<https://www.ohchr.org/en/calls-for-input/2024/thematic-report-79th-session-un-general-assembly-water-and-food-nexus-human?utm_content=bufferbb36c&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer>

**Thematic Report to the 79th session of the UN General Assembly “Water and food nexus: a human rights approach to water management in food systems”**

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**“The Royal Golden Cocoon of Java: Cricula Trifenestrata”**

**#SDGAction49210**

**A registered United Nations Water Action Partnership: creating an economic value through ‘pest’ utilization as a motivating action to prevent pesticides runoff (a major cause in water and soil pollution in developing country).**

Date:

24th February 2024

**To right holders, civil society, or non-state actors**

**2. What are the main challenges to fulfilling your human rights to water and food? Are they linked to intensive agriculture, overdraft of wells, pollution, land, or water grabbing, deforestation, climate change, or others?**

The Royal Golden Cocoon of Java: Cricula Trifenestrata UNSDGAction49210 is a successful initiative that showcases the possibility of international collaboration and open science that utilises a new healthy biomaterial to create an inclusive zero-emission industry, healthy cultural tourism and afforestation while revitalising land biodiversity.

By collaborating with Professor Dr Hiromu Akai (wild silk scientist) and Mr Hidenori Nakanishi (Master Wild Silk Craftsman), the Royal Family of Yogyakarta is the pioneer (in Indonesia) in the utilization of the Cricula wild silkworms’ golden cocoons into export quality wild silk yarns and crafts, which has high demand in the Japanese market who understand and appreciate Cricula wild silk as a superior and healthy material.

The utilization of Cricula Trifenestrata wild silkwoms’ golden cocoon is a proven case that "pest" can be beneficial for all; supported with progressive research and open science. When “pest” is no longer “pest,” this will reduce the usage of **noxious pesticides that is bad for water and Earth.**

This is also a new economic opportunity for pesticides researchers and industries. We need to create an economic value for change. We need to create solutions to the root and cause of pesticides runoff and contamination through better pests research and understanding.

We are looking forward to create global awareness of this good practise, with the hope to replicate this practice globally, hence mitigating climate change. It is paramount to have trustworthy channels of communication between multifarious stakeholders, across sectors, cultures and borders, in order to prevent disinformation and exploitation of local natural resources.

**Innovation  
The economic value of a pest: Cricula Trifenestrata**

The cocoons of the Saturniidae wild silkworms are filled with 0.1- 0.8 micron small pores; first discovered by Professor Dr. Hiromu Akai in 1988 with an electron microscope. Cricula Trifenestrata is one of the wild silk moths that belongs to the Saturniidae family which has the highest number of pores (only 2nd to the protected Agama Miley Madagascar) and occurred in abundance. Presently, they are still labelled as pests in Indonesia and the rest of the world.

Unlike the domesticated (non-porous) Bombyx Mori silk yarn, porous wild silk yarn has excellent heat retention, light texture, higher UV cut and bacteriostatic properties; the potential "healthy silk" of the future.

Therefore, Cricula Trifenestrata golden cocoons can be utilized as sustainable and biodegradable materials which is healthy for human and the environment:

1. TEXTILE: Cricula wild silk yarns and textile are anti-UV radiation & antimicrobial. <https://pat.intellectual-info.com/bio-mori/books-science/18819/>
2. COSMETIC: Cricula proteins are natural, non-allergen ingredients with high anti-UV radiation & excellent antioxidants; great for healthy skin. <https://cocon-cosme.jp/>
3. PHARMACY: Cricula golden pigment is rich with Lutein; a type of carotenoid pigment contained in the cornea of the eye, effective against cataract. (patented in 2008) <https://patents.google.com/patent/JP2008138158A/en>
4. FOOD PROTEIN: Cricula Trifenestrata pupae is a local popular healthy delicacy rich with protein in certain regions in Indonesia. <https://www.facebook.com/reel/257960717309543>

**Implementation**In the 1990s, the Royal Family of Yogyakarta has successfully elevated the livelihood of local villagers in Yogyakarta, Indonesia, especially the rural women who are trained and employed as export quality wild silk spinners.

This is made possible due to open science and artistic collaboration between Yogyakarta and Kyoto as Sisters Cities since 1985.

Professor Dr Hiromu Akai’s pioneering knowledge on the health benefits of porous wild silk cocoons, a potential biomaterial with higher level of antimicrobial & wider range of anti-UV characteristic compared to the non-porous domesticated Bombyx Mori silk, has created an inclusive, zero-emission business model and transformed Cricula Trifenestrata’s labelling; from pest to healthy silk producers.

