Innovative Solution Submission
(offline worksheet)

To contribute to the growing solutions database included in the portal, please answer the following questions with as many details as possible. Keep in mind that "solutions" in the portal are shared here as general concepts. We complement these with concrete examples of solutions adapted for real-world settings. I.e. the general solution concept of "hydroponics" can look very different in different contexts, so the solution profile provides an overview, while examples of hydroponics being used around the world are "attached" to the end of the profile as real-world "examples" to inspire thinking around how this is being adapted in different contexts.

Good to know before you start…

- ~ 30 minutes is needed to submit a full solution profile (to work through the questions)
- solution profiles should be written in 3rd person -- please don't use "I/we..." but instead use "this solution…"
- try to avoid bias in the description sections and when writing the *Impact Target* statements -- keep it as objective and concrete as possible please

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Your opinion matters! *We are excited to learn how it works for you and how we can improve it (and accompanying materials) going forward - reach out with any questions and/or send us feedback at* ***IFSSportal@gainhealth.org*****.**

- *IFSS Portal Coordination team*

STEP 1: Make sure your solution isn't already here!

Please refer to **ANNEX 1: INNOVATIVE SOLUTIONS LIST** at the end of this worksheet for a list of all solutions to ensure the solution you are about to add doesn't already exist on the portal.

IF…

…your solution is already on the IFSS portal, please go to the "**Contribute to an existing solution**" section (ONLINE) and add examples and/ or additional resources to this solution

… your solution is truly new to the IFSS portal, please continue on the next page!

STEP 2: Submitter Details

*Tackling malnutrition and equitably nourishing the growing global population while also safeguarding and/or restoring planetary health is a huge challenge. HOWEVER, every day innovative solutions are being imagined and applied to transform food systems! *To contribute to the growing solutions database included in the portal, please fill out this questionnaire with as many details as possible.*

TELL US WHO YOU ARE

1. **Your name**

First name

Last Name

2. **Name of your organisation**

What do you want to appear on the solutions profile page?
Please select at least one option

☐ Your name ☐ Your organisation

3. **E-mail address**

Please provide your email address so that we can follow up with you in case of questions. Your email will not be published on the IFSS portal but will solely be used for communication proposes from the portal support team.

4. **Location**

Please provide the country in which you are based. This will not be published on the IFSS portal.
**Please refer to the ONLINE submission form for the drop-down menu of countries.*

STEP 3: Solution Details

The IFSS portal aims to surface and disseminate innovative solutions that tackle BOTH dietary and planetary health problems around the world in an equitable way.

As a combination of multiple coordinated and synergistic actions are needed to truly transform our food systems to be healthier for both people and the planet, we encourage you to submit your innovative solution even if it only targets one part of the food/earth system. The next questions will help characterize your solution and make it easily searchable in the portal directory.

1. **Solution name** (Max. 5 words)

2. **Context target** **Please select at least one option.*

Please indicate what the target context is for this solution or add another if necessary

- ☐ Urban
- ☐ Peri-urban
- ☐ Rural
- ☐ Marine/Coastal
- ☐ Other: If you selected "other" for the previous question, please specify *(Max. 5 words)*

  _____

3. **Supply chain segment categorisation** **You can select more than one option*

Select where the innovative solution fits best. Click on the arrow at right for each description.

- ☐ AGRICULTURAL INPUTS and PRIMARY PRODUCTION PRACTICES - Inputs include seeds, varieties/characteristics, natural resources (water, soil), fertilizers, agrochemicals (herbicides, fungicides and pesticides), animal nutritional supplements or medications, feed, farming and equipment, etc. Production practices and output generation (farming, fishing, wild-harvesting, novel food product manufacturing, etc.); monitoring and regulation of input application, pest management

- ☐ HANDLING, STORAGE and TRANSPORT/DISTRIBUTION - The planning, implementation, and control of the flow and storage of goods, services and related information from the point of origin to the point of consumption. Transport and logistics can occur both between the production and processing stages, as well as between the processing and retail stages.

- ☐ PROCESSING and PACKAGING - The processes in which raw materials are combined and transformed to make a final product for sale. This can include any action that preserves, prepares, or adds to foods, such as sorting and grading; chopping, slicing, and butchering of animal and plant products; cooking, drying, canning, fermenting, and curing processes; addition of additives, including nutrients for fortification; and packaging in a ready-to-eat or ready-to-cook format. Packaging includes all the modifications food undergoes after being processed and before being transported such as labelling.

