



IRRIGATION USERS' ORGANIZATIONS IN THE LEGISLATION AND ADMINISTRATION OF CERTAIN LATIN AMERICAN COUNTRIES

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

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CERTAIN LATIN AMERICAN COUNTRIES

by

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PREFACE

The organized participation of irrigation users in the management of water resources is an ancient phenomenon: institutions are known whose origins go back to the earliest civilizations.

There are various reasons for the inception, survival, development and spread of such institutions: (a) the organized participation of users implies greater consideration and evaluation of their interests by the authorities; (b) the assumption of tasks by users' associations implies less direct state intervention, enabling the public sector to make other use of its financial, human and material resources; (c) in less developed countries, such institutions facilitate the capitalization of the community effort in hydraulic infrastructural works, rendering possible the use of financial resources for other purposes; (d) a common organization enables users to realize economies of scale in utilizing their shared resources, thus reducing individual costs and strengthening the efforts which, carried out individually, would have been of little or no consequence; (e) users' associations make it possible for the state to discuss activities, plans, programmes and works with a single partner, through which different users can express their views.

Fully realizing the historical importance, the current situation and the future projection of users' participation, the United Nations Water Conference (Mar del Plata, Argentina, 1977) called attention to the need to create institutional infrastructures suitable for the development and management of hydraulic resources, and recognized the necessity of taking steps to facilitate effective public participation. In this context, the Conference added that, if necessary, national legislations should provide for such participation as an integral part of the planning, programming, execution and evaluation process, and recommended that the individual countries draw up participation programmes as well as exchange their experience in this regard.

With a view to contributing to the proper and fuller implementation of these recommendations, to encouraging research on the legal and institutional problems arising out of participation, to diffusing knowledge of different approaches already adopted, and to offering a wide variety of institutional possibilities, the Legislation Branch of FAO's Legal Office requested the Water Economics, Legislation and Administration Centre of the Argentinian National Institute of Hydraulic Science and Technique to prepare this report on practices in certain Latin American countries, selected on the basis of the importance of users' participation there.

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INTRODUCTION

The countries whose systems are analyzed are Argentina (Mendoza and San Juan Provinces), Chile, Colombia, Ecuador, Mexico, Peru and Venezuela.

In almost all of these, water is public property as a matter of principle, but there are minor exceptions to the rule in Argentina, while in Venezuela both public and private waters are found.

The areas analyzed were selected on the basis of the historical and present importance of irrigation there, of the special problems it creates and of the emphasis on irrigation under public development plans.

Thus, Mendoza and San Juan, in Argentina, have a tradition of irrigation that dates back to the 17th century; the two provinces currently have more than 450 000 hectares under irrigation, while their irrigation administration systems are widely divergent and specialized.

In Chile, about 1.9 million hectares are irrigated. Irrigation was encouraged as long ago as the Spanish colonial period, and it is estimated that 800 000 hectares were irrigated by the end of the 19th century. In 1914, some promotion of the sector began to take place through government action.

In Colombia, the low productivity of certain areas is considered partly due to the underdevelopment of irrigation. In 1948, a stage of active government encouragement began, through the Agrarian Credit Bank, and in 1967 the irrigated area was calculated at 180 000 hectares. It is currently estimated that about 300 000 hectares are irrigated.

Irrigation is very ancient in Ecuador, where there are irrigation canals dating back to before the colonial period. Many of the present works are privately built. The government has played an active role in the sector since 1944, when the National Irrigation Fund was established. Currently, irrigation is the responsibility of the Instituto Ecuatoriano de Recursos Hidráulicos [Ecuadorian Institute of Hydraulic Resources]. The irrigated area is estimated at 80 000 hectares.

Mexico has promoted and continues to promote irrigated agriculture as one of the fundamental objectives of its national policy. It has a rich tradition of irrigation, going back to pre-Columbian times, and its present irrigated area is calculated at 5.4 million hectares.

The history of irrigation in Venezuela dates from the colonial period, when private users built some very simple works. The private sector has played an important role in irrigation: of 362 000 hectares irrigated in 1965, 300 000 were due to private works. Government activity in irrigation began in 1938.

1. WAYS AND MEANS OF PARTICIPATION BY IRRIGATION WATER USERS

User participation can take place at different government levels and through different administrative structures.

Thus, in theory, users can participate in the formulation of policy, the elaboration of plans and programmes and the execution of works in the field.

They can also, directly or indirectly, perform administrative, regulatory and jurisdictional tasks.

Finally, they may have a place in state agencies in which they act jointly with public officials, or in bodies constituted exclusively of users.

In the countries discussed here, the matter can be analyzed as follows.

Argentina

Users in Mendoza Province participate through a series of methods.

At the water policy formulation level, user participation takes the form of contributing to the establishment of water use fees, through the Administrative Tribunal of the General Department of Irrigation.

The General Department of Irrigation, the agency responsible for administering irrigation water, is an autonomous body, linked to the Executive through the Undersecretariat for Public Services. It constitutes a special case in the administration of the Province, in that it is a water authority established by the Province's Constitution, which grants it broad technical, operational and financial autonomy, including the power to adopt its own budget, which is covered by the users. (1)

The General Department of Irrigation, whose basic structure is laid down in Act No. 305 of 1905, is the agency responsible for implementing the Waters Act. It consists of three organs: the Superintendent, the Board of Appeals and the Administrative Tribunal. The Superintendent, designated by the Governor of the Province with the consent of the Senate, is the administrative and technical head of the Department. (2) The Board, composed of five members designated in the same manner as the Superintendent, (3) is made up in practice of representatives of each of the water basins of which the Province consists, and thus represents a case of user participation in a state agency.

There is also an administration at river level, under the responsibility of the local offices of the General Department of Irrigation. (4) At this level, users participate in the Honorary Irrigation Users' Boards, with advisory and consultative powers. Three River Inspectors, elected annually in an Assembly of Inspectors, represent the upper, middle and lower waters of the river. (5)

At the level of the execution of work in the field, the administration of the river basin proper is the responsibility of the River Inspectorates, headed by the River Inspectors. It should be emphasized here that the General Department of Irrigation is responsible for administration down to the dam and principal canal level, while the secondary canals, branches, drainage ditches and secondary ditches are the responsibility of the users, acting through the Inspectorates. (6)

It is important to note that the river authorities are elected by users irrigating their holdings with the waters concerned. (7)

In San Juan Province, users participate in the government through the Council of the Water Department, as well as the Irrigation Users' Committees of the departmental boards. The Province, in its turn, participates in the users' organizations through the secretary of the departmental boards; while the boards consist of users, their secretary is a government agent: the Technical Inspector of the Water Directorate. (8)

Chile

In Chile, users participate through four kinds of bodies, differing not only in their territorial jurisdiction but also in their legal nature and methods of constitution: the Boards of Control, the Canal Users' Associations, the Water Communities and the Provisional Users' Registers, which are government-organized communities. (9)

It should be observed that, unlike the two cases reported above, the Chilean bodies are made up of users exclusively, and that the latter do not participate in the government water management and exploitation agencies.

Colombia

Water user participation takes on different forms in this country.

On the one hand, users may be designated as members of the Board of Directors of the Instituto Colombiano para la Reforma Agraria [Colombian Agrarian Reform Institute] (INCORA) as representatives of the agricultural cooperatives, the Colombian Farmers' Society or the Colombian Rural Workers. (10)

They may also sit on the Board of Directors of the Instituto de Desarrollo de los Recursos Naturales Renovables [Institute for the Development of Renewable Natural Resource] (INDERENA) as representatives of the farmers' associations. (11)

In these two hypotheses, water users would be participating in upper levels of decentralized state agencies, not so much as irrigation users but as farmers, rural workers, members of agricultural cooperatives or of the Farmers' Society. However, even if they are not required to be irrigation users to be designated, nothing prevents them from being users as well, and thus from expressing the point of view of users at the government level.

In addition to this possible high-level participation, users participate directly in the Irrigation Districts, through the Users' Boards and General Users' Board of the Districts. (12)

This type of participation is regulated in detail in the irrigation regulations of Coello and Saldaña Districts, which establish the right of users to sit on these boards to the extent laid down in regulations. (13)

Another type of association is found in the Water Users' Associations such as those of the Irrigation Districts of the Recio and Coello Rivers and of the Lagunillas and Rastrojos Irrigation Canals. (14)

Users are also members of the Advisory Committees of the Irrigation Districts, (15) within which they work in collaboration with representatives of public agencies. (16)

Community undertakings also exist. (17)

Ecuador

The Act creating the Ecuadorian Institute of Hydraulic Resources provides that the Institute's Executive Council is to include a representative of agriculture and animal husbandry. As in Colombia, it is possible for this representative to be an irrigation user and thus be able to represent the interests of this sector. The same possibility exists for the representative of agriculture and animal husbandry on the Advisory Council on Water, when he is also an irrigation user. (18)

At the executive level, Ecuadorian users constitute the entire membership of bodies designated as Water Directorates by the Waters Act. (19)

When fewer than five persons make joint use of a canal, they are obliged to contribute proportionately to its maintenance. (20)

Users may also sit on Irrigation and Drainage Commissions. (21)

Other possibilities are the establishment, under the Cooperatives Act, of irrigation cooperatives, such as the Fray Mariano Benítez Irrigation Cooperative, (22) and the formation of farm workers' associations. (23)

Mexico

The development of irrigation has been parallel with that of the agrarian reform, both of which are based on Art. 27 of the Constitution. (24) By a Presidential Order of 2 January 1953 were created the Agricultural Management Committees, made up of government and users' representatives. Such cooperation is typical of the country. Users participate by sitting on the Irrigation District Management Committees, (25) government agencies responsible to the Secretariat for Agriculture and Hydraulic Resources; they are public bodies, established under federal law to provide water to the land within their jurisdiction. (26)

Users also sit on the Management Committees of the Irrigation Units for Rural Development, of which there is one in each state, territory and federal district. (27)

They also constitute the membership of the Users' Association of each Irrigation Unit. (28)

In addition, they participate through the Water Boards, bodies acting as auxiliaries of the Undersecretariat for Hydraulic Resources.

The view has been expressed (29) that the organization of the districts, a combination of public and private efforts, has been highly profitable, even if the government has not recovered its investments directly. (30) Through the Management Committees it has been possible to coordinate the views of the various participants in the production process, for the purpose of improved regional agricultural planning. (31)

Peru

Users in this country participate through Users' Boards in each of the country's irrigation districts, through Users' Commissions in each of the districts' sectors and subsectors, (32) and through Users' Committees at the level of canals, streams and small projects.

Venezuela

Water users' participation may arise out of various legislative provisions, the type of organization depending on the enactment concerned.

The General Act on the Environment calls for the promotion of initiatives encouraging public participation. (33)

The Agrarian Reform Act provides for the creation of users' associations, subject to existing legislative provisions. (34)

The Forests, Soils and Waters Act (1965) provides for the establishment of local committees for the conservation of renewable natural resources, (35) as well as for the creation of Water Tribunals. (36)

Further, there exist bodies subject to the Civil Code (37) and bodies and courts specialized in water affairs governed by the State Police Codes. (38)

2. TYPES OF ASSOCIATIONS

The legal status of users' associations is a matter not dealt with in most of the enactments analyzed. Rarely do they indicate whether the associations are public or private persons, or whether in virtue of their creation by law they enjoy legal personality, and if so, to what extent.

