

The Integrated Total Plant to process Pelagic Harvests

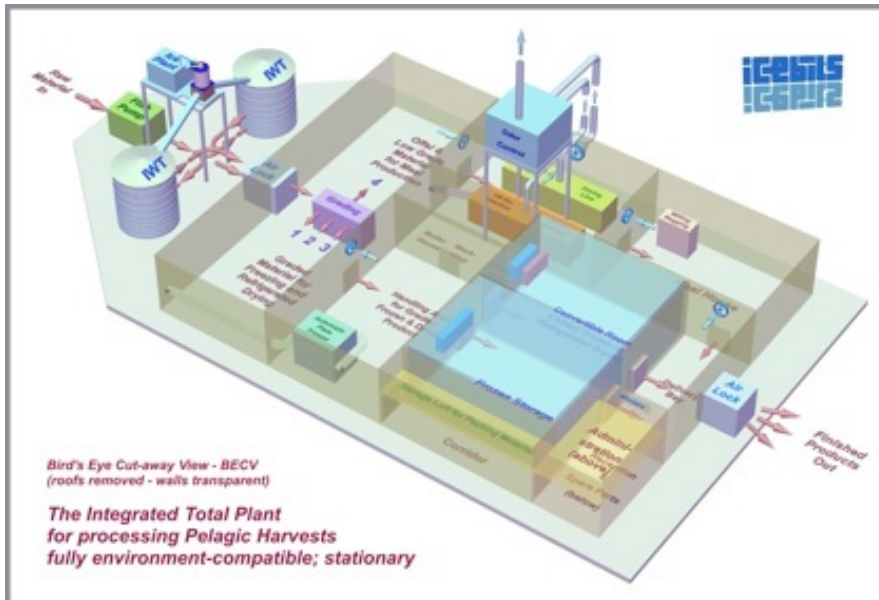
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Traditional harvesting of pelagic marine fish species (Picture 1) takes place in coastal regions throughout the World. Integrated total processing plants (Picture 2) recover these excellent raw materials completely.



Picture 1 - Traditional harvesting of Indian Oil Sardine [*Sardinella longiceps*] in Oman

The entire harvest is contained in the products (Picture 3), which leave the plants as frozen blocks, dried fish and fish meal. Depending on market values, the fish oil goes to fuel the boiler or is refined to marketable grades. Moisture, including the pumping carrier, evaporates and is condensed to potable water.



Picture 2 - The Integrated Total Processing Plant; Bird's Eye Cut-away View

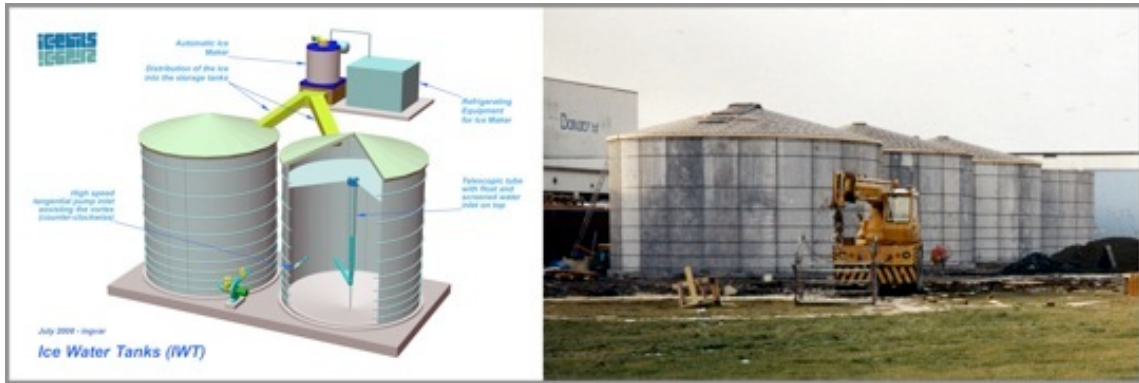
Depending on the degree of decomposition of the landed catches, one-third to two-thirds are separated from the bulk for processing. The prime products—frozen blocks and dried fish—are consumed by humans and fed to exotic animals in zoos, growout and husbandry. Fish meal rendered from the offal is fed to local livestock. The plants come in handy in developing areas, where they produce commodities for export, earning the communities much needed foreign exchange. They comply with all environmental ordinances in force worldwide.



Picture 3 - The Products (left to right); frozen blocks, dried fish and fish meal

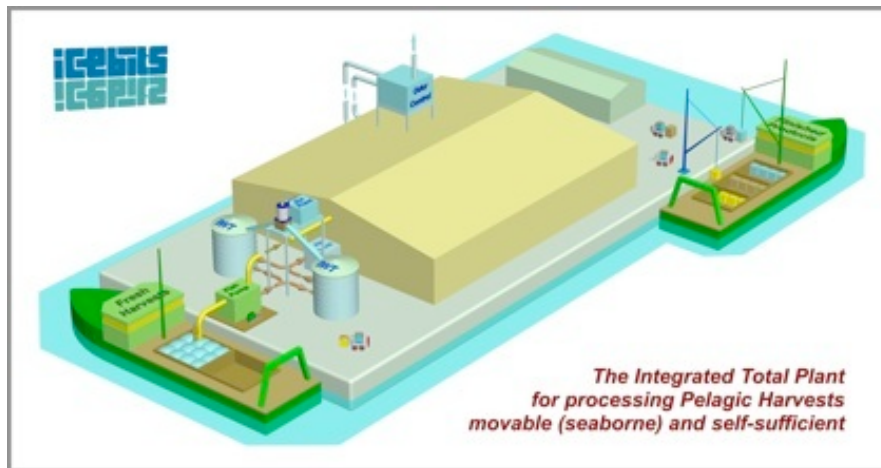
An integrated total processing plant consists Ice Water Tanks (Picture 4), a Grader, an Automatic Plate Freezer, a Frozen Storage Room, a convertible room for Refrigerated Drying or storage and a Fish Meal Plant.

Brown arrows show the flow of material through the plant. Air Locks isolate the sphere of action from the ambient; internal air pressure is kept just below prevailing atmospheric conditions. Blue arrows and axial fans in the walls indicate how odor-contaminated air is collected and sent to the Odor Control for deodorization. Hence, the facility is fully environment-compatible, releasing nothing whatsoever—no fluids, no solids, no smell—to the environs.



Picture 4 - Ice Water Tanks

All individual concepts in this setup are well known and proven; they have been in use throughout the World for decades. However, the integrated total processing concept is new. Much of the major equipment can be found in second hand markets, while peripheral components—tanks, conveyors, supports—can be fabricated in local workshops, of which there are many in all developing communities. Drawings and specifications—to fabricate, assemble, erect and commission the plants—are available on request.



Picture 5 - The Integrated Total Processing Plant; erected on a flat top barge

The plants should be located on the landings in fishing ports, thus minimizing damages to the fresh harvests through handling and reducing transport costs. They can also be erected on flat top barges (Picture 5) to permit fast relocation when chasing schools moving with the seasons.

References on The Web:

[Graders - Automatic Plate Freezers - Refrigerated Drying](#)
[Ultima Fish Meal Plants - Odor Control](#)



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