- ☐ WHOLESALE, MARKETS and RETAIL - The processes in which final food products are delivered to food service operators, including retailers and caterers. This can involve storage, warehousing, and

transportation through specific channels. Distribution can also include wholesalers, who purchase in bulk from the production and processing stages and sell to a retailer or direct to the consumer. In some cases, food supply chains involve non-market distribution, such as through a government food assistance programme. Markets and retail include the sale of food goods in quantities purchasable by individual consumers from a specific point, such as a store, shop, open-air market or e-commerce platforms. Retail also includes those who provide food ready-to-eat, such as restaurateurs, street food sellers, and caterers.

☐ CONSUMERS - The actions and factors related directly to consumers' demographics, income, purchasing power and food acquisition behaviours, consumer knowledge and awareness, food culture preferences and meal practices (including food storage and preparation), and diet and nutritional needs. This category also includes marketing, food messaging, promotion and advertising

☐ WASTE - The management and/or reduction of food loss and waste at each stage of the food value chain (including raising awareness, packaging, 100 percent utilisation, cold chain management, and/or policies)

☐ REGULATORY ASPECTS - The global, international, national, regional entities and institutions regulating the food system such as regulating trade restrictions, quality/safety requirements, patents rights, labelling, traceability, subsidies.

☐ FINANCIAL ASPECTS - This category includes banks, specialised funding agencies, insurance firms and all other forms of financial entities/tools in the supply chain

☐ EDUCATIONAL, OUTREACH and EMPOWERMENT ASPECTS - This category targets education, outreach and empowerment for actors across the supply chain - from food producers to consumers

4. Description of the innovative solution

Provide a short description (200-250 words) that includes the major benefit(s) for the targeted users. For examples of what to include, see the **ANNEX 2: EXAMPLES FOR DESCRIPTION OF INNOVATIVE SOLUTION** below.

5. **"Headline" impact statement**

Please provide a short impact statement (max 20-30 words) explaining the "so what" for this solution. This text will appear as the single "thumbnail" description for each solution in the full solution directory.

To give you some examples of what kind of text is best...

➔ *for solar powered irrigation, "using solar energy to power irrigation systems in a more sustainable manner that could bring improved farming techniques to a wider range of contexts*

➔ *for digital empowerment for women, "increasing access and social agency for women to engage with digital tools and platforms that allows for empowerment in acting along the food supply chain"*

6. **Who are the primary target users of this innovative solution (max 5)?** **You can select more than one option. To add additional target users, select "Other" and list out more.*

Identify target users for the innovative solution from the list here (select all that apply).

- ☐ Subsistence farmers
- ☐ Small & medium commercial farmers
- ☐ Large & industrial farmers
- ☐ Livestock farmers
- ☐ Animal health workers
- ☐ Hobby home gardeners
- ☐ Urban farmers
- ☐ Fishers
- ☐ Greenhouse users
- ☐ Seed industry
- ☐ Input suppliers
- ☐ Food processors
- ☐ Foodtech companies
- ☐ Agtech companies
- ☐ Repair and maintenance shops
- ☐ Packaging companies
- ☐ Meat-packing industry
- ☐ Traders
- ☐ Retailers
- ☐ Distribution centers
- ☐ Wholesalers
- ☐ Exporters
- ☐ Food service industry - restaurants, caterers,etc.
- ☐ Distributors
- ☐ Street vendors
- ☐ Women
- ☐ Pregnant women
- ☐ Public Health workers
- ☐ Children & youth
- ☐ Schoolstudents
- ☐ Teachers
- ☐ Refugees
- ☐ Low/Middle income households
- ☐ Middle/High income households
- ☐ Urban consumers
- ☐ Peri-urban consumers
- ☐ Rural consumers
- ☐ Rural communities
- ☐ Peri-urban communities
- ☐ Urban communities
- ☐ Coastal Communities
- ☐ Internatl. Governing Bodies
- ☐ Natl. Govt - Ministries of Agriculture
- ☐ Natl. Govt - Ministries of Health
- ☐ Natl. Govt - Ministries of Environment
- ☐ Natl. Govt - Ministries of Economics
- ☐ Natl. Govt - Ministries of Trade
- ☐ Global Financial Institutions
- ☐ Natl. Financial institutions
- ☐ Academic & Research institutions
- ☐ Local government (municipalities)
- ☐ Investors
- ☐ Non-Government Organizations
- ☐ Food safety & quality assurance agencies
- ☐ Other: *please specify on next page*