For the purposes of this study, the bodies examined may exist de jure or de facto; the former may enjoy legal personality or not; if so, it may be under public or private law. (39)

Certainly the bodies have certain characteristics which tend to make them of a public nature, and all the more so as waters become a critical resource as regards both its quality and its quantity, and a basic element of governmental development programmes.

Some of the elements indicating that users' associations are legal public bodies are (1) compulsory membership; (2) membership not to be resigned; (3) the association empowered to collect fees or require services or payments of its members, including defaulters; (4) the association regulated, assisted or controlled by government water administration agencies; (5) the association empowered by law to issue regulations; (6) the fact that majority or governing body decisions have compulsory force with regard to the minority or objectors, who can ignore these decisions only by abandoning the status of irrigation users. (40)

One special problem is the need to create associations consisting of small or medium-sized groups (ensuring unity and support), but which are yet able to profit from economies of scale in regional and basin projects, and to deal with the obvious fact that the use of headwaters affects users downstream. This problem has been solved in some legislative systems by establishing small local associations or agencies, which participate in turn in basin, regional or district bodies. (41)

The situation appears to be as follows in the countries studied:

Argentina

Mendoza Province

This province is one of the largest irrigated areas in the world. Since the very inception of irrigation, the participation of users in management and administration was considered fundamental.

Even before the Act of 1884, users were members of legal bodies, and the status of user was concomitant with that of member of the relevant agency, which consisted of all users; these elected annually a judge for the network. (42)

Currently, the Mendoza Users' associations are entitled River Inspectorates; they are public agencies representative of the community of irrigation users. (43)

Consisting of all users of the canal, they have full legal status, with functions and powers laid down by law, and users are not entitled to resign. (44)

No secondary bodies or associations exist in Mendoza, but there are honorary users' commissions advisory to the water subdelegates (one for each basin) of the government administration agency, the General Department of Irrigation. (45)

For canals irrigating more than 300 hectares, there are boards consisting of an inspector and three delegates. (46)

Finally, it should be stressed that the River Inspectorates are autonomous with regard to the General Department of Irrigation. (47)

San Juan Province

Users' associations in this province are public bodies.

Two basic types exist: departmental boards and irrigation users' commissions; the members of the former are elected by the members of the latter, who in turn are elected by the users. (48)

To be eligible to these bodies, the basic requirement is to be the legal owner (or his legal representative) and user of a water concession. (49)

Every department of the province has a Departmental Board consisting of three members (who may not be members of the board of another jurisdiction), each representing one of the three sections into which the department is divided for this purpose. The Board meets in the town hall or any other official building in the department, when it has no office of its own in the department. (50)

Each canal or group of canals serving more than 300 hectares with at least six holders of concessions elects an Irrigation Users' Commission; for this purpose the irrigated area is divided into three parts: upstream, middle and downstream, each of which elects one member and one alternate to the Commission. When there are fewer than six concession-holders, or when the area irrigated does not exceed 300 hectares, they elect a delegate having, mutatis mutandis, the powers of the Commission. (51)

Chile

In this country, users' participation has a long history, going back to the last century.

In 1908, (52) it began to be specifically regulated, its legal status varying according to the type of organization; thus, there exist both de jure and de facto organizations.

According to the best opinions, the de jure organizations are private legal persons, but certain characteristics of their organization (strict government regulation; government control; power to impose penalties, settle disputes and collect fees and contributions; and compulsory establishment) imply the status of public, non-governmental legal persons. Notwithstanding this, the provisions of the Civil Code apply to them in the absence of other provisions. (53)

Of the four structures for users' participation in Chile, the Canal Users' Associations, like the Boards of Control, enjoy legal personality; the differences between these two types, as will be seen below, lie in their membership, responsibilities, and areas of jurisdiction. (54)

The Water Communities, on the other hand, derive their ministerio legis existence from the recognition of a community of interests among persons exploiting a common resource. (55) They do not enjoy legal personality, and their powers and organization differ from those of the bodies mentioned above.

The Provisional Users' Registers are established by the General Directorate of Waters, and the persons concerned organize themselves in a manner similar to the Water Communities. (56)

Colombia

In Colombia, users participate in the Irrigation Districts of the INCORA. (57)

Art. 337 of the Renewable Natural Resources and Environmental Protection Code promotes the organization of associations of users of renewable natural resources, including water.

Provision similarly exists for the organization of community undertakings, (58) contemplating the constitution of associations assembling the users of one or several watercourses or the same distribution system or artificial watercourse. These bodies are auxiliaries of the National Institute for Renewable Natural Resources and the Environment (INDERENA). (59) Formed in respect of a single distribution system, they are entitled Water Users' Associations; when a single artificial watercourse is involved, they take the name of Canal Users' Associations. (60) The legislation also declares the existence of a community among the users of waters originating in the same diversion of a watercourse. (61)

Common-law bodies regulating the use of water among their members also exist.

Community water-management undertakings may be set up. They have legal personality; their legal, administrative and official status varies according to the needs and capacities of the community. (62)

As regards the INCORA districts (Coello and Saldaña), the applicable regulations authorize users to vote for, and be elected to, the Users' Boards and General Users' Boards of the Irrigation Districts. (63)

These bodies are created and regulated under law. The Boards represent the users within each sector of the district, while the General Boards represent all the users at district level. They are public agencies, without legal personality, subject to the system established by Decree No. 182 of 1968 and the regulations issued under INCORA Order No. 18 388.

In order to avoid operational problems in the organized activities of the users that arise from the lack of legal personality, Water Users' Associations are created under private law; their existence is based on Decree No. 755 of 2 May 1967 and on Decrees Nos. 132 and 2259 of 1976.

These associations, which enjoy legal personality, may enter into agreements under which they are delegated functions of the Colombian Institute of Hydrology, Meteorology and Land Improvement (HIMAT). (64)

Ecuador

The Water Directorates of Ecuador are legal bodies assembling the users of the same water source. Irrigation and Drainage Commissions, financed with public funds, also exist.

The Water Directorates enjoy legal personality, as do the Irrigation Cooperatives, the Farm Workers' Associations and the Irrigation and Drainage Commissions. (65)

The legislation and statutes do not indicate specifically whether the personality of these bodies is subject to public or private law. Notwithstanding this, Ing. Edgardo Larenas, in the report under reference 65, affirms that the Irrigation and Drainage Commissions are public legal persons. (66)

Legal personality was granted to the Directorates in 1936; prior to that time, they existed only de facto. (67)

De facto bodies currently exist with respect to secondary canals, de jure status being limited to principal canals. (68)

There also exist de facto syndicates, second-level organizations assembling different de jure directorates. (69)

Mexico

The Mexican Act of 31 December 1971 provides for various methods of user participation, without entering into matters of detail, which are covered in specific regulations.

The forms of participation are as described in the preceding chapter, to which it should be added that the bodies concerned are created under public law.

Of the total of 5.4 million hectares under irrigation, more than half are subject to the Irrigation Districts system. In these areas, users are incorporated into the administrative machinery of the state through the District Management Committees.

Water Boards and Users' Associations, the latter following the Irrigation Units pattern, operate outside the area of the Districts.

The Boards are tending to disappear, because their results have not been satisfactory. The government has channelled its efforts through the Irrigation Districts, the Boards having been downgraded and problems of works, conflicts among users and favouritism in water distribution having arisen in them. (70)

The legal personality of the Users' Associations is not clearly defined.

Thus, the author has been informed that they are legal persons, (71) while elsewhere the opinion seems to exist that they lack this status and assume obligations either through the village or through all users acting jointly and severally. Their authority being exclusively internal, they cannot obtain credit, but it is intended to grant them legal status. (72) The model statutes for users' associations studied contain no elements that shed light on the problem. (73) The Regulations issued under the Waters Act state that Users' Societies are legal bodies empowered to act vis-à-vis the authorities and enter into contracts with private agencies. (74) Although these Regulations were issued under the prior Waters Act, the second provisional article of the current Federal Waters Act provides that the Regulations under the earlier Act continue to apply to the extent that they do not conflict with the new one. But this, considering that Art. 77 of the Federal Waters Act refers to Users' Associations without specifying whether they enjoy legal personality, would seem to indicate that the subsequent application of Art. 232 of the Regulations would lead to the associations being legal persons if and when the Associations contemplated by Art. 77 of the Federal Waters Act are identical with the Associations contemplated in the Regulations. It would be desirable for the position to be clarified explicitly by means of an authorized ruling or specific legislation; the need for this clarification becomes evident in the light of conflicting opinions among officials interviewed.

Nor is the status of the Water Boards clearly defined. No act or regulation grants them legal personality or powers (representation vis-à-vis the authorities, power to contract or proceed in justice) from which their nature as legal persons can be inferred clearly. (75) They would appear to be cases of bureaucratic decentralization or, what amounts to the same thing, administrative deconcentration, without their own legal personality. What exists is a delegation of authority by the government to bodies in which users participate.

The Irrigation Districts are not legal persons. They can be said to be irrigation administration circumscriptions, in which there is a considerable degree of bureaucratic decentralization. Nor are the District Management Committees legal persons; they are internal organizations making possible a certain participation by users and a relative coordination between users and the government. (76) The same is true of the Rural Development Irrigation Units and the Irrigation District Management Committees. (77)

Peru

The ways and means of participation in this country were described in the preceding chapter. It may be noted here that they are bodies under public law. Of the organizations identified in the preceding chapter, the Irrigation District Users' Boards and Users' Commissions in the irrigation sectors, the former include the latter, which are incorporated into the Boards through the membership of their Executive Boards, which in turn may set up Users' Committees. (78)

The District Boards are thus second-level organizations. They are public-law bodies, as are the Users' Commissions and Committees. Users' organizations, except the Users' Committees, acquire legal personality by being entered in the Register of Legal Persons, the Book of Associations. (79)

Venezuela

The bodies subject to the Civil Code are private persons which acquire legal personality as soon as the agreement constituting them is officialized in the branch office of the Public Register of their domicile. (80)

Users' Societies under the Agrarian Reform Act enjoy legal personality subject to compliance with the legal formalities. (81) The law does not specify whether they exist under public or private law, but in the absence of other provisions, the legislation concerning civil societies applies to them. (82)

The Water Tribunals under the Forests, Soils and Waters Act (1965), in consideration of their powers, are public bodies. (83)

De facto associations have no legal personality. (84)

The laws and regulations do not define the legal status of the local conservation committees. (85)

They would appear to be private organizations, with semi-public support, without legal personality, membership in which is voluntary and ad honorem. (86)

The Water Magistrate is a one-person public organism with de imperio powers, since his decisions have compulsory force. (87)

3. CREATION AND MEMBERSHIP

A fundamental problem is that of the method of creation of the bodies. They may be established at the demand of the interested parties, or by a vote of the interests involved, or simply by order of the competent authority. In certain cases the fact of being a user implies automatically the status of member of a body of users. (88)

Membership in them may be voluntary or compulsory. In most cases observed, resignation from them is not permitted unless the person involved abandons his status as water user. (89)

Together with this, the government may be empowered to require their creation, and at the same time to require the participation of all the users concerned.

