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## Conflict of Interest and Its Resolution as Factors in the Commercialization of Aquaculture in the Americas

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My concern is to examine a conflict of interest between private investors and the nations of Latin America which I believe must be resolved if aquaculture is to become a dynamic part of economic growth and of needed social change. Stated another way, I would like to query: why does the commercialization of aquaculture proceed so slowly, when the need is so great and we know so much?

It is not my intent to present a classical economic analysis of the costs and benefits of investment—public or private—in aquaculture. You are all keenly aware, I am sure, of the enormous potential productive capacity of the vast reaches of offshore waters surrounding the Americas and edging the lakes and rivers of the hemisphere. Taken together with man-made containers, the efficient use of these waters could have a major impact on both the food economy and general economy of millions of people and every nation. I take this as a fact but will not deal with this fact in quantitative terms.

Nor will I attempt to relate in detail to the complex interplay of traditional basic feasibility factors which in a classical sense govern investment in particular enterprises. Here, too, I am sure you are familiar with the literature on the subject, or from direct experience can tabulate and quantify the elements affecting the acceptability and viability of a business dealing with aquaculture, e.g., the cost of money, technology, labor, management, marketing; obsolescence; return on equity capital; the benefits of transferred technology, employment, and training;

the value to national accounts of taxes, foreign exchange savings, and earnings; and the eddy effect of the purchase of supplies and services among a myriad of others.

Rather, I would like to address myself to that aspect of the economics of aquaculture which examines the field as a material means of satisfying human desires in a broad and profound way. In coming down to this focus of attention, it is not meant to imply that aquaculturalists are prone to overlook the broad human considerations of economic development. But, whereas steady and heady advances are being made in the control of life cycles of animal species of current or potential commercial interest; in the associated fields of biological engineering to ensure efficient large-scale production; in the control of diseases and predators; in the handling of wastes; in marketing techniques; and in site selection procedures; I suspect that no comparable advances are being made in organizing the business of aquaculture so that its benefits ensure the maximum satisfaction of the people of a host country. I also suspect that it is for this reason—the fact that ventures in aquaculture are largely being considered from the traditional investment viewpoint of profit on equity—that advances in the sciences and technology of aquaculture are far outdistancing the actual application of knowledge to commercial activities.

This situation is understandable. Merely defining the diverse sensitivities and aspirations of a nation and its people or, in a more limited sense,

just the people in the neighborhood of an aquafarm, is a difficult art to practice. Reducing these understandings to a workable method of dealing with them in the context of a business operating for profit is even more difficult. Yet I hold that the future growth of aquaculture as an industry of real significance for the Americas depends upon the skill with which we are able to blend our ability and our urge to do what we know how to do, with doing it within a humanistic tradition. The powerful forces of scientific curiosity, engineering ingenuity, entrepreneurship, and return on investment must be hitched to what men think is needed for their growth and joy and because they perceive what is done to be "good."

What logic can construct such a belief? One first has to react to the thrust for national development and social justice which is the outstanding characteristic of the Americas today. There are cynics, with evidence from history and contemporary affairs to support their charges, who argue that social revolution as idealized and translated into political action is just a cover for those protecting their wealth and power. However this may be, the facts as dictated by law—by the pragmatism of political leaders—by pressure from better and better organized centers of self-interest such as labor, farmers, and students—by conscious nationalism capable of violent expression—by agitation within religious and military organizations to break with conservative traditions and to

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foster rapid advancement among the poor and disenfranchised—are facts which affect a private decision to invest and a government decision to allow a business to proceed.

The law may restrict the percentage of foreign participation, project location, currency convertibility, marketing arrangements, transfer of technology, staffing patterns, the cost of labor, and even the selling price of the finished product. Politicians may promote costly social benefits as a charge against doing business, such as those related to job security, health, and housing. Self-interest groups may insist on a greater share of profit, a lesser role for foreigners, more say in policy. Violence as a tool of revolution may intimidate both public and private enterprise. Agitation within conservative institutions such as the church and the military may be hopeful signs for future progress but in the short run may engender a volatile, often explosive response to repressive forces out of the past.

