Claims

1. A floating solar-powered multi-unit fish cage (1), comprising
   (i) a floating planar grid (2), the grid (2) defining at least two grid interspaces (3),
   (ii) at least one or more solar units (4), and
   (iii) at least one or more fish cages (5),
   wherein
   (a) at least one fish cage (5) is allocated to at least one grid interspace (3),
   (b) at least one solar unit (4) is allocated to at least one grid interspace (3), at least partially or completely covering said grid interspace (3), thus forming a solar unit-covered grid interspace (6),
   (c) at least one solar unit-covered grid interspace (6) partially spans at least one fish cage (5) forming a partially covered fish cage (7),
   (d) the partially covered fish cage (7) allows for caged fish to voluntarily position under the at least one, at least partially solar unit-covered grid interspace (6), and
   (e) the at least one solar unit-covered grid interspace (6) provides any of
      a. electric energy,
      b. protection of fish from direct solar radiation,
      c. predator protection for fish, for example, from fish-predatory birds, and
      d. optionally heat to the water in fish cage (5),
      or any combination thereof.

2. The floating fish cage (1) of claim 1, wherein at least one fish cage (5) is allocated to at least two or more grid interspaces (3).

3. The floating fish cage (1) of claim 2, wherein at least one grid interspace (3) is a solar unit-covered grid interspace (6), and at least one grid interspace (3) is an open grid interspace (3).

4. The floating fish cage (1) of any of claims 1 to 3, wherein the at least one fish cage (5) comprises a mesh or grid for water exchange from ~~the~~ an aqueous fish compartment with surrounding water.

5. The floating fish cage (1) of any of claims 1 to 4, wherein the at least one fish cage (5) is a closed fish cage (8) forming a closed aqueous fish compartment, thus hindering water exchange with surrounding water.

6. The floating fish cage (1) of claim 5, wherein the closed fish cage (8) comprises a watertight flexible sheet(s) (9) and has an inner water level (10) extending above ~~the~~ an outer water level (11) floating the fish cage (1), thus exerting hydropressure on the flexible sheet(s) (9) of the fish cage (5) to stabilize its maximum volume and shape.

7. The floating fish cage (1) of claim 6, wherein a vertical difference between the inner water level (10) and the outer water level (11), i.e. water column height, of the closed fish cage (8) is at least 5 to 100 cm, optionally at least 10 to 70 cm, optionally 15 to 60 cm, and optionally 20 to 50 cm.

8. The floating fish cage (1) of claim 6, wherein the volume of the closed fish cage (8) is at least 2 to 100 m^3, optionally at least 3 to 80 m^3, optionally 4 to 70 m^3, and optionally 5 to 50 m^3.

9. The floating fish cage (1) of claims 7 and 8, wherein the vertical difference between the inner water level (10) and the outer water level (11) of the closed fish cage (8) is at least 5 to 100 cm, optionally at least 20 to 50 cm, and the volume of the closed fish cage (8) is at least 3 to 80 m^3, optionally at least 5 to 50 m^3.

10. The floating fish cage (1) of any of claims 1 to 9, wherein the at least one grid interspace (3) for receiving and/or mounting the at least one or more solar units (4) and the at least one or more fish cages (5) have substantially the same planar dimensions, thus rendering the grid interspaces (3) suitable for receiving both options interchangeably.

11. The floating fish cage (1) of any of claims 1 to 10, wherein the at least one or more solar units (4) comprise solar panels that can be hinged, folded and or slid to uncover the at least one grid interspace (3) beneath.

12. The floating fish cage (1) of any of claims 1 to 11, wherein the at least one or more solar

units (4) ~~provide~~ can provide heat to the water of at least one fish cage (5) by supplying electricity to an electric heater and/or by direct contact to the water by lost heat during electricity generation.

13. The floating fish cage (1) of any of claims 1 to 12, wherein one or more of the solar units (4) can be flexibly positioned to
(i) optimize solar radiation input and energy output,
(ii) optimize shade and/or predator-protection for fish, and/or
(iii) contact water of the fish cage (5) to transfer lost heat during electricity generation.

14. The floating fish cage (1) of any of claims 1 to 10, wherein the at least one fish cage (5) and/or the at least one solar unit (4) is connected to the floating grid (2) by detachable connecting means selected from the group consisting of screws, hooks, eyes, slide fastener and hook-and-loop fastener.

15. A method for raising fish in a floating fish cage, comprising the steps of
(i) providing a floating solar-powered multi-unit fish cage (1) according to any of claims 1 to 14,
(ii) introducing, feeding and growing fish in the at least one or more fish cages (5), and
(iii) producing electric energy by means of the at least one or more solar units (4).

16. The method of raising fish according to claim 15, further comprising the step of heating the water in the at least one fish cage (5) by electricity from the at least one or more solar units (4) or its lost heat during electricity generation.

17. The method of raising fish according to claim 15 or 16, further comprising the step of flexibly positioning the one or more solar units (4) to
(a) optimize solar radiation input and energy output,
(b) optimize shade and/or predator-protection for fish, and/or
(c) contact water of the fish cage (5) to transfer lost heat during electricity generation.