They may be composed of physical and legal persons. As the case demands, a minimum number of users or a fixed irrigated area may be required for their creation. They may be composed of users and government representatives. (90)

The situation is as follows in the cases examined.

Argentina

In Mendoza and San Juan Provinces the fact of being a user determines membership in the users' body. It is compulsory and inherent in the status of user, the obligation existing under public law. The only means of avoiding participation is to forego the use of the resource. (91)

They are established de jure proprio and the membership consists of all the users in their jurisdiction.

In San Juan Province, a Users' Commission is set up whenever at least six users irrigate more than 300 hectares. When these two requirements are not satisfied, the users confine themselves to electing a delegate. (92)

In Mendoza Province the river inspectors and delegates, representing the users through the River Inspectorate, are elected by the users. (93)

In San Juan Province the members of the Users' Commissions are elected by the users, one being designated for each section of the irrigation canal (upstream, middle and downstream) in order to ensure a balance among the interests of the different areas. (94)

The same criterion applies to the Departmental Boards, elected by the members of the Users' Commissions and consisting of three representatives on the basis of the three circumscriptions into which the department is divided for the purpose of electing the Board. (95)

In both Mendoza and San Juan Provinces, the election of the River Inspectorates and Irrigation Commissions is subject to government control and approval. (96)

Chile

According to the Waters Code, a Water Community is to be formed by the mere fact that two or more persons use the waters of the same artificial watercourse, even if no Canal Users' Association exists among them or no agreement has been entered into concerning the use of the waters. (97)

Consequently, it is a body consisting of all the users of the artificial water-course, constituted ministerio legis by reason of the mere fact of the community of interests in respect of the irrigation canal.

Should the occasion arise, and subject to compliance with the relevant formalities, it may be converted into a Canal Users' Association. (98)

The creation of a Canal Users' Association calls for a more complex procedure. It may be established at the request of individuals or, as provided by Act No. 16 640, by the government, by an order of the General Directorate of Waters. (99)

When the government constructs irrigation works, it may require the establishment of a society of users. (100)

When an association is established by agreement, the agreement must be in writing and duly registered. (101) This procedure requires the unanimity of the eventual members. (102) Failing this, it must be established by court decision, in an audience at which the majority, but not the totality, is required. The audience may be requested by the users or by the Director-General of Waters. (103) The constitution of the association, its statutes and any amendments thereto are subject to the approval of the President of Chile, acting on a report of the General Directorate of Waters. (104)

Where no Water Community or Canal Users' Association exists, the Water Directorate may assign positions and responsibilities to users, in order to supply the lack of formal organization. (105)

Chile is one of the few countries in which the operations of users' associations have developed empirically. As regards their creation, it has been observed that in the Aconcagua Valley and its environs, the formal association of users is not a generalized practice, being in the view of the users themselves complex and difficult to accomplish. (106)

The Boards of Control are set up through a court procedure similar to that for Canal Users' Associations, but, unlike the latter, they cannot be established through extra-judicial procedures. (107) The statutes of the Boards are subject to approval by the President of Chile. (108) Membership in them is compulsory in areas where the government has financed reservoir construction works. (109)

The members of the Users' Communities and Associations are the owners of rights of use or their replacements for any reason, and any provisions to the contrary are void. (110)

The Boards of Control, in turn, are made up of the physical persons, Canal Users' Associations, Water Communities and other legal persons who in any manner use the waters of the same river or basin. (111)

The Provisional Users' Registers are made up of the persons designated by the government. (112)

Colombia

In this country it is considered, under law, that a basic right of users of irrigation waters in Coello and Saldaña Districts is to elect and be elected to the Users' Boards and the General Users' Board. (113)

For this purpose a user is taken to mean any person, physical or legal, who under any title works land in Coello and Saldaña Districts, with the right to enjoy the benefits which in any way derive from water works and utilization. It is indispensable that the user be entered in the General Register of Users. (114)

The Users' Boards consist of five members. (115)

Elections take place in an Assembly of Users. (116)

The election of the Users' Board may be requested by the users themselves or by the project director concerned. (117)

The General Users' Boards of the District, in turn, are elected in an Assembly of Users' Boards, with the Project Director presiding. (118)

When an association is created, it represents all the users of the district, (119) provided that it consists of the majority of them. (120)

Associations are created by decision of the Irrigation District Users' Boards, which draw up draft statutes and submit them for the consideration of an assembly of their members. (121)

All the current and potential users of the District Irrigation Service are members. It is indispensable for them to be entered in the General Register of Users. (122)

Membership in and resignation from the association is voluntary. (123)

The District Advisory Committee is composed of four members elected by the Executive Board of the Association. (124)

The community undertakings within the purview of Art. 338 of Act No. 2811/1974 are assisted by the government; five users are necessary for their creation. (125)

The statutes of the Coello River Association provide that they are subject to the approval of the Ministry of Agriculture. (126)

Art. 56 of the statutes of the Recio River Association contains the same provision. (127)

The Ministry of Agriculture is responsible for organizing national campaigns promoting users' associations. (128)

Ecuador

The Water Directorates in this country may meet at the call of the Ecuadorian Institute of Hydraulic Resources (INERHI) or at the request of a party concerned. (129)

Such meetings, entitled General Assemblies, are held to elect the Executive Council; members must be invited personally, at least eight days before the meeting. (130)

The Irrigation and Drainage Commissions are established on the petition of the parties concerned, after approval by the INERHI, which evaluates the justification of the need and suitability of the measure and the technical studies on which it is based. (131)

The establishment of the Directorates requires at least five persons sharing rights over the same source of water. (132)

The order establishing them is not subject to appeal. (133)

The statutes of the Directorate are subject to the approval of the INERHI. (134)

One of the specific functions of the INERHI is to promote users' associations. (135)

The statutes of the Mocha-Tisaieo-Cevallos Directorate provide that the corporation constituted by the Directorate consists of all the users of the waters within its jurisdiction. (136)

The statutes of the Fray Mariano Benítez Irrigation Cooperative, on the contrary, specify that membership therein is voluntary. (137)

Mexico

All the bodies in which users are members are established as required by law.

The Irrigation Districts, whose Management Committees consist in part of users, are established by the Federal Executive, on the recommendation of the Secretariat for Agriculture and Hydraulic Resources. (138)

The Irrigation Units, on the other hand, are created by decision of the Secretariat. (139) Under the law, a Users' Association operates within the Units. (140)

In each state, district and federal territory exist Management Committees of Rural Development Irrigation Units. (141)

Users must participate in the organization and control of federal irrigation systems. (142)

The procedure for formation of the Users' Associations is similar to that of the Water Boards described below. (143)

The Water Boards may be established on the petition of the users, on the order of the representative of the Secretariat for Agriculture and Hydraulic Resources or on a decision of the General Directorate of Water Use. (144)

They are designated by the users authorized by the Secretariat in the regulations of the watercourse or reservoir concerned, and consist of representatives of the different groups of users. (145)

Different groups of users within the Irrigation Districts are represented on the Management Committees proportionately to the number of users in each. (146)

The Irrigation Unit Management Committees determine the number of representatives of each Users' Association who sit thereon. (147)

Membership in Irrigation Unit Users' Associations is compulsory. (148)

Their establishment is subject to the approval of the Secretariat for Agriculture and Hydraulic Resources and the Rural Development Irrigation Unit Management Committee. (149)

Peru

The Users' Boards of Peru consist of a representative of each District Users' Commission and one for each non-agricultural use. (150)

The Waters Authority makes the calculations according to the users' register and determines those who are entitled to vote and to be elected. Persons whose dues and fees are not fully paid up are not entitled to stand for the Board. (151)

When the Users' Board is established it is officially recognized by ministerial order. (152)

The Waters Authority publishes an invitation to meetings of the assembly in a newspaper, at least ten days in advance. If fewer than 50 percent of the members attend, a new meeting is called, which is held no matter how many members attend. (153)

The small and medium farmers, agricultural undertakings of an associative nature and the peasants' communities must be represented on the Users' Commission. (154)

The Users' Commissions and Committees are governed by the same regulations as the Boards but operate within smaller sectors. Unlike the Boards, they require the recognition only of the District Administrator. (155)

The members of the Users' Commissions elect delegates to the Users' Board, and the members of Users' Committees designate delegates to the Commissions.

Venezuela

The local conservation committees are established by the government. (156)

The criteria for their establishment are laid down by the Ministry of the Environment and Renewable Natural Resources. (157)

The Water Tribunals are created by the National Executive. They consist of no more than seven and no less than three members, designated by the Ministry of the Environment and Renewable Natural Resources. To avoid tie votes, (158) the number of members is always odd. Two members are representatives of the Ministry of the Environment and Renewable Natural Resources, the remainder being inhabitants of the place concerned, selected by the Ministry from a list of ten members drawn up by the users. (159)

The Users' Associations under the Agrarian Reform Act include users of the waters of the same or neighbouring sources. (160) The government assists in their establishment, which may be voluntary, ordered by the government at the request of a minimum number of users, or required by the government. (161) The minimum number of users required for their formation is five, but this number may be increased according to the volume and length of the watercourse. They are attached to the Ministry of Agriculture and Stock-Raising, (162) which authorizes them by ministerial order. Their statutes, like those of associations constituted under the Civil Code, must be drawn up in writing. (163)

The creation of organizations constituted under the Civil Code is voluntary; they must be entered in the Public Register. (164)

De facto bodies do not require a minimum number of members, are subject to no formalities whatever and are clearly voluntary.

The Water Magistrate is designated annually by a majority vote of the members of the community, and a record of the election is drawn up. (165)

4. TERRITORIAL COMPETENCE

The management of a water resource raises the problem of whether it is possible to determine exactly the limits of the areas within which it is to take place.

Variations in area produce different technical, social and economic effects in the structure of users' associations. It is generally accepted that the smaller the area under control of a body, the greater the cohesion among its members, and this is reflected by facilitating the taking of decisions and the execution of the common task. (166)

The ideal situation is a limited geographical area forming a hydrological unit suitable for water management: the social advantages of the small group are combined with the favourable characteristics of the hydrological unit.

Problems arise when the area suitable from the physical and economic point of view is so great as to make it necessary to sacrifice the advantages of internal cohesion typical of small groups. In such cases there are two possibilities: either to operate the entire administration and management system regardless of users' associations, all the burden being carried exclusively by the administrative agency, or to integrate the users' organizations within more comprehensive bodies. This makes it possible to benefit from the technical and economic advantages of large areas and at the same time, although indirectly, from the advantages conferred by small groups. (167)

An intermediate body is inserted between the local and the central levels, making it possible to use the bodies as the terminal links in the chain of national administration and planning.

There are two procedures commonly used to determine territorial competence: 1) arbitrary determination of an area of influence; 2) a flexible system under which the area is bounded by the extreme point of the community of interests or by the point beyond which the irrigation watercourse cannot be used. (168)

Argentina

In Mendoza Province, the territorial competence of the River Inspectorate is determined by the area irrigated by the canal in respect of which the users' organization is established. (169)

The same criterion governs the Irrigation Commissions of San Juan Province, the boundary of whose authority is determined by the limits of the area irrigated from a common canal, or from a group of common canals when none waters more than 300 hectares. (170)

The competence of the Departmental Boards of this province is determined by the political boundaries of the Department to which they belong. (171)

Chile

The territorial jurisdiction of the Boards of Control is exercised on natural watercourses up to the point where they are diverted artificially; at this point begins the competence of the other bodies analyzed in this study. The territorial competence of the Boards comprises in principle the hydrological basin, but may in particular circumstances cover only sections or subsections. (172)

The Canal Users' Associations determine their territorial scope in their statutes. When the statutes are silent, the Waters Code prescribes that the territory extends to the point where the community of interests ceases, provided that artificial watercourses are concerned.

