

# **Tourists as a common-pool resource: A study of dive shops on Utila, Honduras**

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## **Introduction**

A common-pool or common property resource (CPR) is characterized by high subtractability, meaning that one individual's use of it detracts significantly from another person's ability to use it, and by low excludability, meaning that it is difficult to prevent any particular individual from using it. The classic example of a CPR is a plot of grazing land shared by a group of farmers: the addition of new livestock to the common land diminishes its usefulness to the rest of the farmers, but it is hard to exclude any particular farmer's animals from the land. CPRs differ from three other types of goods: (1) public goods, such as national defense services, which share with common-pool resources the feature of low excludability but also have low subtractability; (2) toll (or club) goods, such as toll roads, which have low subtractability but high excludability; and (3) private goods, such as most consumer products, which have both high subtractability and high excludability (Ostrom et al. 1994:6-7).

Ever since Garrett Hardin's seminal essay on "The Tragedy of the Commons" (Hardin 1968), CPRs have been a central concern of social science in general and economic development studies in particular. In brief, Hardin pointed out that CPRs are inherently prone to overexploitation. Although the best thing for all concerned might be for the individuals using a particular CPR to restrain themselves, each individual's own ends are best served by exploiting it to the fullest. For many years, Hardin's model of the tragedy of the commons, combined with Olson's (1965) insights about the difficulty of getting groups to act collectively to solve problems, gave the study of CPRs a distinctly pessimistic air. A common view was that the only solutions to CPR problems were either to eliminate the CPR itself by dividing it up and turning it into a private good, thereby giving each individual an incentive to conserve the resource for the future, or by using the central power of the state to enforce

conservation of the resource.

More recently, it has become clear that another solution to CPR problems may be possible in some circumstances. Specifically, given the right conditions and institutional supports, it is possible for the users of the resource themselves to develop procedures and protocols for exploitation of the resource that allow its fair use and encourage economic development while minimizing the risk of overexploitation. Ostrom (1990:90; see also Low and Heinen 1993, Ostrom et al. 1994, Ridley and Low 1993) has identified a number of characteristics that contribute to the success of locally managed CPRs. For example, they must have clearly defined boundaries, sanctions for rule violations, procedures in place for changing rules, the ability to monitor members' use of the resource, and procedures for resolving conflicts between members. Successful examples of self-governed CPRs given by Ostrom (1990) include water resources and irrigation schemes (e.g., Maass and Anderson 1986; Glick 1970) and grazing lands (e.g., Netting 1981; McKean 1986). Anthropologists have made major contributions to the literature on CPRs, which may reflect the fact that successful organizations for CPR governance typically exist on a small scale that is amenable to study by existing anthropological field methods. Anthropological contributions to this literature include not only Netting's study of grazing land management in the Alps (Netting 1981) but also studies of fisheries management schemes (e.g., Berkes 1987, McKay 1987, Kurien 1995, Durrenberger 1997, McDaniel 1997, Acheson 1998) and irrigation schemes (e.g., Baker 1997, Gragson and Payton 1997, Uphoff et al. 1990).

The existing literature published under the rubric of CPRs is limited in three ways:

(1) *Exclusion of failures* - The existing literature on CPRs mostly concerns relatively successful examples of local CPR governance. For the further development of our understanding of what leads to cooperation in some circumstances but not in others, however, it is also worth spending some effort to understand situations in which efforts to organize groups to manage CPRs have failed.

(2) *Exclusion of non-natural resources* - Virtually all existing studies of attempts to manage CPRs locally concern natural resources, mainly fisheries, grazing lands, and water. However, there is nothing in the definition of CPRs that limits them to natural resources. Any resource that has the key characteristics of high subtractability and low excludability is, by definition, a common-pool resource. Money provided by customers to a particular class of businesses is an example of an artificial resource that is nevertheless a common-pool resource. Such money has the characteristic of high subtractability in the sense that money spent by a customer at one business is not available to any other business, and it has

the characteristic of low excludability in the sense that it is often hard to prevent either new firms from entering a market or existing firms from lowering their prices in order to attract more customers.