Other: please specify others if necessary and separate with a comma (5 words maxt)

7. **Keywords characterising the innovative solution** *You can select more than one option. To add additional key words, select "Other" and list out more.*

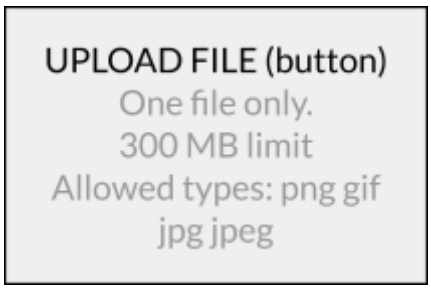
Identify keywords that describe the innovative solution from the list here (select all that apply). To add additional key words, search for and select "Other" and list out more.

- ☐ 3D printing
- ☐ Alternative protein
- ☐ Animal feed
- ☐ Aquaculture
- ☐ Artificial intelligence
- ☐ Big data
- ☐ Biofortification
- ☐ Circular economy
- ☐ Closing nutrient loop
- ☐ Cold chain
- ☐ Collaboration
- ☐ Community building
- ☐ Convenient processing
- ☐ Desert agriculture
- ☐ Digital platform
- ☐ Drone technology
- ☐ Education - adult
- ☐ Education - youth
- ☐ Enzymes
- ☐ Fermentation
- ☐ Finance
- ☐ Food biodiversity
- ☐ Food design
- ☐ Genetic improvements
- ☐ Indoor farming
- ☐ Urban farming
- ☐ Information/communication
- ☐ Mobile phones
- ☐ Online services
- ☐ Packaging
- ☐ Precision agriculture
- ☐ Preservation
- ☐ Regenerative agriculture
- ☐ Sensors
- ☐ Sharing economy
- ☐ Solar energy
- ☐ Traceability
- ☐ Waste
- ☐ Water availability
- ☐ Women empowerment
- ☐ Other: *please specify (10 max)*

Other: please specify up to 10 others if necessary and separate with a comma (2 words each key word/concept)

8. **Innovative solution picture or graphic** **Please refer to the ONLINE solution submission form to upload file.*

Please include a representative picture or graphic of the innovative solution.



Copyright information:

- ☐ N/A
- ☐ Yes, I am the author/copyright holder
- ☐ Yes, I got permission from the copyright holder or I paid for the picture/graphic
- ☐ No, I don't have permission/licence
- ☐ I don't know

9. **Solution Readiness**

Select the maturity of this solution.

- ☐ **Idea -** Solutions at this stage only exist as an idea at this moment, they do not yet have a plan or prototype.
- ☐ **Prototype -** Solutions at this stage are in their infancy, with prototypes having been developed or initial testing phases being undertaken. Initial testing has begun within research / pilot contexts.
- ☐ **Gaining traction** - Solutions at this stage have been piloted with successful use in a given setting. Evidence-based analysis and assessments are available.
- ☐ **Moving to scale** - Solutions at this stage have been successfully piloted in a given setting and are starting to be adopted elsewhere or scaled up in production quantity. Operational use by relevant users has been demonstrated across the community.
- ☐ **Mainstream -** Solutions at this stage have been successfully implemented in various settings or have large production quantities. Solution is used routinely within the community of practice. Quality assurance and body of knowledge in place.

STEP 3: Impact targets: Dietary Health, Planetary Health, & Equity

1. **Which of these critical criteria are targeted by this solution** *Select all that apply

- ☐ FOOD QUALITY: Potential of solution to improve the nutritional quality of the food basket, i.e. that it provides dietary diversity and balanced diets including a range of food groups and all beneficial nutrients (e.g. vitamins, minerals, proteins, essential fats, dietary fibres) Also includes the potential to and minimises potentially harmful elements (e.g. anti-nutrients, high quantities of saturated fats, salt and sugars) and diet-related comorbidities

- ☐ FOOD SAFETY: Potential of solution to minimise biological, chemical or physical contamination of food product(s) *both sanitation and toxicity issues

- ☐ FOOD AVAILABILITY: *Potential of solution to increase supply and/or access to nutritious foods. Please take into account seasonal shifts in supply, the importance of stability, changes in policy & trade, and excesses/shortages of raw materials needed for a food's production or processing*

- ☐ FOOD AFFORDABILITY: Potential of the solution to increase access by reducing the consumer price or increasing purchasing power for nutritious foods, either through increased income or entitlements (e.g. social protection mechanisms).