Examined this way, political, social, and economic reality in the Americas logically defines the critical importance of man's felt needs to the acceptance of industrial and agricultural development (aquaculture being of both types). The search for personal dignity and national identity is going on everywhere, throughout every institution and within all strata of society. The search is energized by passion and hope and is full of vigor. To treat this probe into future possibilities as demagoguery or as being transitory, is to proceed irresponsibly and at peril. New business ventures, particularly those created through private enterprise, simply must participate in the quest for a satisfying meaning of life.

Aquaculture by its nature relates almost uniquely to considerations of the quality of life, both from the perspective of a nation and of an individual. Water serves so many purposes and competition for its use can strain human relations to their limit. Water and land use are inextricably related, not only in production terms but as well in the areas of recreation, environmental purity, and aesthetics, each in turn closely related to the demands of cultural style and to physiological and psychological health and happiness.

An aquafarm may restrain access to a shoreline; it may pollute or it may require pollution control of upstream waters in rivers used as such or which feed lagoons and lakes of commercial promise. In an area of acute poverty and malnutrition, the aquafarm may be producing an expensive foodstuff for far away markets, at once whetting and frustrating the local appetite, encouraging thievery and antagonism. A region of primitive pristine beauty may be invaded with access roads, power lines, and other infrastructure requirements of an aquafarm, resulting in a predictable set of reactions. Some will object out of concern for the protection of the environment; others will decry such costly installations unless the aquafarm is but one enterprise in a complex to be served by the new facilities. The question arises: who is responsible for taking the initiative to produce an area development plan, the pioneering aquafarmer wishing to get started or the government, which might then cause long delays in implementation?

In all these instances, flagellation of human relations is a constant danger. These instances can be added to, almost without end. Aquaculture is capital intensive and calls on sophisticated technology and highly skilled management, neither generally available in the Americas outside of Canada and the United States. Insofar as Latin America is concerned, for some indefinite time to come most of the product of aquafarming will be too costly for local consumption and there will exist a dependence on foreign markets where prices and currency value and the modes of marketing are beyond control. Total or partial but significant reliance on foreign capital, foreign technology, foreign managers, and foreign markets can roil the emotions of any Latin American nation. Indeed, faced with this subordinate role, some countries in Latin America—Mexico is a good example—are attempting to develop aquaculture largely on their own despite delays which might be occasioned.

But this is not necessarily in the best interests of these nations. Viewed within the theme of this conference, "Science and Man in the Americas," I would rather seek for the alternative

course of action which brings the benefits of aquaculture most rapidly to the largest number of people. In this light, rather than yielding to the dictates of ancient antagonisms and suspicious and too vigorous nationalism, I would rather challenge the entrepreneurs in aquaculture, wherever they may be from, this way: How can we design new enterprises so that their profitability will attract the necessary money, know-how, and management even while making of aquaculture an industry where primary operating policy is to satisfy the desires of men—"men," as I have noted, being all of us?

There is no simple answer, obviously, to this question but whatever the full answer may be, to seek it out with any hope of success requires acceptance of one basic principle, namely, that private enterprise in the Americas (indeed, everywhere in the future) cannot exist to concentrate wealth. What is allowed to be created to produce profit must in the end benefit local people more, far more, than the benefits which accrue to the original entrepreneurs who start with so much: with education, money, a sense of freedom and dignity, health, and boundless opportunity to move on.

The implications of this principle are far reaching, too much so to be fully analyzed at this time and place. Certain implications, however, are critical to our discussion. People who do not risk must nonetheless share in profits and be financed into ownership. New aquaenterprises may have to be designed so that full ownership transfers, over not too long a period, in a formal, open, politically as well as legally acceptable way, to people who are employed by, or whose lands are used by, or who live adjacent to, the aquafarm.

Financial management may thus be required to deliberately recover equity at an interest rate and capital gain acceptable not just to the original owners but to the potential owners as well. Financial management may require a policy to accelerate getting out of the project rather than staying in and benefitting from expansion. The long-range view of venture capital in aquaculture may have to be that profit per venture is limited and that

only by moving on to other sites can the capital be put to dynamic work at a satisfactory rate of return. More than this, net income may in part be required for payout to local people even before they start owning stock, as means of motivating them to accept, trust, and be inspired by management.