(3) *Exclusion of collusion* - Although the problems faced by CPR management schemes are very similar to those faced by firms trying to form cartels and fix prices, the study of cartels is often explicitly excluded from the analysis of CPRs. Ostrom, for example, excludes from her consideration CPRs “in which a group can form a cartel and control a sufficient part of the market to affect market price” (1990:26). This choice seems clearly to be based on normative rather than theoretical concerns. The exclusion of collusion from CPR research seems particularly inappropriate in contexts in which the goal is the alleviation of poverty, the ostensible victims are tourists and other consumers from relatively wealthy countries, and the goods in question are luxuries, not necessities. Furthermore, excluding such schemes from our consideration seems not in keeping with the spirit of anthropology. It is ethnocentric to allow Western economics’ biases against price-fixing agreements to prevent us from studying what those from other cultural backgrounds might see as perfectly legitimate arrangements among producers. As many anthropologists have documented, one of the most negative side effects of market-based development around the world has been the breakdown of existing patterns of cooperation within communities (Black 1999:18). To the extent to which cooperation among local producers, even if it involves price-fixing, can accommodate both market-based development and maintenance of previously existing patterns of cooperation within communities, it seems worthy of consideration. Even if the desire of policy makers is to discourage the formation of cartels and price-fixing arrangements, it would seem worthwhile to use our best intellectual tools, including those developed for the study of CPRs, to study them.

This chapter, which deals with the failed attempts of Utilian dive shop owners to form a cartel and fix prices, helps to balance the literature in all of these three ways.

### **Ethnographic background**

Utila is the third largest, after Roatán and Guanaja, of Honduras’ predominantly English-speaking Bay Islands, which are located in the Caribbean Sea off the northern Honduran coast. Existing social science research on Utila is

limited to some economic anthropology (Lord 1975), medical anthropology (Miller 1974), historical geography (Davidson 1974), and linguistics (Doran 1954, Warantz 1983, Lipski 1986). The ancestors of the island's current inhabitants, who reached the island mainly by way of the Cayman Islands, were chiefly of British and African descent. In recent years, a large number of mainland Hondurans have also come to the island in search of work. The population of the main settlement of East Harbor is about 2,000, with an additional 400 or so on a series of cays just off the island's southwestern tip. Although Utilians at one time had a key role in the Central American fruit trade, since World War II Utilian men have made a living mainly by leaving the island and working in the merchant marine and, especially in recent years, in the oil industry around the world. Commercial fishing has also been an important source of income for many Utilians. Particularly since Hurricane Fifi devastated the island in 1974, many Utilians have moved to the United States, most settling in the New Orleans area, and today most Utilian families have strong social and cultural ties to the U.S. Utilian culture has been described as highly individualistic and acquisitive with a strong ethic of consumerism (e.g., Lord 1975). Although a few Utilian households fit the Caribbean stereotype of matrifocality, by and large Utilian household heads are male, marriages are formal rather than common-law, and divorce is uncommon.

Tourism developed rapidly during the 1980s in the nearby nation of Belize and on the neighboring Honduran Bay Islands of Roatán and Guanaja, but on Utila it lagged behind due mainly to the island's relative isolation and unattractiveness. Although in recent years both boat and plane service to the island have become quite regular and reliable, in the past they were both somewhat erratic. With its severe insect problems at some times of the year and lack of good beaches, the island's only real attraction to tourists is its collection of coral reefs, which offer some very fine scuba diving and snorkeling opportunities. As Roatán, Guanaja, and Belize have grown more crowded and expensive for dive tourists, Utilians have seized on an opportunity to expand their tourist operations, and now the island is the home to a large number of small inns, guest houses, restaurants, and dive shops. A small number of resorts catering to well-heeled tourists have opened or are planned for Utila, but for the most part visitors to Utila are young, low-budget travelers from Europe and North America in search of cheap scuba diving.