- ☐ FOOD DESIRABILITY: Potential of solution to improve the desirability of nutritious foods or healthy diets, i.e. to make foods or healthy diets more aspirational, tasty, culturally appropriate, convenient, and/or easy to prepare

- ☐ CLIMATE MITIGATION: Potential of solution to reduce the greenhouse gas footprint of our food systems e.g., by reducing emissions or by capturing carbon

- ☐ CLIMATE ADAPTATION*: Potential of solution to increase the adaptation capacity to climate change of our food systems e.g., by providing options to minimise the impact of severe weather events, droughts, flooding, changing seasons, or other climate related issues*

- ☐ WATER USE: Potential of solution to decrease the water footprint of our food systems e.g., by increasing water use efficiency, recycling water, or reducing water needs

- ☐ SOIL HEALTH: Potential of solution to improve soil health, restore degraded land or avoid land degradation, e.g. by increasing soil organic matter, contributing to soil biodiversity and soil nutrient availability, reducing soil erosion and risk of gully formation

- ☐ REDUCING BIODIVERSITY LOSS: Potential of solution to decrease biodiversity loss related to our food systems, e.g. by reducing pressure on land, water and chemical pollution, enhancing conservation of species at risk, and/or creating habitat in agricultural lands/aquaculture wate

- ☐ INCREASING AGROBIODIVERSITY: Potential of solution to increase biodiversity in our food systems e.g., by diversifying production systems and ingredient portfolios, and enhancing use of underutilised species.

- ☐ REDUCING POLLUTION: Potential of solution to decrease pollution from our food systems e.g., by reducing nitrogen or phosphorus run-off and plastic pollution, or by reducing other types of pollution

☐ Other: If you selected "other" for the previous question, please specify (5 words max):

2. Which of the UN Sustainable Development Goals (SDG) are targeted by this solution? *Select all that apply

SDG definitions and descriptions are included ONLINE in the IFSS portal GLOSSARY with links to the United Nations SDG resources.
https://ifssportal.nutritionconnect.org/solutions/glossary#sustainable-development-goals-sdgs

- ☐ SDG 1: No Poverty
- ☐ SDG 2: Zero Hunger
- ☐ SDG 3: Good Health & Well-being
- ☐ SDG 4: Quality Education
- ☐ SDG 5: Gender Equality
- ☐ SDG 6: Clean Water & Sanitation
- ☐ SDG 7: Affordable & Clean Energy
- ☐ SDG8: Decent Work & Economic Growth
- ☐ SDG9:Industry, Innovation & Infrastructure
- ☐ SDG 10: Reduced Inequality
- ☐ SDG11: Sustainable Cities & Communities
- ☐ SDG12: Responsible Consumption & Production
- ☐ SDG 13: Climate Action
- ☐ SDG 14: Life Below Water
- ☐ SDG 15: Life on Land
- ☐ SDG 16: Peace & Justice Strong Institutions
- ☐ SDG 17: Partnerships to achieve the Goal

3. Dietary impact narrative

Provide a short description of why and how the solution could have a positive impact on improving dietary health by 2030. Expand on how this solution affects the dietary health criteria that you selected above (50-150 words).

4. Planetary impact narrative

Provide a short description of why and how the solution could have a positive impact on protecting and/or restoring planetary health by 2030. Expand on how this solution affects the planetary health criteria that you selected above (50-150 words)

5. Equity impact narrative

Provide a short description of why and how the solution could have a positive impact on improving equity by 2030 (50-150 words)

6. What are the main concerns and/or lessons learned with this solution?
Provide a short description or list of main concerns for the potential risks and/or other negative effects or consequences of this solution. (50 - 150 words)