The Water Communities exercise their competence over the area affected by the waters of the irrigation canal which determines its extent. (173)

When the territory is defined by the statutes, it may be smaller, but not larger, than that determined by the community of interests, in respect of canal administration and water distribution. (174)

The principle of community of interests also applies to the Provisional Users' Registers. (175)

Colombia

The territorial competence in Colombia of the zonal Users' Boards and of the General Boards of the Irrigation Districts is determined by the boundaries of the zones and districts under the regulations.

According to the case, the area of jurisdiction is defined in respect of the irrigation system, the hydrological basin or political boundaries. Thus, the Association of the Cosecheros and Rastrojos Irrigation Canals operates on the canals for which it is named, on the area covered by the drainage system of the waters feeding them, and on the Lagunillas River basin for reforestation; it has competence in the towns of Armero and Ambalema. (176)

In other statutes, such as those of the Association of Users of the Waters of the Recio River, it has been found suitable to define the zone of influence as related to the boundaries of the irrigation district in which the Association is located, providing further that for the other purposes of the Association, its competence extends to the entire Department of the Tolima and, if appropriate, as far as the course of its affairs permits. (177) Its competence as regards water use is defined on the basis of the exact boundaries of the District.

The Association of Users of the Coello River applies the same criterion, the area of jurisdiction of the Association coinciding with that of the Coello River District. However, the users may request modification of the geographical boundaries. (178)

The District, in turn, is defined jurisdictionally as an agricultural unit disposing of the works necessary for irrigation and the proper conservation and rational development of the land comprised therein. Its exact boundaries and the waters available to it are defined in the specific Regulations of each district. The District may be divided into units, units into zones, and zones into sections. (179)

Arts. 267 and 276 of Decree No. 1541/78 determine the area of influence as a function of the use of the waters of the common supply system, natural or artificial.

Ecuador

The jurisdiction of the Waters Directorates of this country is determined by the limits of the area of influence of the source exploited in common. (180)

The Irrigation and Drainage Commissions determine their zone of action in their rules of procedure. (181)

The statutes of each body define their zones of influence fairly precisely. Thus, the Mocha-Tisaleo-Cevallos River Irrigation Canal Directorate provides that its competence extends to all the waters circulating in the canal from the Avalla Torrent to the Tisaleo, Cevallos and Mocha Parks. (182)

Mexico

The territorial competence of the Mexican bodies is determined for each district and irrigation unit by the law or regulations.

The Irrigation Unit Management Committees exercise their competence within the boundaries of the state or federal district in which they operate. (183)

The territorial competence of the Users' Associations, operating within the Rural Development Irrigation Units, is established as a function of the Irrigation Unit. (184)

The Waters Boards exercise their powers within the area of influence of the relevant watercourse or reservoir. (185)

Peru

The Irrigation District Waters Boards operate at the level of the basin, or basins when the limited size of these justifies including several basins in the same Irrigation District. (186)

The Users' Commissions exercise their authority in the area of the zones or sector into which the District is divided. (187)

In both cases, the areas of competence are defined in the provisions governing the establishment and operations of the Irrigation District and the zones and sectors into which it is divided.

The Users' Committees operate within the Irrigation Commission, at the level of the canal, small valley or torrent. (188)

Venezuela

The areas of jurisdiction of the Water Tribunals are determined by river or by zones, their definition being at the discretion of the National Executive. (189)

The jurisdiction of the Users' Associations is determined by the limits of common interest, these in turn being a function of the length of the watercourse. (190)

The territorial competence of the Civil Associations is established in their statutes, and that of the de facto associations by the limits of the interests of their members. (191)

The authority of the Water Magistrate covers the area of the interests of the users electing him.

5. ORGANIZATION, DISTRIBUTION OF POWER OF DECISION. GOVERNING BODIES. ADMINISTRATIVE STRUCTURE

As a rule, the essential characteristics of each body are determined within a general pattern laid down in basic legislation, with which its creation and operation must comply.

An analysis of the functions of the institutions studied shows that they carry out various types of tasks, which may be classified into activities of discussion and decision concerning the policies of the body and the works to be carried out; the execution of such works; and the settlement of disputes among the membership.

These activities correspond to functions exercised by the organs of the institutions.

In some cases, each function is assigned to a special organ; in others, a single community organ exercises all the functions of the body. There is a wide range of possibilities with regard to functional differentiation through special organs.

As a methodological abstraction, it can be stated that in general, deliberative powers lie with the users as a whole, meeting in an assembly or board, while the executive functions are assigned to directors, managers, directorates or management committees. In some cases, the power to decide on de facto disputes among members is assigned to a special organ of the community. (192)

The deliberative organs are empowered to designate the members of the executive organs and consist of the owners of the lands affected by the action of the users' association.

Within the institutions studied there exists an institutionalized system for taking the decisions most important for the user members. Among these fundamental decisions are the election of the executive bodies, the approval of plans for works and services and the determination of the financial responsibility of each user. A review of the activities of the executive bodies during their term of office may also be included.

In some systems, the power of decision is directly proportional to the interest of each member, while in others the legislator has sought to establish measures to protect the entire membership against the undue weight of more influential economic sectors. (193)

Such restrictions are imposed through two basic systems: limits on the voting capacity of the members and provisions guaranteeing minorities the right to be heard.

Traditionally, voting rights are fixed on the basis of the interests of each member of the community. These interests are determined by the advantages each member receives or, what amounts to the same thing, the number of hectares subject to irrigation, or the volume of water taken, or, finally, by the areas serviced by drainage systems or the value of the holdings protected against the harmful effects of the waters.

The situation is as follows in the countries analyzed.

Argentina

The River Inspectorates of Mendoza Province are directed by an inspector, elected by the users for a three-year term. He must own land within the jurisdiction of the inspectorate, and his taxes and fees must be fully paid up.

For canals irrigating more than 300 hectares, three delegates serving the same term are added.

Voting in elections of inspectors may take place by proxy. (194)

In voting at elections each user is entitled to a number of votes between a minimum and a maximum, independently of the number of hectares he possesses under irrigation. Further, starting from the basic minimum, increases in the number of hectares under irrigation do not lead to a proportionate increase in the number of votes, which is reduced as the irrigated area increases, up to the established maximum. (195)

In San Juan Province, every holder of a concession in respect of public waters is entitled to vote, and is obliged to vote whenever called for this purpose. His failure to vote without good cause makes him subject to a fine, which can be collected through legal constraint. (196)

Users vote on questions of lease, antichresis * or improvement contracts under which possession of the land is granted for a period of not less than three years. (197)

The number of votes to which each user is entitled is in proportion to the number of hectares irrigated, but this proportion decreases as the area increases until a maximum number of votes is reached, after which time the number is not increased further. (198)

The Users' Commissions are managed by three members, one being elected for each section of the canal. (199)

Chile

Originally, the number of votes of each member was in proportion to his water rights, converted into shares or quotas within the organization.

This system led to the preponderance of the interests of the big landowners, to the detriment of the small users.

For this reason, and considering that in such bodies the human factor is as important as capital, Act No. 16 640 set up a system under which all members are entitled to the same number of votes, obtained by dividing the total water rights of the body among the members. To this basic number of votes is then added the number of votes to which each member is entitled by the number of his shares. (200) This system is applied in the Canal Users' Associations, Water Communities and Boards of Control.

As regards their organizational structure, the organs of the Chilean bodies differ according to the type of organization.

The organs of the Canal Users' Associations are the General Board of Shareholders the deliberative body, and the Directorate, the executive body. (201)

The Boards, which may meet in regular or special session, consist of all the holders of water rights.

The Directorate, elected by the Board for one year, consists of from three to 11 members and may meet in regular or special session, (202)

Compliance with its decisions is ensured by the Chairman, who also represents the Association vis-a-vis third parties. (203)

The Secretary of the Directorate is responsible for administrative duties. (204);

The Boards of Control have an organizational structure similar to that of the Canal Users' Associations, with a General Assembly for deliberation and a Directorate responsible for administrative questions. It also has distributors and wardens. (205)

*A form of mortgage contract by which the mortgagee takes possession of the mortgaged property and has its fruits or profits in lieu of interest.

In the sessions of the Boards of Control, the Canal Users' Associations are represented by their president, the Water Communities by the Chairman of their Directorate or administrator, and the other physical or legal persons by themselves or by their appropriate representatives and organs. (206)

The Water Communities have a Directorate if they have more than five members. Otherwise, the responsibilities that would have been exercised by the Directorate are devolved upon one or more administrators. (207)

The Provisional Registers have an organizational structure similar to that of the Associations, except that they have only three Directors, this number not being subject to change. (208)

Colombia

The Irrigation District Users' Boards are elected by zone, in a General Assembly. They consist of five members, three elected by the owners of holdings of less than 20 hectares and two by the owners of holdings of more than 20 hectares. (209)

For election purposes, each user has one vote. (210) The General Board of the District has seven members, four representing the owners of holdings of less than 20 hectares and three the owners of holdings of more than 20 hectares. (211)

The Zone Users' Board has a chairman, a secretary, a legal officer, a treasurer and one other member. (212)

In addition to these officers, the General Board of the District has a vice-chairman and a further other member. (213) Its members hold office for two years and are reeligible without limitation. (214)

In both organizations, decisions are taken by an absolute majority. (215) Membership of the Board is unpaid and confers no advantages whatever.

The organs of the Users' Association are the Board of Directors and the General Assembly. (216)

The Board of Directors of the Association has seven members, four of whom represent smallholders as indicated above. (217) For election purposes, each user has one vote. (218)

In addition, as a control organ, the Assembly elects an Auditor (219), who must be a certified public accountant. (220)

The statutes of the Coello Association also call for an Administrator. (221)

Voting is personal, and proxies are not authorized; voters must be entered in the register of users and have no outstanding debts to the District. (222) In the Associations, as well, each user has one vote, (223) but this rule is not absolute, since the statutes of Cosecheros provide for proportional voting. (224)

The members of the Board, elected for two years, (225) meet in regular and special sessions. The latter may be requested by the authorities or by at least 50 percent of the users. (226) Under the Coello statutes, 10 percent of the users may call for a special session. (227)

The organs of the Board of Directors are the chairman, the vice-chairman and the recording secretary. (228) Its members may receive fees for their attendance, (229) the amount of which may not exceed one day's pay, plus travel costs.

The Board takes its decisions by absolute majority. (230)

The District Advisory Committee is also composed of representatives of big land-owners and smallholders, sitting jointly with government representatives. (231)

Ecuador

For the purposes of participation in users' bodies, each user has one vote, no matter what the quantity or volume of his concession or the area of his land. (232)

The Water Directorates have two organs: the deliberative General Board and the executive Waters Council. (233)

The members of the Council are elected for one year; their posts are unpaid public offices, except for those of Administrative Officer and Treasurer. (234)

The Council is composed of a chairman, a vice-chairman, a secretary, a legal officer, a recorder, an administrative officer, a treasurer and one other member. (235)

The Board is composed of all the users; it takes its decisions by simple majority of votes cast. (236)

The Irrigation Cooperatives have the following organs: General Assembly, Administrative Council, Control Council, Manager (237) and one employee: the Secretary.