### **Utila's dive shops**

The present study was conducted during the summer and fall of 1996 as part of a broader examination of Utilian culture and social life. All of the eleven dive shops that were open on the main island in early 1996 were parties to an agreement to fix prices, and all of those shops agreed to respond to a simple questionnaire about each shop's history, operations, and involvement in agreements to fix prices. In addition, the questionnaire was administered to the former owner of the oldest shop on the island, to the island's mayor, who is part owner of one of the shops, and to the owner of one of the two shops that opened

on the island after the agreement was made. Only the owner of the other new shop refused to participate. A dive shop on the Utila cays was not included in the study because it was never a party to any agreement among dive shops and because it is in such a different competitive position from the rest of the shops due to its isolation.

The first commercial diving operation opened on Utila in 1969. Three more dive shops opened their doors during the 1980s, and the rest of the twelve shops on the main island of Utila opened in the 1990s. Five of the shops are wholly owned by Utilians, five are owned by non-Utilian foreigners, and two are owned by partnerships of Utilians and foreigners. Broadly speaking, all of the shops are fairly similar to one another in terms of their sizes and resources, with anywhere from ten to thirty diving sets (i.e., all of the gear needed for one diver) and one to three boats. All of the shops employ between five and ten people, about half of whom are dive instructors, the rest being boat captains, office staff, cleaning staff, and people to run air compressors. Almost all dive instructors are non-Utilians, and all of the shops offer diving certification through the Professional Association of Diving Instructors (PADI).

Although a few experienced divers do visit Utila, the majority of the dive shop business on Utila is in teaching people how to dive. Utila has a reputation among tourists as a very inexpensive place to learn how to dive. Shops occasionally charge as little as \$100 for a few days of instruction leading to the first level of certification with no additional charges for equipment rental, or, as is common among dive shops in the United States, requirements that students purchase their own "personal equipment," such as masks, snorkels, and fins. Certified divers can pay as little as \$10 for additional "fun dives," tanks and equipment included, though a charge of about \$25 per dive is more typical. The dive shops on the island report a wide range of numbers of customers, with one shop reporting fewer than two hundred certificates awarded per year and only 48 fun divers while another shop reports more than 1,400 certificates awarded per year and 5,200 fun dives. These numbers do not necessarily represent the number of tourists on the island because many visitors stay long enough to earn two or more certificates and take many fun dives after certification. Nevertheless, the size of the market is impressive. Assuming that each certificate costs the diver an average of about \$140 dollars and each fun dive costs about \$25, then something between \$1 million and \$2 million per year are being spent on Utila on diving, and of course this does not include all of the money the divers and their friends spend on lodging, meals, and souvenirs.

The variation among the shops in terms of their numbers of customers probably reflects their attempts to gain extra market share through specialization and a variety of advantages and disadvantages each shop has in the competition for customers. For example, shops compete to offer classes in a variety of languages, with classes routinely being available at one shop or another not only in English but also in Spanish, French, Italian, Dutch, German, Danish, Norwegian, and even Indonesian and Hebrew. Some shops attempt to gain an advantage by offering their customers package deals that include not only dive instruction but also lodging and food for the time it takes to complete a course.

A few shops offer specialized classes in underwater photography and in deep diving using special gas mixtures. Many shops see themselves as being disadvantaged by their locations, which are either too far from the air strip and dock where most tourists arrive or too close to them, causing tourists to pass them by in search of other deals. Virtually all shops expressed pride in the quality of their staffs and equipment and their focus on safety, though a common complaint was that such quality means little to tourists intent on finding the least expensive deal possible.