Management (investor) responsibility may go beyond the distribution of cash benefits which derive from corporate profits: cash as income and cash as savings in the form of stock ownership. The very existence of the aquafarm and its resources of staff, technology, and management skill may require application to the general problems of economic development among the people in the area of the enterprise, a service function which arises out of the sheer need for help among those who are not being helped by their own government, for whatever the reasons.

Lest all of these words seem an intellectual exercise and an emotional plea, I would like to conclude with a brief description of our work in Mexico which represents a working model of the foregoing principles in practice.

Coordinación Rural, A.C. (a non-profit corporation) is a member company within Ingenieros Civiles Asociados, S.A.<sup>1</sup> (a profit-making corporation), a wholly Mexican-owned group of companies operating in the construction, manufacturing, and commercial sectors of the economy. Coordinación Rural—CRAC for short—receives its entire operating budget from selected companies of Ingenieros Civiles Asociados (the ICA Group); too, it is from ICA Group income that investment capital flows to acceptable rural businesses generated by CRAC. Other sources of investment capital are sought in every case but the commitment of the ICA Group, basic to thrust of CRAC, is always to participate if a project is deemed sound. There are no bottom or top limits on the size of investment opportunities being sought; no policy fixes the percentage of ICA Group equity, which may be very minor or very major, as required for implementation.

In its work, CRAC, organized at the

end of 1971, seeks to attract investment and loan capital, technical transfer and management skills from the private sector to ventures in rural areas where poverty and ignorance prevail but where a combination of native intelligence, latent entrepreneurship, cultural vigor, physical resources, existing but unused technology, and infrastructure point to opportunities for commercial enterprise. CRAC searches for the site. It evaluates operational feasibility from the viewpoint of cultural, political, financial, technical, administrative, and developmental considerations. It promotes the equity and loan capital required, not only in terms of dollars but also in terms of investors who accept the policies of investment which collectively we call the principles of "popular capitalism." Finally, CRAC, which itself cannot invest legally, organizes the most appropriate corporate structure, participates in policy control, and takes responsibility for the guidance of a new enterprise into relationships with organized groups of rural people who will be the ultimate beneficiaries of the project.

Three examples of CRAC-type investments, each radically different in design but all sharing the common goal of development, may serve to clarify the relevance of CRAC to the resolution of issues impeding the growth of aquaculture.

#### **MODEL 1 — FOMENTADORA RURAL, S.A. de C.V. (FORUSA)**

FORUSA is a stock corporation with five corporate and two individual investors. Its income derives from a technical assistance contract with an organization of small-scale farmers which it helped organize and train for self-management and, from the operation of capital intensive, profit-making divisions. FORUSA pursues five courses of action simultaneously:

1. It directs, through the technical assistance contract with co-operating farmers, the modernization of traditional farming methods, leading to maximum production at maximum net return of the crops (corn, sorghum, chickpeas) normal to the area. In this case, yields have been increased 300-400 percent and

net income per hectare has been tripled, not only because of higher yields but, as well, from lower interest rates on credit and improved marketing procedures.

2. It encourages farmer organization through which private bank credit can flow and training for ownership and management of businesses created by FORUSA can take place. As a result, the farmer organization now borrows directly from a private bank and is ready to initiate its own business venture, independently of FORUSA, such as a trucking division and an irrigation (from wells) division.

3. It encourages family participation in community-wide organizations through which social development is stimulated, as, for instance, the building of a potable water system, construction of a plaza, school building improvement, sewage drainage control, among others.

4. It invests in capital intensive enterprises, such as a store, and an agricultural machinery service center, out of whose profits shares are paid to the users. Net (after tax) income is in part diverted to a trust which, when funds are adequate, will buy the particular profit centers in the name of these users. By this means, income from other sources than farming, as well as employment, can be generated.

5. It invests in research and development aimed at diversifying land use to increase income per unit area, as well as to increase employment. Flower culture, multi-cropping, fresh vegetable production, and other activities typify this effort.

FORUSA aims to bring 10,000 acres of land under management and then withdraw from this activity as the people are organized and trained. It expects to increase family income by a factor of 10 or more. It anticipates the creation of labor demand through multicropping and business activity, even though mechanization of farming practice is inevitable. It is already refocusing the use of labor from farming to community development. It is working with the community in plans for advanced schooling. FORUSA has no doubt that as it leaves one local venture, other local investment opportunities will present themselves. Already, investment plans exist for years ahead, even while transfer-of-ownership processes are being initiated for the earliest of the businesses created.