Each member is entitled to one vote regardless of his certificates of contribution, and the decisions of the Assembly are taken by simple majority. (238)

The five members of the Administrative Council, elected by secret ballot, hold office for one year. Their functions are unpaid. (239) The Council has a Chairman and four members. (240)

The Control Council is composed of three members, elected for a one-year term; one of the members is elected Chairman. (241) There is no provision to the effect that Council membership is unpaid.

The Manager holds office for one year, being elected by the General Assembly. (242) There is no provision specifying that his services are unpaid.

The Secretary, more than an organ, is an employee, appointed by the Administrative Council. (243)

The Farm Workers' Associations have a General Assembly and an Executive Council. (244)

The seven members of the Council, elected for one year, are the Chairman, the vice-chairman, recording and communications secretary, treasurer and secretaries for organization, public relations and legal defence. (245)

There is no provision governing their right to payment, nor the voting system.

Mexico

The organs of the Irrigation Districts are the Manager and the Board of Directors. The latter includes users who perform their functions jointly with representatives of the various public-sector bodies. (246)

The Regulations concerning the organization and operations of the Water Boards and Water Magistrates are not very clear. (247) However, and although it is not specifically designated as such, a meeting of users exists and has functions similar to those of an Assembly, and the Water Board proper, elected by the members, is composed of their representatives, (248) with executive functions.

The Board is composed of a chairman, a secretary, a treasurer and other members. (249) Alternates are provided for.

Each user is entitled to one vote, regardless of the number and area of his holdings. (250)

The members of the Users' Associations of the Rural Development Irrigation Units elect an Executive Committee, composed of a chairman, a treasurer, and as many other members as necessary. (251) The Regulations specify that the election is to be held in a democratic manner, but shed no light on the meaning of this expression.

An Assembly of Users also exists. (252)

The Board of Directors of the Rural Development Irrigation Units are composed of representatives of public agencies and of the users. (253)

The Regulations issued under the Nationally-owned Waters Act, which remain in force insofar as they do not conflict with the Federal Waters Act, provide that the organs of the societies of users are the General Assembly, the Executive Board and the Control Committee. (254)

Peru

The Peruvian legislation guarantees the right of all users to designate representatives to the executive boards of users' organizations, the majority being calculated by the number of persons and the minority being represented. (255)

Users are represented on the basis of the use made and the area of their holdings. (256)

The members of the organs of the associations are elected for a two-year term. (257)

The organs of the Users' Board are the Executive Board and the Assembly, composed of delegates designated by the users' commissions and the representatives of other uses. (258)

The same organic structure is found in the Users' Commissions and Committees, the organs of which are the Executive Board and the Users' Assembly. The Executive Board consists of six members, and the determination of the responsibilities of the chairman, treasurer and other members is compulsory in all cases. (259)

Venezuela

The users' bodies of this country, with the exception of the Water Tribunals, have a deliberative Users' Assembly and an Executive Committee. (260)

In general, the latter consists of seven members: a chairman, a vice-chairman, a treasurer, a secretary and other members. (261)

The Water Tribunals consist of from three to seven members. Their president and secretary are representatives of the Ministry of the Environment and Renewable Natural Resources. (262)

The other members are inhabitants of the place concerned. Lacking agreement, they are designated by the Ministry. (263)

The decisions of the Water Tribunals are taken by majority vote; in case of a tie, the president casts the deciding vote. (264)

In the Users' Associations decisions are also taken by majority vote, since even if the Agrarian Reform Act is silent in this respect, Art. 745 of the Civil Code applies in the absence of other provisions.

In the de facto associations, the executive and legislative functions are exercised by the Town Council. (265)

The Water Magistrates are one-person organs. (266)

6. PURPOSES, FUNCTIONS AND POWERS

The associations must have certain powers in order to achieve their purposes. (267)

The type and scope of the powers conferred upon them vary.

In some countries they may issue regulations, collect fees, settle disputes, etc. In others, on the contrary, their responsibilities are limited to mere assistance and advice to the central authorities. (268)

The analysis of the different countries studied shows the following situation:

Argentina

In Mendoza Province, the Honorary Irrigation Users' Boards may recommend means of improving water use and distribution; act as a conciliation organism in disputes among users; observe the proper execution, conservation and cleaning of irrigation and drainage works. (269)

The Inspectorates in the same province are charged with the tasks necessary for watercourse maintenance and improvement. The Inspectors are also responsible for exercising control and ensuring justice in disputes regarding distribution that may arise among users. (270)

The Inspector is also empowered to impose penalties (fines and interruption of water). (271) In return, the users acquire from the Inspectors the quantities of water to which they are entitled. The inspectorates in turn require the support of the users through both actions and attitudes, i.e. payment of canal fees, canal cleaning, voting, candidacy for office, and interest in other matters concerning the canal. (272)

The Inspector draws up the budget of the body, subject to the presentation of accounts, distributes the water among the members and administers the canals.

When the Inspectors are assisted by three delegates, i.e. in the case of canals irrigating more than 300 hectares, the latter, under the supervision of the Inspector, draw up the budget, determine charges and examine the Inspector's report on his administration. (273)

The Departmental Boards of San Juan Province have the following powers: (274)

- to adopt the Department's annual canal and embankment conservation, improvement, cleaning and dredging budget and establish the quotas determining the fees to be charged to water concession holders, subject to the approval of the Water Directorate, the centralized organ of the Province; (275)
- to nominate the staff of the Department and supervise the application of any necessary disciplinary measures in accordance with the regulations in force; (276)
- to ensure the Department's proper compliance with the Irrigation and Drainage Act, the proper distribution of the water and the punctual payment of the contributions due from the concession-holders; (277)
- to set the turns of irrigation among the canals and coordinate the periods for cleaning and dredging them, taking into account the proposals of the Users' Commissions; (278)
- to enjoin users whose sluices are in poor condition or fail to comply with the rules in force to make the necessary repairs and modifications, warning them that otherwise the work will be carried out by the Departmental Board at their cost, with a surcharge of 100 percent,

provided that the allocation for such work must be requested of the Council in advance; (279)

- to forward to the General Directorate the requests for works submitted by the Users' Commissions; (280)
- to decide in the first instance on internal disputes of the Users' Commissions, those arising between different commissions and the appeals of users against decisions of other organs; (281)
- to call a meeting of users every six months to report on the activities of the Board;
- to designate the Zone Councillor to sit on the Council of the Provincial Water Directorate. (282)

The principal responsibilities and powers of the San Juan Users' Commissions are as follows:

- to draw up the annual budget of the canal or canals under their authority; (283)
- to nominate canal staff; (284)
- to ensure the conservation and maintenance of the canals; (285)
- to recommend to the Departmental Board the proper date for cleaning and dredging the canals; (286)
- to recommend the method of irrigation from their canals and ensure its fair distribution; (287)
- to supervise the cleaning and dredging of the canals under their authority and to cover the cost thereof when the Departmental Board so decides. (288)

Chile

The powers of the Chilean users' organizations extend to all matters in which there is a community of interests. (289)

They may engage in all acts and contracts which directly or indirectly foster their purposes. (290) They are empowered to distribute water among their members according to their respective rights, and to apportion costs proportionately. They build, exploit, improve and maintain common works. (291)

The Canal Users' Associations and Users' Boards may obtain loans, offering as guarantee the accounts due from their members, and may issue public bonds and fix charges for their payment on maturity. (292)

The Water Communities have the same powers, except as regards the issuance of bonds and the constitution of guarantees. (293)

The Boards of Control are the only users' bodies which may declare periods of water shortage, and may also request the President of Chile to declare a given source dried up. They may also establish irrigation turns for a river and suspend the supply. (294)

The Canal Users' Associations and the Water Communities are obliged to maintain a register of users, (295), who are bound to attend the Assemblies or pay a fine for their absence, (296) to authorize the use of private canals when necessary, (297) to pay fines for arrears of payment (298) and to authorize the employees of users' bodies to enter their premises. (299)

The Boards of Control maintain a list or register of canals. (300)

The General Board of Shareholders of a Canal Users' Association may meet in regular or special session. (301) In regular sessions it elects the Directorate, approves the budget, determines the fees payable by the users, examines the report of activities and the investments account of the Directorate and designates inspectors to analyze the costs projected for each future financial period. (302) Special sessions may discuss only the matters for which they were called. (303)

The Directorate, the executive organ, is responsible for settling disputes among the users concerning the distribution of water among members, and disagreements between the Association and any member as to the method of exercise of members' rights or the control and maintenance of common works. (304)

It is also responsible for water distribution, protecting members' rights, executing temporary or permanent works, conserving and cleaning the canals, establishing turns, proposing regulations, programming works, drawing up draft budgets and assessment schedules and appointing the staff. It may delegate functions. (305)

The Directorates and, as applicable, the Administrators of the Water Communities are responsible for accepting and distributing water received and utilized from a common source. In addition, they are bound under the law to settle disputes arising among the users, although it is reported that in fact only very few communities hear and settle such disputes (306).

Unlike the Canal Users' Associations, the Water Communities cannot assume rights and obligations autonomously, because they have no legal personality. (307) The rules concerning Canal Users' Associations are applicable to them except when specifically provided to the contrary. They are empowered to assess and collect fees from their members on the basis of the latter's interests in the distribution of the waters subject to the community. (308)

The functions of the Boards of Control are to administer and distribute the waters of natural watercourses to which their members are entitled, to operate and maintain common supply works and exercise any other powers granted by law. They may build new, and improve existing, works as authorized by the Waters Directorate. (309) Many rules concerning Canal Users' Associations also apply to the Boards of Control.

In achieving their purposes, they control water catchment and distribution; they may declare shortages, fix quotas, suspend supplies, prohibit the use of the resource and hear disputes concerning the location of works. They maintain the canal register and may request the President of the Republic to declare a given source dried up. (310) It has been stated that, except for their different geographical scope, their powers are practically the same as those of Canal Users' Associations within their jurisdiction. (311)

Field research in the Aconcagua River Basin indicates that, for the user, the Board of Control is a remote and relatively abstract body, carrying out functions over large and poorly defined areas. (312) It has been suggested that the government act to ensure that these bodies realize their institutional potential, emphasizing that in the area analyzed (Aconcagua River) no case had been encountered in which these institutions had settled disputes among users. (313)

The functions and powers of the organs of the Provisional Users' Registers are similar to those of the Canal Users' Associations. (314)

Colombia

The Irrigation Districts dependent upon the INCORA have as their primary function the proper operation, administration, conservation and rehabilitation of the areas under their jurisdiction. (315)

The zonal Users' Boards are required to cooperate with the district officials to ensure that their user members satisfy their obligations, in particular those concerning the conservation of secondary irrigation and drainage systems, and may request of the Project Director the means necessary for protecting their rights. They may propose measures and works, approve or disapprove budgets, work programmes and financing submitted to them by the Project Director and control the investments and work carried out as a consequence. (316)

The District General Users' Board is required to report any offences and abuses committed in the District, propose the transfer and dismissal of subordinate staff for good cause, comment on draft regulations and ordinances, propose work studies and construction and means of financing, approve the financial plans submitted by the Project Director in respect of studies and works in view of improvement, control the investments and works carried out as a consequence, cooperate with the Project Director, and give its opinion on the budget, calculation of resources and charges proposed thereby; it is empowered to draw up its own rules of procedure. (317)

The users' community provided for in Art. 162 of the Natural Resources Code has as its purpose the catchment and distribution of waters and the conservation and improvement of artificial watercourses.

