.zoom.us/j/97612932493>

Meeting ID: 976 1293 2493

Passcode: 86656400

4. Organization and partners

The webinar is organized by Isparta University of Applied Sciences, in cooperation with the FAO-SEC Office and Ministry of Agriculture and Forestry of the Republic of Turkey. This event is supported by “Capacity Development for Sustainable Fisheries and Aquaculture Management in Central Asia (FISHCap)”, which was developed under “FAO-Turkey Partnership Program (FTPP)”.

5. Participants

A total of 15 speakers from 13 institutions found in 8 countries will make presentations at the event. Countries: Turkey, Azerbaijan, Canada, India, Iran, Romania, Spain, and Ukraine.

In addition to the mentioned countries, invitation letter will be sent to the stakeholders of the FISHCap project, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan to participate. Isparta University of Applied Sciences, which will hold the event, will send an invitation letter to both the stakeholder Ministries and universities.

6. Webinar language

The webinar will be conducted in three languages: Turkish, English, and Russian through simultaneous interpretation.

7. Webinar contact persons

- Dr. Mustafa Ceylan, Isparta University of Applied Sciences (mustafaceylan@isparta.edu.tr)
- Mr. Haydar Fersoy, Senior Fishery and Aquaculture Officer (Haydar.Fersoy@fao.org)
- Ms. Mariia Uzengin, Field Programme Assistant (Mariia.Uzengin@fao.org)

8. Webinar agenda

The agenda for the webinar is given on the next page.



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ISPARTA UNIVERSITY of APPLIED SCIENCES
International Webinar on Medicinal Leech Sector
(24-25 February 2021)

Webinar Agenda

24 February 2021, Wednesday*

* Please note that the time is specified according to the Ankara (Turkey) time (UTC+03.00)

Opening Session

Opening Remarks

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| 10:00 – 10:20 | <ul style="list-style-type: none"> - Prof. Dr. İbrahim Diler, Rector of the Isparta University of Applied Sciences, Turkey - Ministry of Agriculture and Forestry of the Republic of Turkey - Viorel Gutu, Sub-regional Coordinator for Central Asia and Representative in Turkey, FAO |
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Scope, objectives and expected outputs of the webinar

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| 10:20 – 10:30 | <ul style="list-style-type: none"> - Dr. Mustafa Ceylan, Isparta University of Applied Sciences, Turkey - Haydar Fersoy, Senior Fishery and Aquaculture Officer, FAO |
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Session I. Status of the medicinal leech populations

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| 10:30 – 10:50 | <p>The role Southern European refugia in the evolutionary history of <i>Hirudo verbana</i></p> |
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Dr. Serge Utevsky – V.N. Karazin Kharkiv National University, Ukraine

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| 10:50 – 11:10 | <p>Status of medicinal leech populations in Azerbaijan</p> |
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Şebnem Farzali – Fırat University, Turkey

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| 11:10 – 11:30 | <p>Status of medicinal leech populations in Romania</p> |
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Dr. Victor Surugiu – Alexandru Ioan Cuza University, Romania

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| 11:30 – 11:50 | <p>Unraveling the <i>Hirudo</i> diversity in the Iberian Peninsula</p> |
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Dr. Andrés Arias – Oviedo University, Spain

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| 11:50 – 12:10 | Q&A Session and Break |
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Session II. Collection and trade of the medicinal leeches

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| 12:10 – 12:30 | <p>Medicinal leeches and international leech trade</p> |
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Dr. Naim Sağlam – Fırat University, Turkey

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| 12:30 – 12:50 | <p>Contraband leeches: how iDNA can inform on the origin of leech populations</p> |
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Dr. Sebastian Kvist – Royal Ontario Museum and University of Toronto, Canada

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| 12:50 – 13:10 | <p>Medicinal leech collection in Turkey</p> |
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Dr. Osman Çetinkaya – Isparta University of Applied Sciences, Turkey

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| 13:10 – 13:30 | <p>Fighting Against Medicinal Leech Trafficking at Turkish Customs</p> |
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Emel Özcan – Republic of Turkey Ministry of Trade, General Directorate of Customs Protection, Turkey

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| 13:30 – 13:45 | Q&A Session |
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25 February 2021, Thursday*

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Session III. Medicinal leech aquaculture

10:00 – 10:20	Leech breeding facilities and medicinal leech status in Iran Dr. Masoumeh Malek – University of Tehran, Iran
10:20 – 10:40	Medicinal leech aquaculture in Turkey Dr. Mustafa Ceylan – Isparta University of Applied Science, Turkey
10:40 – 11:00	Leech production and marketing problems in India Mr. Nilesh Dalvi – Leech India, India
11:00 – 11:20	Medicinal leech regulations in fisheries legislation in Turkey Mrs. Aygül Yılmaz, Dr. Nuran Çavdar, Mrs. Zuhul Akdoğan – Ministry of Agriculture and Forestry, General Directorate of Fisheries and Aquaculture, Turkey
11:20 – 11:40	Q&A Session and Break

Session IV. Medical applications and projects on the medicinal leeches

11:40 – 12:00	Medicinal leech studies conducted at General Directorate of Agricultural Research and Policies Dr. İlhan Aydın – Ministry of Agriculture and Forestry, General Directorate of Agricultural Research and Policies, Turkey
12:00 – 12:20	Traditional and complementary medicine in Turkey Dr. Med. Mehmet Zafer Kalaycı – Ministry of Health, Traditional, Complementary and Functional Medicine Department, Turkey
12:20 – 12:40	Medicinal leech enzymes and their use potential in pharmacology and cosmetic Dr. Hüseyin Ayhan – Ankara Yıldırım Beyazıt University, Turkey
12:40 – 12:50	Q&A Session

Closing Remarks

12:50 – 13:10	Closing Remarks
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