As the rural villagers understand the value of Cricula Trifenestrata’s golden cocoons, they begin to protect Cricula’s natural habitat by active tree planting, resulting in biodiversity restoration of an otherwise arid land that belongs to the Royal Family of Yogyakarta.

**Experiences**

Challenges:

There is a lack of knowledge on Cricula Trifenestrata as a beneficial insect, hence the massive culling with excessive use of noxious pesticides. - Fast-crop cultivation has created arid land prone to extreme weather events such as erosion, floods and landslides, which endangers the rural residents as well as a Javanese cultural landscape in Imogiri, Yogyakarta, Indonesia.

Child marriage is a problem in the rural villages where there is a lack of access and capacity for a sustainable economic support system.

The possibility of the loss of a unique species as part of a healthy ecosystem. In the 1990s, the Royal Family of Yogyakarta has successfully elevated the livelihood of local villagers in Yogyakarta, Indonesia, especially the rural women who are trained and employed as export quality wild silk spinners.

This is made possible due to open science and artistic collaboration between Yogyakarta and Kyoto as Sisters Cities since 1985. Professor Dr Hiromu Akai’s pioneering knowledge on the health benefits of porous wild silk cocoons, a potential biomaterial with higher level of antimicrobial & wider range of anti-UV characteristic compared to the non-porous domesticated Bombyx Mori silk, has created an inclusive, zero-emission business model and transformed Cricula Trifenestrata’s labelling; from pest to healthy silk producers.

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**Maturity level**

We are pleased to have the blessing from the Royal Family of Yogyakarta, to further disseminate this good practice and accelerate global climate crisis mitigation, with the creation of a premium art book: The Royal Golden Cocoon of Java - Cricula Trifenestrata, showcasing Royal Wild Silk Art works that has supported the economic value of a “pest.”

The Royal Golden Cocoon of Java: Cricula Trifenestrata is also an officially curated and registered:

- UN Good Practice (2nd Call 2019) #SDGAction30981

- UN Acceleration Actions (2022) #SDGAction48294

- UN Water Action Network (2023) #SDGAction49210

- UN Conscious Fashion and Lifestyle (2023) #SDGAction49141

Cricula Trifenestrata wild silk moth are distributed throughout different regions, we need open science in order to have qualitative and quantitative exchange of information and knowledge for the progressive health benefits for all, leaving no one behind.

Collaboration across cultures and nations is paramount as wild silk moths live in various regions of the world. Therefore, it is important to have reliable and trustworthy channel of communication, in order to avoid disinformation and exploitation of natural resources.

There are approximately 160,000 species of moths in the world, many of these moths create unique cocoons, these are abundant natural resources awaiting for collaborative research and development for the benefit of all. It is a basic human rights to have access to applicable biodiversity knowledge and veritable information, in order to achieve optimum health and living condition for all.

Presently, we are actively looking for a global SDG driven artbook PUBLISHER with strong distribution channel to mobilize and catalyst change for the good of all.

**The main challenges to fulfilling our human rights to water and food: Massive disinformation and misinformation (intentional or/ and unintentional) happening at local, national and international level is hindering the access and participation in scientific knowledge and its applications for sustainable development (especially in developing countries).**

Links to the initiative - “The Royal Golden Cocoon of Java: Cricula Trifenestrata”

#SDGAction30981 #SDGAction48294 #SDGAction49141 #SDGAction49210 #SDGAction53224

<https://explorer.land/x/project/criculatrifenestrata53224/>

<https://sdgs.un.org/partnership-progress/partnership-progress-2019-09-05>

<https://www.youtube.com/watch?v=zcix1RHxOgI>

<https://www.facebook.com/criculatrifenestrata/>

<https://www.nature-basedsolutions.com/page/893/the-royal-golden-cocoon-of-java-cricula-trifenestrata>

<https://web.archive.org/web/20230928135121/https%3A%2F%2Fpanorama.solutions%2Fen%2Fsolution%2Froyal-golden-cocoon-java-cricula-trifenestrata-unsdgaction30981>

<https://act4sdgs.org/profile/sdgaction30981>

<https://restor.eco/platform/organizations/097921c2-fb3c-4ecf-9bb1-fe0f21913a7e/>

**Annex II**

Other references:

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<https://ditjenbun.pertanian.go.id/pengenalan-dan-pengendalian-hama-ulat-kipat-cricula-trifenestrata-pada-kayu-manis/>

<https://www.kratonjogja.id/>

<http://jsws.web.fc2.com/about_e.html>

<http://saishien.com/aboutcricula.html>

<https://yamazen-style.com/?pid=148348669>

<https://cocon-cosme.jp/>

<https://patents.google.com/patent/JP2008138158A/en>