The purpose of the Users' Associations is defined differently in the various statutes and resolutions. Looking at those statutes and resolutions in pari materia the purpose broadly includes the following: the defence, conservation and maintenance of its irrigation and drainage canals, compliance with and establishment of legal requirements concerning water catchment and distribution, water use and control, cooperation with higher-level policy and administrative bodies, basin reforestation and cooperation with other users' bodies. (318)

Other bodies, such as the Coello River Association, stipulate that their purposes include electing representatives to bodies providing services in the agricultural sector, taking an active part in their discussions and sessions, evaluating their performance, programming improvements in their services, controlling their work, encouraging the organization of their members, administering the district by delegation of authority, promoting solidarity among their members, administering their funds, stimulating infra-structural improvement, and creating and sponsoring cooperatives and bodies in the common benefit. (319)

The Association of Users of the Waters of the Recio River has the same objectives. (320)

The Users' Associations may receive delegations of authority from government agencies. (321) Such delegations, which depend on the degree of development of the Association, concern the administration, operation, development and rehabilitation of the Irrigation and Drainage District. (322)

The primary purpose of the community undertakings is to organize users of limited financial means, ensure the effectiveness of concessions, ensure that the distribution of water satisfies the needs of the users, represent the interests of the community and maintain the catchment, water transport, distribution and drainage works as well as defence works. (323)

The statutes of the Coello River Users' Association provide that the Association must administer its property in accordance with its objective, which is the legal extension of the District Users' Board, and must respect its commitments. (324)

It must also be open to the suggestions of the users, provide technical cooperation and advice and act on their behalf vis-a-vis other public and private agencies. (325)

The Association may require users to justify their quality of users; facilitate the work of administration, improvement and maintenance of the irrigation system; construct the necessary works; pay their fees; accept irrigation and seeding plans and conservation and operation works; accept irrigation and drainage canal easements; comply with regulations; cooperate in campaigns and programmes; and facilitate the furnishing of services and the diffusion of information. (326)

The detailed functions laid down in Decree No. 755/67 confer very broad rights on the users, including participation in servicing bodies, promoting the organization of users, requesting information, suggesting means of improvement, controlling, supervising and acting in the management of public waters, etc. (327)

The General Assembly of the Association elects the members of the Board of Directors, approves its regulations and amendments to the statutes, establishes service committees, designs action programmes, decides on dissolution, approves balance sheets, accounts and reports, and elects the Auditor. (328)

The statutes of the Cosecheros Association empower the Assembly to study and approve the budget. (329)

The Board of Directors of the Association elects representatives to the Boards and Committees of the sector, takes all the measures not specifically reserved to the Assembly, submits annual reports on the progress of its work and projects which it deems suitable, represents the Association vis-a-vis servicing bodies, maintains the register of members, calls sessions of the Assembly, requests the cooperation of the members on special commissions, draws up its rules of procedure, approves staffing plans and the annual budget, controls missions and the execution of works, reports abuses to the authorities, appoints administrators for the branch offices of the Association, delegates functions, imposes penalties on members having violated the statutes, proposes the study and construction of works and admits and rejects new members. (330) To these functions the statutes of the Coello River Association add those of approving fees, drawing up financing plans, supervising progress in the execution of the budget and delegating its functions. (331)

The statutes of the Cosecheros Canal Association include hearing appeals against penalties imposed by the manager.

The Chairman is the legal representative of the Association. (332)

Control of the acts and accounts of the Association lies with the Auditor. (333)

Unlike the Recio River Association, the Coello River Association has its administrator as legal representative; he is also responsible for executing the policies laid down by the Board of Directors and coordinating his activities with those of the Association. (334) He further draws up irrigation plans, which he submits for the opinion of the Advisory Committee of the Association. (335)

The legal representation of the Cosecheros and Rastrojos Irrigation Canals Association lies with a manager, who also enters into contracts for the acquisition of material needed by the Association, collects fees and may obtain loans with the authorization of the Board of Directors. (336)

Ecuador

The Water Directorates have two management and executive bodies: the General Board and the Waters Council. Their basic purpose is water direction and administration. (337)

The Board elects the members of the Directorate and receives its annual report on works and investments. The policy-making body consists of one representative of each right of use. (338)

The Council, organ of administration and execution, is responsible for ensuring compliance with the orders and rules of the water authorities, requiring proper water distribution and use, ensuring respect of the law, drafting the Directorate's statutes and regulations, maintaining the register of users, fixing turns for water use, planning the operation, maintenance and improvement of the aqueduct it uses, prescribing irrigation systems by volume, approving the budget drawn up by the Administrator, controlling investments, imposing penalties, submitting progress reports of the Association to the water authorities and settling disputes among users. (339)

The Administrator, who is a member of the Council, also carries out water super-vision tasks, observes and ensures observance of decisions of the Council, maintains the registers of water volume and use, reports irregularities, ensures the conservation and maintenance of watercourses and works, draws up the users' register and performs the other functions assigned to him by the law and the statutes. (340)

The statutes of the individual associations are more explicit with regard to their objectives. Thus, the statutes of the Mocha-Tisaleo-Cevallos Water Directorate provide that the purpose of the body is to regulate water use, avoid misappropriation, properly invest and administer its funds, protect the general interest, ensure the conservation and maintenance of the canal and its secondary works, and ensure harmony, tranquillity and order among its members. (341)

The General Board designates the members of the Waters Council, the employees and administrative staff, and the commission responsible for managing the association's funds, and gives its opinion of the progress report submitted by the chairman and secretary of the Council. (342) It holds regular and special sessions, the latter at the call of the chairman of the Council or at the petition of 10 percent of the users.

It is also responsible for amending the statutes and regulations, approving the budget, auditing the use of funds, delegating its responsibilities to the Council and dismissing, removing or replacing its members for proved violations of law or the statutes. (343)

The Council is composed of representatives of each secondary canal, conduit or catchment. They must possess users' rights. (344) It is responsible for administering the waters, appointing staff, approving the budget, fixing the amount of the bond to be posted by the treasurer, supervising the collection and investment of funds, verifying cash on hand and the balance sheet, imposing penalties on users, authorizing expenditures, fixing dates for cleaning and repairing ditches, hearing and deciding on appeals, calling meetings of the General Board, taking action for the benefit of users, the Directorate, irrigation works and water supply, executing functions delegated to it, complying with the technical and administrative rules of the INERHI, enforcing the members' rights and rules and regulations, drawing up rules of procedure for submission to the Board, drawing up and updating the irrigation time-table, establishing turns, planning and controlling the proper operation of the channels, requiring the installation of water supply control equipment, and preparing and forwarding annual reports to the INERHI. (345)

The legal representative of the Council and the Board is the chairman. (346)

The Administrator is a full-time paid official of the Council. He is responsible for the proper administration of the canals, (347) ensuring compliance with all rules and decisions, and ensuring that water supplies are properly received and distributed. (348) He may have staff under his supervision. (349)

The Irrigation and Drainage Commissions are obliged to build and maintain water regulation and distribution works. (350)

The purpose of the Irrigation Cooperatives is the use of waters within their jurisdiction and the acquisition and administration of other waters for the benefit of their members. (351)

For this purpose they may improve farming techniques and methods, establish processing plants, obtain and grant credit against real guarantees, market their products and establish relations with other bodies. (352)

The Assembly of the Cooperative draws up its basic work plan, issues general administrative rules, approves the water distribution regulations, elects and reelects officers, decides on changes in the capital of the cooperative and special assessments, studies the semi-annual balance sheets, hears and decides on appeals in case of removal or expulsion of members. It is further empowered to perform any other function authorized by law, statutes or regulations for the proper management of the cooperative. (353)

The Administrative Council is responsible for the executive tasks. It complies and ensures compliance with laws, statutes and regulations, decides on the admission of new members, appoints and reappoints staff, submits draft amendments to the statutes and regulations, plans and programmes, and the budget, decides on contracts in general, establishes wages and salaries, negotiates credits, etc. (354)

The Control Council is responsible for the internal economic, financial, accounting and legal control of the Cooperative. (355)

The Manager is the legal representative and the immediate executive organ of the body. (356)

The Farm Workers' Associations have several objectives. As regards waters, their purpose is the exploitation of land and the procurement of irrigation waters. At the same time, they have all the powers necessary for the exercise of legal personality, including the organization of working groups for the construction of catchments and canals. (357)

The President of the Association is its legal representative. (358)

Its Executive Council consists of the chairman, vice-chairman, recording secretary, treasurer and secretaries for organization, public relations and legal defence; (359) it is responsible for the executive functions and daily administration of the Association. (360)

The Assembly is composed of all the members enjoying their full rights. It is responsible for deliberative functions, approving plans, programmes and regulations, audit, and control of the members, with powers of expulsion and rehabilitation. (361)

Mexico

The purpose of the Irrigation Districts of this country is to ensure the best use of water, adapting the exercise of rights to agricultural necessity. (362)

The District Board of Directors, of which, as has been seen, users form part, is responsible for drawing up programmes, promoting means of development, improving the irrigation infrastructure, rationalizing cultivation and obtaining credit. (363)

It further prepares the District's budget, recommending to the Secretariat for Agriculture and Hydraulic Resources the amounts to be paid by the users for the services they receive. It is the consultative body for all questions affecting the improvement of the District. (364)

It is responsible for approving and modifying irrigation plans and distributing excess water. (365)

The purpose of the Irrigation Units is the supply of water for various purposes, through the construction and rehabilitation of hydraulic works. (366)

The Irrigation Unit Boards of Directors have as their purpose to organize, coordinate and advise on the operation of the Irrigation Units, ensuring maximum productivity and proper water use, respecting irrigation and cropping plans, organizing the users, cooperating with the Secretariat for Agriculture and Hydraulic Resources, approving budgets and fees and recommending the establishment of new irrigation units. (367)

The Users' Associations are entrusted with the administration, operation and conservation of the works of the rural development irrigation units within which they operate. (368)

They are responsible for distributing the water and maintaining and improving the works in accordance with the legal provisions in force. They are required to collaborate with the government authorities in the improvement and development of the works, and to draw up the users' register. (369)

The Waters Boards operate as auxiliary agents of the Secretariat for Agriculture and Hydraulic Resources and are responsible for the orders regulating water distribution. (370)

It is within their authority to organize water distribution, exercise police and control, maintain works of common use, appoint and dismiss staff, draw up budgets of

receipts and expenditures and collect and manage funds in accordance with budgets approved by the Secretariat for Agriculture and Hydraulic Resources. (371)

The officers of the Boards are not obliged to serve without pay. (372)

Peru

The purpose of the users' organizations is to achieve the active participation of users in the development, conservation, preservation and rational use of water and soil resources, in coordination with the Irrigation District Technical Administration, representing the government. (373)

To this end, the user is bound to construct and maintain works in condition suitable for water use, evacuation and drainage, to use water rationally in accordance with his title of concession and to participate in meetings called. (374)

The Users' Boards represent the organizations constituting them in questions of general interest and by delegation in specific cases, ensure compliance by the bodies constituting them with the provisions of the Waters Act, supervise the payment of fees and dues, programme with the Waters Authority the execution of water and soil development plans and programmes, acquire property and equipment, draw up semi-annual reports on their financial situation, organize and coordinate educational activities, supervise the management of the bodies constituting them, sit on the District Coordination Committee and participate in the preparation of the Irrigation and Cropping Plan. (375) They recover from their members the share due from them to cover their budgets.