<sup>1</sup>Mention of trade names or commercial organizations does not imply endorsement by the National Marine Fisheries Service, NOAA.

## **MODEL II — PORQUI, S.A. AND P.A.Z., S.C.**

These two corporations symbolize the flexibility of CRAC concepts. For many years, Heifer Project International (of Little Rock, Ark.) successfully operated a program of introducing well-managed very small-scale animal husbandry projects into primitive communities at the family level, where opportunities for farming income were minimum. The impact of the Heifer program, first to produce food, then surplus for sale per family, and then community-wide surpluses for sale in a more organized and profitable way, has been significant in Mexico. In 1971, it became apparent that a new source of support for the program, other than U.S. philanthropy, would be necessary for program continuity and growth.

Within the history of Heifer's work in Mexico, there was an important contribution to private enterprise philosophy. At very small cost per community, people could be started toward better health, productive work, net growth in income (purchasing power) and providing a raw material base for outside investment. Therefore, it seemed justifiable to CRAC to encourage investment in any kind of profit-making enterprise whose goal it would be to use profits not only to earn income on venture capital but, more importantly, to earn the income needed to support the Heifer Project program.

In this case, it was a natural consequence of the competence of the Heifer Project staff in Mexico to invest in Porqui, S.A., a commercial piggery. At the end of less than one year of operation, Porqui will take over the financial support of the Heifer program, which takes the name of P.A.Z., S.C., a nontaxable corporation

which can receive gifts and even engage in profit-making activities so long as earnings are not paid out as dividends. As Porqui accumulates funds with which to buy out the original investors (who will have earned an attractive interest in the meanwhile), P.A.Z. becomes the owner. P.A.Z. in this way becomes self-sufficient and is provided a dynamic basis for planned growth. While local people do not become the direct beneficiaries of profit of Porqui, the benefits of profit do become focused on the rural poor over the entire nation.

## **MODEL III — FEED LOT**

In Mexico, the primary source of milk is the very large number of small herdsmen with from five to thirty odd holsteins. Production per cow is low, a great loss in the face of a serious shortage of milk. The bull calves are generally killed within the first week after birth, since feed costs are high and for sale milk is the concern of the dairyman. This slaughter is another great loss, in the face of a serious shortage of beef, to Mexico and to potential export markets.

The feed lot planned is aimed at helping to wipe out both losses, even while diversifying the income base of the dairymen and making a good profit for the investors. Utilizing recent technical advances, a feed lot company will buy and fatten holstein bull calves for the beef market. The dairymen who supply these calves will be given veterinary services to improve the care of animals and to provide artificial insemination service to upgrade herd quality. Too, balanced feed at break-even costs will be sold to these suppliers, bringing feed costs down and production up. Credit for the suppliers to dig wells and otherwise improve their holdings and their operational efficiency will be arranged. In the end,

the ownership of the feed lot will transfer to the calf suppliers. Since it is anticipated that there is room in Mexico for a chain of such feed lots, the original investors, as they leave one lot behind, can keep their money working elsewhere, over a long period of time.

In conclusion, may I note that these remarks are not intended to promote CRAC, per se. CRAC does, however, in a pragmatic way, illustrate the feasibility of combining investor interest with the all-consuming demand by the people of the Americas for social justice, for participation rather than exploitation. While I have not spoken about aquacultural ventures, CRAC is considering them and finds no difficulty of placing them within its conceptual framework. In truth, I find no field of investment excepted by the demand for broad participation in the benefits of investment in profit-making ventures. That which I said at the outset of this paper, I will say again, if somewhat differently. Aquaculture in the Americas will not be a fruitful field for foreign investors—or even to national investors—unless and until the traditional hoarding of financial benefits is cast aside.

Speaking directly to potential private investors in aquaculture, I have to say that it is not enough that the money is "yours," that "you" are taking the risk, that each man must fight for and compete for his gains. More and more in the future of the Americas, those who are able to invest privately, those who want to invest privately, and those who believe deeply in the power for economic growth inherent in private investment, must go beyond their own interests when designing projects and help lead others less fortunate toward self-sufficiency, toward pride in achievement, and toward what they dream about when they dream of the "good life."

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