The shops make little effort to advertise off the island apart from a very few small advertisements in publications aimed at tourists and a few fliers occasionally handed out to tourists as they leave the mainland for Utila or as they arrive on the island. Shop owners report that between eighty and ninety-five percent of their customers are walk-ups. One owner explained that although the normal way to reach dive tourists would be through diving magazines, those coming to Utila are typically on tight budgets and have little or no previous diving experience and so would be unlikely to have ever looked at such a publication. As of 1996 one dive shop had also set up a web site, but the cost of doing so was negligible. The owners uniformly describe the flow of tourists to the island as steady and reliable with only minor increases in two vaguely defined high seasons, one in the winter, when presumably tourists are trying to escape cold weather at home, and one in the summer, when college students are not in classes. The minor seasonality in Utilian tourism was not a major problem for any of the dive shop owners. Although most shops reported that they did need a few customers each month in order to stay pay basic overhead and stay in business, when business falls off most can either lay off instructors or rely on other sources of income. As one dive shop owner put it, "I can always live on bananas and land crabs."

### **The history of agreements among dive shops**

Not only dive shop owners but also hotel owners and restaurateurs on Utila often complain about the low prices that they are forced to charge due to all of the competition on the island and the extreme price sensitivity of the tourists they are able to attract to the island, but attempts to organize have usually met with either apathy or resistance. For example, the senior author of this chapter was present at an informal meeting of the island's tourist business owners in August, 1994. Attendance to the meeting was poor, and the discussion quickly moved from the topic of how to organize so as to reduce competition among local businesses and get more money out of the tourists coming to the island to other concerns, such as the island's drug problem, its trash disposal problem, and complaints about the behavior of tourists.

Dive shop owners also have complaints about the effects of competition among the rapidly growing number of dive shops on their profits, sometimes adding the observation that competition may force shops to cut corners to such an extent that safety is compromised. The shops have occasionally made a few informal verbal agreements to fix prices, particularly

for the basic dive courses they offer. For instance, most of the island's shops agreed verbally during the summer of 1995 to fix the price for the basic open water course at \$139. Although one dive shop owner was so irked by an attempt by other dive shop owners to pressure him into going along with this agreement that he immediately and spitefully dropped his price to \$99, most of the shops stuck to the \$139 price from June until September of that year. When the number of tourists began to drop in September, however, some shops began to bend the rules by offering two free dives to anyone earning a certificate at their schools. Soon the whole agreement fell apart, and many shops began to cut prices in order to compete.

Shortly thereafter, in November of 1995, an owner of one of the dive shops began a more formal effort to organize. He sent a letter to all of the dive shop owners outlining the problems as he saw them and inviting them all to a meeting. The meeting was attended by representatives of all of the existing shops on the main island. They agreed to form the Association of Utila Dive Shop Operators (AUDSO) in order to maintain a relatively high price for their services and to ensure the maintenance of safety standards, protection of the reef environment, and good relations with the Utilian community. They agreed on prices of \$149 for basic and advanced diving courses, \$30 for a two-tank fun dive, \$125 for a ten-tank package of dives, and \$25 for a night dive. They also agreed that the courses would not include any additional free dives and that a safety committee would be formed to monitor the shops' compliance with basic safety standards regarding equipment and dive practices. Because of a widespread perception that tourists were being pressured to choose a dive shop before they had a chance to learn about all of the shops, the group agreed that their instructors would not hustle for customers at the air strip or the dock. On the other hand, the group encouraged its members to pass out brochures on the Honduran mainland in order to encourage more tourists to visit Utila rather than, say, Roatán or Guanaja. Each shop agreed to pay a membership fee of 400 lempiras (about \$30) per month to the association and to limit their number of dive instructors to five. The association was to issue certificates of membership to be prominently displayed in each shop and to be removed if it was decided that a particular shop was not adhering to the association's guidelines. Arguing that the island's reef was already overrun with dive boats, the association also asked the municipal government not to issue more permits for dive shops on the island. The mayor, who was part owner of one of the shops, agreed to this arrangement and threatened to use the power of the local government against any shops that failed to adhere to the pact, mentioning a Honduran law that requires businesses to publish price changes one month prior to the date of the change. Some shop owners believed that dive shops that violated the agreement would have their permits lifted for one or more weeks, but as far as any of the owners remembered no sanctions were ever actually imposed on anyone and no sanctions of any kind were specified in the formal written agreement.