The Users' Commissions support the Waters Authority and carry out and execute studies and works for the use and development of the resource, participate in the preparation of the Irrigation and Cropping Plan, advise the users, draw up annual work plans, recommend to the Waters Authority the level of annual dues to cover their budget, prepare reports on their accounts, enforce the orders of the Waters Authority concerning distribution and use, grant loans, ensure payment of fees, attend meetings called by the Authority, report on natural protection zones or areas to be reafforested, and request the Authority to declare reserve zones or grant quarrying permits. (376)

The Users' Committees, in turn, support, propose and execute works for the dredging and maintenance of irrigation canals, and in specific cases distribute the water in accordance with the rules laid down by the local waters authority; they support the technical authority of the district and the Users' Commissions in complying with the orders they issue. (377)

In view of execution of the tasks of the various users' bodies, functions have been assigned to their organs.

The Assembly, in regular or special session, is the deliberative organ, while the Board of Directors is the executive body.

The Board implements the decisions of the Assembly, administers the resources, calls meetings, ensures that its chairman discharges his legal or administrative duties, recommends to the Assembly the work plan, draft budget, accounts and balance sheet, supports the Water Authority, pays and receives fees, reports on compliance with the instructions of the Assembly and, in general, takes all the technical and administrative measures necessary for meeting its objectives. (378)

The Assembly, in turn, approves the operations of the Board of Directors through an analysis of the general balance sheet of income and expenditures, approves its pro-programme of work, approves and authorizes loans and financing, establishes users' fees, takes the measures necessary to ensure user compliance with the plans of the administration, approves and amends the statutes, establishes the administrative responsibility of the Board members, orders their removal and, in general, deals with affairs that affect or concern the users. (379)

The powers of the deliberative and executive bodies of the different users' organizations are essentially the same. (380)

Venezuela

The general objective of the Users' Associations is to exercise, preserve and defend common rights. (381)

The Water Tribunals in this country establish water turns; their decisions are executory but subject to appeal. (382)

In areas where the users designate a Waters Magistrate, he is responsible for the distribution of public waters and is competent to settle disputes among users. (383)

The purpose of the Users' Associations under the Agrarian Reform Act is the consolidation and joint use of public waters. (384) They may obtain concessions, construct irrigation and power works, obtain funds and acquire property. (385)

The Waters Magistrate is responsible for distributing public waters and, in places where he operates, directs and administers the users' associations, solving the problems arising out of water use and distribution. His decisions have compulsory force, under pain of fine or arrest. His orders are subject to appeal, (386) unlike those of the Municipal Council, which are final. (387)

7. FEES, INCENTIVES AND FINANCIAL SYSTEM

The users' bodies may obtain their resources in several ways: members' contributions and subsidies and, in some cases, charges to third parties. (388)

The analysis of the countries studied indicates that the method most used in Latin America is charges to users.

Notwithstanding this, in some of the countries studied, users' bodies may meet their financial requirements by calling on public or private credit, subject to reimbursement. This method, authorized by the legal provisions, raises serious problems in practice, which will be discussed in detail in the analysis of the case of Chile.

In general, the basis for determining users' fees is their interest in the association, represented by their water rights.

The comparative situation is as follows:

Argentina

Whether the Mendoza Province River Inspectorates draw up their budget depends on the type of inspectorate. Those which draw up budgets determine the fees to be paid by the user on the basis of his irrigation rights. (389)

Fees are payable in cash or in kind.

The analysis of the budgetary or contributions operation of the River Inspectorates reveals two categories: inspectorates with or without an official budget.

There are about 1 600 river inspectorates in Mendoza Province. In about 650, the General Department of Irrigation (GDI) is responsible for approving the budget and the scale of fees thereunder.

This category includes the inspectorates which, by reason of the number of users served, the area covered or the length of the river, become complete administrations; this creates the necessity of endowing them with certain formalities and controls to support their operation.

These inspectorates are linked in different ways with the GDI. The most important linkages are as follows:

- with the Honorary Administrative Tribunal, organ of the GDI responsible for approving the budget of expenditures and the calculation of resources and therefore determining the annual contribution of the concession-holders;
- with the Rivers and Budgetary Control Division, organ of the GDI which focusses on the river inspectorates with formal budgets, performing the following functions:
 - establishing the rules under which the river inspectorates draw up their budget of expenditures and calculation of resources;
 - auditing the management of the inspectorates concurrently with the execution of the budget;
 - verifying the annual accounts that the inspectorates must submit for approval or rejection to the Honorary Court of Accounts of the Province, after submission to the Administrative Tribunal of the GDI;

- with the Revenue Department, organ of the GDI responsible for receiving payments due from concession-holders to cover distributions arising out of the execution of the budgets of the various inspectorates;
- with the Accounting Department: the river inspectors are the officials responsible for administering the resources obtained for the execution of their respective budgets, the GDI being simply the collecting agency. For this reason, the payments collected by the Revenue Department are redistributed to the different bank accounts of the river inspectorates as they are received.

The inspectorates without formalized budgets are those which, constituting simple administrations, do not require greater control. Normally, this group is made up of the inspectorates with a small number of concession-holders, a limited jurisdictional area and a watercourse of limited length. These situations, taken together, lead to easily managed administrations, and various functions of the inspectorate, such as watercourse cleaning, are transferred to the users themselves.

This type of inspectorate maintains none of the above-described relationships with the GDI.

Their budgets are totally informal, and their approval and the establishment of fees is the sole responsibility of the inspectorate. (390)

The basis for determining the scale of fees in the river inspectorates with formal budgets is the area possessed which benefits directly or indirectly from a given water-course (irrigation or drainage). In the case of irrigation, an area is considered to benefit directly if it is irrigated from the watercourse controlled by the inspectorate. Areas irrigated from watercourses diverted from such watercourses are deemed to benefit indirectly. Consequently, fees are fixed for the main canal and for the secondary canals of the diverter.

In San Juan Province, in fixing fees, the Departmental Irrigation Boards compute the costs for services rendered payable to the Water Department, which draws up the relevant preliminary draft. In every case, an effort is made to ensure that the probable revenue will cover the respective budget. (391)

The fees are established according to the balance drawn up by the collecting and auditing agency, the Water Department, which determines the corresponding regular and special dates of payment. (392)

The Users' Commission draws up the annual budget for the operation of the canals under its authority. (393)

The Departmental Board, in turn, establishes, before 15 February of each year, and taking into account the partial budgets submitted by the Irrigation Commissions, the annual watercourse conservation, improvement and cleaning budget, determining at the same time the fees to be assessed in order to provide the necessary resources as approved by the Council of the Water Department. (394)

Chile

The principle applied in this country is that the parties concerned pay the costs as a function of the benefit received, determined proportionately to their water rights. (395)

The orders of the General Board governing costs and fees are binding on all the members, a duly certified copy thereof acting as the document of execution. (396)

When a shareholder benefits direct and specially from a given activity or work, he bears the total cost thereof. (397)

Default in payment of fees gives rise to punitive interest; in addition, the water supply may be suspended. (398)

The associations may obtain loans, offering as security the accounts payable by their shareholders. (399)

Their capital consists of the financial and other resources contributed by the owners of rights of use, receipts from fines and the assets they may acquire in any manner. (400)

They may obtain government loans through the Chilean State Bank up to 75 percent of the value of the irrigation works they construct. (401) In practice, this occurs on with the approval of the directors. No subsidies or special credits exist.

The foregoing is true as regards the theoretical and formal operation of the capital and financing of the Canal Users' Associations.

Empirically speaking, it has been reported that in practice, according to studie in the Aconcagua Valley, the contributions of members are very limited. (402)

Frequently, more than a year of arrears of payment is observed, without the defaulter being pursued before the courts, considering the cost of the legal procedures Fees must cover the ordinary costs of administration, staff, premises, and cleaning and maintenance of canals, as well as extraordinary costs arising out of exceptional circumstances.

The users agree that the fees are low, but are not inclined to pay more, because the services and works they receive from the Association are insufficient. The latter, in turn, cannot furnish more without increasing fees. The case is thus a typical vicious circle. (403)

The constitution of guarantees on users' fees to obtain loans from third parties is a type of financing that has never been used in the Aconcagua Valley because their low level renders them unprofitable for lending institutions. (404)

The latter prefer to operate directly with the guarantee of individual users, who, although infrequently, are prepared to endorse personally the debts of the Association. (405)

The Water Communities are subject to the same principles as the Associations, except that they are not authorized to issue negotiable instruments or to grant guarantees on the accounts receivable from their members.

The Provisional Users' Registers are subject to the same principles as the Canal Users' Associations, (406) except as regards the issue of instruments and offering as security the accounts payable from the shareholders, which is not expressly authorized.

Colombia

The operational and administrative costs of the Users' Boards are assessed on a pro rata basis and proportionately to the number of hectares served possessed by each user. (407)

For this purpose they must draw up a budget of expenditures, which is subject to the approval of the Project Director of the district in which they are located. (408)

The funds are deposited in a special account in the name of the Board. Cheques must be signed by the Project Director and the Treasurer of the Board. (409)

Collection of fees is the responsibility of the Irrigation District and not of the Board. (410)

The Users' Associations divide their costs pro rata among their members, distributed proportionately to the irrigable areas according to the users' register. The fees are recovered by the Irrigation District to which the Association belongs. (411)

The statutes of the associations deal with this question in detail. Thus, they provide that the capital of the Association consists of the fees paid, as a function of the volume of water furnished, to conserve canals and drainage ditches, maintain common works and build new works; of the chattels and real estate acquired through special assessments; of fines imposed; and of the product of loans, donations and contributions. (412)

The same statutes provide that certain long-term investments, such as costs of studies, installation of hydrometeorological networks and forest development, are to be financed by loans. (413)

The agreement on the delegation of functions between the Coello River Association and the HIMAT specifies that fees covering the services and costs of the Association are fixed by the latter, with the approval of the HIMAT, which further is to receive a monthly statement of income. (414)

The Association is also empowered to recover 2 percent of its annual proceeds for its administrative tasks. (415)

The statutes of the Coello River Association provide that the regular operating budget of the Association must be covered by the users. (416)

The budget of receipts, which must be equal to the budget of expenditures, is drawn up on the basis of two scales: a flat fee and a fee by volume. The former is a fixed sum payable per hectare registered, whether or not the service is used. The latter is paid per cubic metre of water received by the user at his catchment. (417)