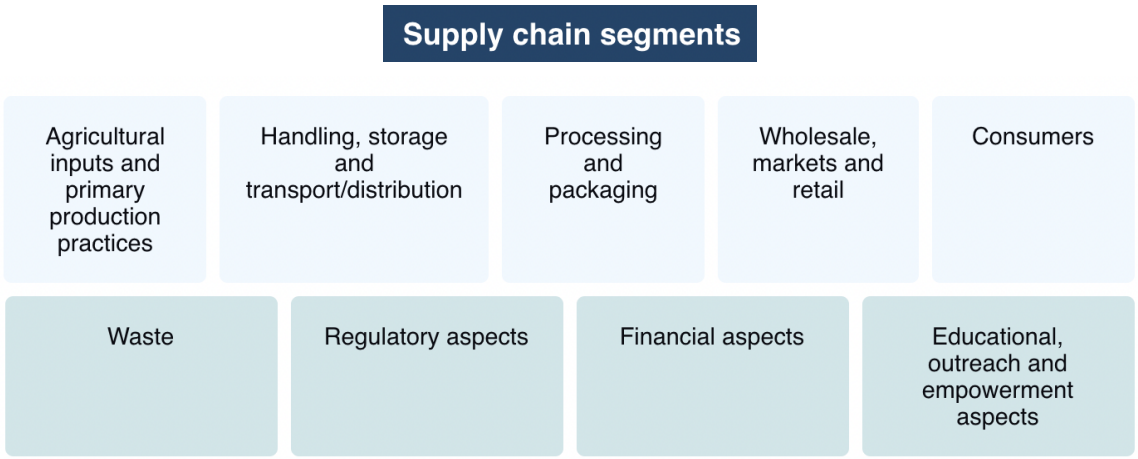
STEP 4: Submit your innovative solution!

Enter in the information from your worksheet above into the* **ONLINE Solution Submission form *here:*
https://ifssportal.nutritionconnect.org/solutions/submit-and-join/before-you-start

ANNEX 1: INNOVATIVE SOLUTIONS LIST

Please refer here to the full list of innovative solutions included in the IFSS Portal database as of Aug 2021, organized by supply chain segment. To learn more about these solutions, please visit https://ifssportal.nutritionconnect.org/solutions/explore .

**We actively encourage and invite new solution submissions as well as contributions of examples and additional resources to solutions already there! Check it out and please share your ideas and experiences with the portal community at https://ifssportal.nutritionconnect.org/solutions/submit-and-join .*



ANNEX 2: EXAMPLES of DESCRIPTIONS of SOLUTIONS

SOLUTION: Microalgae and cyanobacteria for food
DESCRIPTION: Microalgae and cyanobacteria can be farmed year round in many parts of the world by using renewable energy in order to be used as a source of protein in human consumption. Algae is packed with proteins and other nutrients that are essential for human diets and can be added to increase protein content. This source of protein has fewer negative environmental impacts than production of other protein sources (crops and livestock) as it has the potential to decrease soil degradation, reduce overuse of freshwater, and reduce carbon emissions into the atmosphere. Algae grows in brackish water and can use geothermal or hydroelectric energy sources in order to power LED lights that allow the algae to grow. Currently, microalgae and cyanobacteria are mainly sold as a dietary supplement in the form of tablets and health drinks for human consumption, but are also used as feed additives for livestock and aquaculture. The main species farmed are *Spirulina*, *Chlorella* spp., *Haematococcus pluvialis* and *Nannochloropsis* spp.

SOLUTION: Solar powered irrigation pumps
DESCRIPTION: Modern water pumps and agricultural irrigation systems utilize relatively high amounts of either gas or electrical energy. Solar powered irrigation pumps offer an alternative that relies on a cleaner energy source and are increasingly found in rural, peri-urban, and urban areas, proving useful in a wide range of applications from residential, to commercial agricultural - depending on the size of the unit and amount of solar panels. This solution functions by attaching a solar panel, or a photovoltaic array, to a water pump, providing a renewable source of solar energy to power the pump, eliminating or greatly reducing the need for fuel-burning mechanisms by replacing them with a renewable solar source. There are different types of solar pumps including rotating and positive displacement pumps which can be both submersible or surface based. In the simpler design models, pumps powered by the sun provide crops with water when it is sunny - often making it critical to attach/include a timer mechanism to control flow and use water resources efficiently. Although solar panels are commonly used today to power lights and heaters, using solar energy as a mechanism to power irrigation pumps is highly sustainable as it is the most abundant energy source on Earth today.

SOLUTION: Bundled crop insurance
DESCRIPTION: A barrier for increased vegetable production is that farmers, particularly small farmers, may have to give up staple food space if they want to change to vegetable production. This risk is increasing with climate change. Mechanisms to protect the livelihoods of smallholder farmers are necessary to assist in producing more vegetables and diversity beyond staple crops. This innovation includes crop insurance products and subsidies as mechanisms to assist in establishing vegetable production. The insurance would come bundled with the seeds, and would reimburse farmers should disease spread. The payouts could be financial as well as in high quality seeds, irrigation or other assistance to help re-establish production.