No formal procedures were ever established for monitoring the agreement or for settling any disputes that might arise among association members, and no meetings of the association were held after January, 1996.

Monitoring the agreement was left up to individual shops, which had the effect of intensifying the already existing feelings of suspicion and distrust among many of the dive shop owners who suspected nearly everyone (including, at first, the authors of this study) of being spies for the other shops. Despite the lack of monitoring, most shops did adhere to the prices stipulated in the agreement for the first few months of 1996. The shop owners we interviewed had a wide variety of opinions about why the agreement did not last more than those few months, with almost every shop on the island being blamed for its failure by the owner of some other shop. Some owners remember that some shops bent the rules by offering free rooms at inns they also owned. Others blame particular shops for cutting their prices, while others blame the mayor for not penalizing shops that cut prices and for giving permits to new shops that were not parties to the agreement. The mayor defended himself by saying that he has too much to do and too few staff people to do it already and so cannot be expected to monitor the behavior of so many dive shops. Owners of the new dive shops, for their part, pointed out that agreements to fix prices are not legal under Honduran law and thus that the legal status of the association was, at the very least, ambiguous. Although mainland Honduran law has traditionally not been vigorously enforced on Utila, the island has begun to attract more attention from Honduran authorities, particularly tax assessors, as the local tourist industry has grown.

### **Discussion**

One way to understand the difficulty in establishing successful arrangements for the local management of CPRs is through the Prisoner's Dilemma game. In this game, although both parties would benefit from cooperation, there is also a strong temptation to defect from an agreement to cooperate. However, if both parties defect, they both receive lower payoffs than they would had they both cooperated. The trick in avoiding overexploitation of a CPR is to restructure the payoffs in such a way that defection is less tempting and cooperation is more attractive (Ostrom 1990). For Utila's dive shop operators, the temptation to defect from the pact (i.e., to lower prices in order to attract more customers) was never effectively lowered and the incentive for cooperation was never effectively increased.

In other situations, people have been able to overcome this dilemma by creating agreements and institutions that do change the payoffs to appropriators of particular CPRs. Ostrom (1990:90) identifies the following elements as essential to successful CPR arrangements, many of which were not part of the AUDSO agreement:

- (1) *Clearly defined boundaries* - Ideally for the success of a group like the AUDSO it would be impossible for additional shops to open on the island without the approval of the group itself. This was left up to the mayor, who, despite being part

owner of one of the shops, quickly gave permits to two new dive shops.

(2) *Congruence between appropriation and provision rules and local conditions* - In short, the rules governing the management of the CPR should be tailored to the its characteristics. No single set of rules will work for all CPRs and not even for all CPRs of a particular type, such as water resources or fisheries. In the case of the Utila dive shops, there was an attempt to tailor the rules of the group to fit the characteristics of the CPR in question: tourists. In particular, the group's members appear to have understood that their prospective customers shared a number of attributes, such as a general ignorance about diving combined with a desire to learn and a keen awareness of their travel budgets. Thus the practice of hustling for customers at the air strip and dock, seen by many as an unethical practice that preyed on the tourists' ignorance about diving and about Utila, was banned by the agreement, and the price agreed upon by the group was still quite low in comparison with that charged elsewhere in the world.

(3) *Collective-choice arrangements* - Ideally, most of the individuals affected by the rules governing a CPR should be able to take part in changing them. Although all members of the AUDSO had equal voices in the group, because the AUDSO's founding charter included no procedures for changing the group's operating rules, this cannot be said to have been true.

(4) *Monitoring* - The AUDSO agreement included no provisions for monitoring shops' compliance with the agreement.

(5) *Graduated sanctions* - Apart from some vague hopes that the mayor would use his power to sanction shops that violated the agreement, the AUDSO agreement included no sanctions at all, graduated or otherwise.

(6) *Conflict resolution mechanisms* - The AUDSO agreement included no procedures for conflict resolution.

(7) *Minimal recognition of the rights to organize* - Powerful organizations outside the local community, such as national governments, must not interfere with the rights of the appropriators of a CPR to organize. As was pointed out by the individuals who wanted to open dive shops on Utila after the

AUDSO was formed, this was always a potential problem for the group. A group formed for the sole purpose of fixing prices ran the risk of attracting the attention and disapproval of Honduran authorities, although the AUDSO did not itself last long enough for this to be a problem.

Another way to approach the failure of the AUDSO is through the theory developed by economists to analyze cartel formation. Interestingly and quite logically, much of that theory is similar to the theory developed for the analysis of CPR management. For example, many works on collusion and cartels follow the same tack as Ostrom's book (1990) in approaching the issue through the prisoner's dilemma game (e.g., Brown et al. 1976, Philips 1995, Spar 1994; see also Axelrod 1984). Despite this formal similarity, the two bodies of theory appear to have been developed in isolation from one another, and, at least in the case of Ostrom's analysis of CPRs, this isolation is deliberate. Overlap between the two bodies of theory is minimal, with cartel formation being examined as a collective action problem (*sensu* Olson 1965) only occasionally (e.g., Bowman 1989). Although customers, like any class of CPR, have their own distinctive characteristics, and although the appropriators of a CPR are rarely under the severe restrictions regarding overt cooperation experienced by colluding capitalist firms, there is no reason why the formal theories regarding collusion and cartels, on the one hand, and CPR management schemes, on the other, should not converge at some point. In some small way this study of collusion among Utilian dive shops may at least point at such a convergence.

People familiar with Utila, such as Utilians themselves, were not at all surprised by the AUDSO's rapid demise. While Utilians are proud of their island and its culture, they are also highly critical of it and eager to talk about its problems. One of the main themes that comes through in conversations and interviews with Utilians is a widespread frustration with the general lack of cooperation on the island. Attempts like that of the dive shop owners to organize group and community activities on the island nearly always fail. Even efforts to organize sports teams and leagues on the island tend quickly to fall apart in mixtures of apathy and bitterness. This lack of a sense of community has been noted elsewhere in the Caribbean, as well, and it has been compared to the behavior of crabs in a barrel, which could escape if they were to cooperate but which instead continually pull one another back down into the barrel (Wilson 1975). Although many dive shop operators are not Utilian, they do tend to be independent and individualistic, and one of the attractions of the dive shop business itself is the opportunity to be one's own boss while doing something one loves to do. Indeed, given that so many of the Utilian dive shop owners are non-Utilians, this absence of a sense of community may be even more of a problem for the dive shop owners to overcome than it would be for a group consisting of all native Utilians. This supports the argument made by McKay and Jentoft (1998) that CPR issues should be analyzed not solely from a "thin" or theoretically formal perspective but also from a "thick" or ethnographically

informed perspective, one that takes into account the social and cultural context of the CPR problem. Although it would be easy to diagnose the AUDSO's failure simply as a result of the poor design of its charter, the shortcomings of the charter may themselves best be seen as reflections of the Utilian milieu. For example, the lack of any formal procedures for group decision making or for the imposition of sanctions may reflect a fear on the part of the organizers that too formal and powerful an organization might lead some dive shop operators not to join the association in the first place.

### **Recommendations**

Dive tourism can develop in a variety of ways. Elsewhere in the Caribbean, its development has often been in the hands of large, foreign-owned hotels and resorts. Although such resorts may employ local people, the fact that they are not locally owned or controlled gives locals little incentive to get involved in environmental preservation (see Olsen 1997 for an interesting case study on Jamaica). On Utila, in contrast, dive tourism has developed on a very small scale, involving many small dive shops, inns, and restaurants, most of which are owned by Utilians themselves. This style of development has the potential to accomplish several important goals simultaneously, including maintaining a high degree of local control over the island's economy, enhancing Utilians' incomes, and, like ecotourism elsewhere, giving locals a strong incentive to try to maintain the local ecosystem (see Nelson et al. 1993). In short, Utila's dive industry may provide a good foundation for sustainable development for the island for some time to come provided that the small shops continue to dominate. Their success in this regard may be enhanced by a certain amount of cooperation among the shops of the sort envisioned by the AUDSO. Furthermore, part of the reason all but one of Utila's dive shops agreed to answer our questions was that they all hoped that it might help them resolve their differences and come to some sort of lasting agreement. With these practical goals in mind, we would like to offer some suggestions about how they might go about redesigning their organization not only for the benefit of the shops themselves but also for the safety of their customers, the health of the reef, and the sustainable development of the island's economy.

In order that the AUDSO may avoid having problems with the Honduran legal system, they need to incorporate formally, with the aid and advice of a Honduran attorney, as an organization devoted primarily to preserving the Utilian reef ecosystem and to maintaining safety standards among Utilian dive shops and only secondarily to regulating the prices charged. A new charter should include specifications about the groups' formal structure, including its officers, how long they will serve, and how they are chosen, how group decisions will be made, and how the charter itself will be changed, if necessary. It should include provisions for the settlement of disputes among group members and between group members and the association, perhaps including the specification of some disinterested party not from Utila as an arbitrator. An English-speaking attorney or judge from elsewhere in the Bay

Islands might be a good candidate for that sort of role. A safety committee should be established, and the charter should include rules about safety inspections and a detailed list of sanctions for violations of safety rules, culminating in expulsion from the AUDSO.

Judging from the mayor's willingness to give out permits to new shops and his unwillingness to monitor shops' behavior, it would be unwise for the AUDSO to rely on the mayor or any other Honduran government official to restrict entry into the market or to help them enforce their charter. Rather than trying to restrict entry into the Utila dive shop market as a whole, they need to restrict membership in the AUDSO itself. This would require making AUDSO membership an attractive and profitable thing for which new Utilian dive shops must strive. In order to do this the AUDSO itself must provide services for its members beyond its efforts to maintain a basic price level and an awareness of safety and conservation issues. In particular, the AUDSO might make itself useful to its members by advertising its member shops in international travel publications and on the World Wide Web. Because such advertisements may also attract customers to Utilian dive shops that are not members of the AUDSO, it might be wise to include in them some encouragement, such as a price break, for customers to make reservations with the AUDSO, including a deposit, before coming to Utila. In addition to the price break, the customers could be guaranteed a date for the beginning of a dive class on Utila while still retaining the right to choose among the members of the AUDSO after arriving on the island.

Such an arrangement would put the AUDSO in the position of collecting money on behalf of its members, and that might be a good step in terms of enhancing cooperation among the members. Because it is so easy for member shops to cheat on price agreements by making bargains with individual tourists, we recommend that the members of AUDSO turn the collection of all funds for dive classes over to the AUDSO. Cheating could be prevented by simultaneously making the AUDSO and not its member dive shops the clearinghouse for all of the paperwork involved with PADI certification. The paperwork involved in issuing PADI certificates makes the dive classes different from all of the other goods and services offered by the dive shops, and for the long run success of the AUDSO it would probably be wise for them to abandon the idea of regulating what member shops charge for activities like fun dives and night dives.

Although reorganizing the AUDSO in these ways would be expensive for the shops concerned and would require them to relinquish some of their autonomy, it would also serve to achieve the dive shops' main goal of maintaining the profitability of the dive business on Utila, and both the dive shops and the tourists would be served by the association's efforts to preserve the reef that attracts the tourists in the first place and to keep diving safe. Although price competition would be reduced among member shops, tourists would be served by the maintenance of other forms of competition among the shops and by competition of all kinds between member shops and non-member shops.

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