Delay in payment gives rise to interest at 2 percent per month. (418) Users may file appeals against errors in assessment. (419)

Bills for fees have legal force, and failure to pay justifies refusal to issue certificates of non-indebtedness by the bodies collecting income taxes. (420)

Extraordinary and emergency works must be agreed by the users benefitting from them. (421)

Ecuador

The capital of the Directorate consists of the contributions of the users and the resources acquired in any other manner. The users contribute proportionally to their rights in paying for the services and works provided by the Directorate and to the administration thereof. (422) The rights may be defined as a function of volume or of area. (423)

The Irrigation and Drainage Commissions may act as intermediaries between their members and the National Development Bank and other credit institutions. (424) The Bank scrutinizes the loan and controls its investment. (425) It is obliged to establish special credit lines. (426)

Contributions may be paid in cash or in kind. (427)

The particular statutes of each of the institutions studied throughout this report go into greater detail in dealing with this question. Thus, it is established that the capital consists of the periodic fees fixed per hour of water use or fraction thereof, and which may be increased if the circumstances on which they are based change; special assessments; entrance fees; fines imposed by the Directorate; and contributions by public or private bodies. (428)

The funds are used to cover administrative costs, salaries, rents, canal conservation and repair, works construction and the purchase of machinery, tools and equipment. (429)

Defaulting associates are required to pay a surcharge, (430) without prejudice to interruption of the service and payment of inspection costs. (431)

The statutes of the Farm Workers' Associations empower them to collect fees to cover their administrative costs and finance the programmes they undertake. (432) The ordinary fees, payable monthly, are fixed on the basis of the members' income. Special assessments are established according to the reason for their collection. (433)

The Irrigation Cooperatives also deal with the question in their statutes. Obtaining credit from banking organizations and public and private bodies is considered to be of fundamental interest.

The capital of the cooperative consists of contribution certificates. (434) Its funds consist of the value of the certificates, profits from investment and from commercial and agricultural activities, amounts received from water lease rights, funds transferred to the cooperative for any purpose, voluntary contributions, reserve funds and fines collected. (435)

The last two cases analyzed might be subject to criticism in that they fail to define fees for services or works, thus limiting severely the potential of these bodies in the irrigation sector. Nor do they fix payment on the basis of water rights.

There exist subsidies resulting from construction of works by the government without the requirement of subsequent reimbursement. (436)

Art. 17 of Act No. 369/72, explicitly applicable to the Drainage Commissions, provides that the government and other public legal persons are to recover from the beneficiaries the value of the hydraulic works and the cost of operation and maintenance carried out with their funds. (437)

Payments are assessed on the basis of the irrigable area within the zones of the canals under the authority of the Commission. Users are obliged to irrigate. (438)

A surcharge is made when it is necessary to resort to pumping services. (439)

The scale of fees is proposed by the Irrigation and Drainage Commission but is subject to the approval of the INERHI (440) and is promulgated by the Ministry of Natural Resources and Tourism. (441) Payment may be made in instalments. (442)

Fees are payable whether or not the water is used, and are calculated on the basis of amortization, maintenance and operating costs and the necessary time of use. (443)

Mexico

Users are required to pay for all the services received from the Irrigation Districts. (444)

Fees are calculated on the basis of water volume, land area cultivated, crop value, costs of the District and recovery of the reimbursable share of government investments. (445) They are updated periodically; default may give rise to suspension of the service and recovery by constraint. (446)

The Water Boards draw up their budgets of income and expenditures and submit them for the consideration of the Secretariat for Agriculture and Hydraulic Resources; they are empowered to collect and manage the funds resulting. Default may give rise to the suspension of services. (447) The users determine freely, by majority vote, the costs to be authorized in the budget of expenditures, and establish fees accordingly. They are obliged to bear in mind that the fees must be sufficient to cover the Board's operations, and the Secretariat is empowered to reject the budget if it is found to be insufficient for the execution of the Board's functions. The fees are fixed on the basis of the volume of water to which each user is entitled. (448)

Fees are payable in cash or in kind. In general, the Boards do not have recourse to credit. Nor do they receive government subsidies, although the government may execute distribution works if it recovers its costs. (A49)

The amount of the fees payable in the Rural Development Irrigation Units is fixed by the Secretariat, after hearing the views of the Irrigation District Board of Directors of the district, state or federal territory concerned. (450) Fees are collected through the Users' Association of the Unit, and default may give rise to suspension of supplies. (451)

The rules of the Abala Irrigation Unit Users' Association provide that the users' fees must cover the operating and maintenance costs of the irrigation system, (452) all the users being obliged to pay them because the system must be self-financing. The budget and the fees are established not by the association itself but by the State Irrigation Units Board of Directors. Default may give rise to suspension of the service. (453) Fees are established on the basis of water rights, determined by volume, area and number of irrigations. (454)

Although legislative policy requires self-financing, in reality the irrigation systems have never been self-financing, and the users' fees have covered only a part of the costs. (455)

The purpose of subsidies is to provide the user with financial flexibility, reduce agricultural risks in the absence of social services, compensate for low prices in consideration of the fact that certain expenditures incurred are not for the exclusive benefit of farmers, and stimulate the multiplying effect of agriculture. (456)

Further, the inabilities of some farmers to pay, and the high cost of technical assistance, are also taken into account. (457)

Peru

The financial resources of the Users' Boards and the Users' Commissions consist of the fees paid by the users, interest earned on their capital, loans which they may obtain, donations, legacies and other receipts. (458)

The fees are cash contributions by the users, paid annually, which must cover the work programme, the administrative budget, the acquisition of goods and services and the constitution of a reserve fund. (459)

In special cases an extraordinary contribution may be assessed, subject to the approval of the Irrigation District Technical Administration. (460)

Loans must be specifically allocated for the purpose for which they are obtained, under the responsibility of the members of the Board of Directors, severally and jointly, and amortized through the users' fees. (461)

The funds of the Users' Committees are allocated by the Users' Commissions, whose governing bodies must recover the fees payable by the users. (462)

Default of payment gives rise to penalty surcharges, suspension of the service by the Irrigation District Technical Administration and recovery by constraint.

The amount of the fees is proportional to the rights of the users, who must be fully paid up. (463)

The scale of fees is recommended by the Users' Commissions but must be approved by the Waters Authority, which must be informed as to the management of the funds. (464)

The Users' Boards control the payment of fees. (465)

Venezuela

The legislation provides that the Conservation Committees may receive subsidies. (466)

The rules and documents consulted contained no information with regard to the financial system of the Water Tribunals and Water Magistrates, nor were data obtained during interviews.

The Agrarian Reform Act authorizes Users' Associations to obtain the necessary funds, but does not specify by what means or of what nature. (467)

In the associations subject to the Civil Code, every user is liable for all that he has committed himself to contribute. (468) Persons having undertaken to contribute money and failing to do so in due time are liable for interest thereon and damages. (469)

Information on the financial system of de facto associations is lacking.

8. OFFENCES AND PENALTIES

The users' bodies are empowered to impose minor penalties, or are obliged to report proved or observed offences, with the power to penalize offenders for actions specifically affecting their operations.

In the different countries the situation is as follows:

Argentina

In Mendoza Province, the inspectors may fine users who violate the law; defaulters may be fined up to 50 percent of the canal or drainage ditch assessments that they have failed to pay. (470)

The inspectors, in turn, may be fined by the Water Subdelegates or the Superintendent for dereliction of duty. They may be dismissed by the Honorary Administrative Tribunal of the General Department of Irrigation, for due cause. (471) The authorities of the various watercourses may be suspended or replaced at any time by the Tribunal, at the request of a number of users representing two thirds of the valid votes of the watercourse, and in such cases the candidate designated by the said majority must be designated. The Tribunal is empowered to require the direct authentication of each and every such signature. (472)

Inspectors failing to render faithful accounts of the use of the funds they administer may be debarred from holding any waters administration office for five years, without prejudice to removal from office when the irregularity is observed or discovered in the course of their employment. (473) The General Department of Irrigation, acting *ex officio* or at the request of interested parties, may require the presentation of the accounts and relevant documents, officials refusing or delaying to present them being liable to removal. (474)

In San Juan Province, the members of the Users' Commissions and Waters Boards are obliged to report proved offences. (475)

Chile

In this country, the members of users' bodies are obliged to attend meetings of the Board of Shareholders; failure to attend renders them liable to a fine if the meeting cannot be held for lack of quorum. The fine, which is variable, is based on current minimum wages, in order to avoid becoming outdated as a result of depreciation of the currency. (476)

Default in paying the Association's fees gives rise to punitive interest of 2 percent per month, without prejudice to the right to suspend the water supply. (477)

Fines are imposed after a hearing. Their general maximum is twice the living wage for employees in trade and industry in the Department of Santiago. They are subject to appeal after payment. (478)

Users condemned for fraud, dilapidation, embezzlement or undue appropriation of waters are debarred from holding office or being employees of users' associations. (479)

The Board of Directors is empowered to impose fines for the modification of water distribution equipment; the fine may vary between one tenth and four times the living wage for employees in trade and industry in the Department of Santiago. (480)

Colombia

The laws and regulations empower the Project Directors or the Chiefs of Irrigation Districts (government officials) to impose fines and suspensions for undue

appropriation of water, verbal insult or assault on District officials, destruction of works, prejudicial clandestine works, blocking roads, sale or cession of water, acts to the prejudice of third parties and intentional damage to works, equipment, structures and canals. (481)

In Users' Associations, the following acts are considered serious offences: undue appropriation of water, serious offences toward public officials, damage to and destruction of works, clandestine construction to the prejudice of third parties, interruption of district communications services and roads, sale of water, failure to comply with irrigation schedules and payment for services with bad cheques. (482)

Penalties imposed are without prejudice to the payment of damages and penal action.

In each case, the repair or modification of the elements impeding water distribution, communications or roads may be required. (483)

The penalty imposed by the association consists of a fine and the temporary or permanent suspension of the water supply. Fines are fixed.

The penalties are imposed by the Administrator of the Association by an order stating the grounds on which it is based, (484) and notified to the user together with information on the recourses available to him. (485)

Failure to comply with this requirement nullifies the procedure. (486)

There exist recourses of reinstatement and appeal. The former is filed with the Administrator, the latter with the Board of Directors. Both recourses stay final imposition. (487)

The statutes of the Cosecheros and Rastrojos Association contain rules similar to the foregoing, except that the imposition of penalties must be requested of the INDERENA or the competent government agency. (488)

When any association assumes functions by delegation from government agencies, its members become civilly and penally responsible for the administration of the property entrusted to their management. (489)

The statutes of the Recio River and Coello River Associations deal with this question, generally speaking in the same manner as set out above. It should be noted, however, that in these bodies penalties are imposed by the Chairman of the Board (490) or the Administrator of the Association. (491)

Penalties in these two associations consist of fines and suspension. Permanent suspension implies the removal of the offender. (492)

Ecuador

In this country the Waters Directorate may impose penalties on users for failure to meet their obligations. The general principles concerning penalties call for prior hearings and penalties of fines, suspension of water supply and repair of damage, if the offence is not pursuable under ordinary law. (493) Penalties are imposed by the Waters Council of the Directorate. (494)

The user has the general responsibility not to waste water, nor to channel it if the conduits are in poor condition, and is responsible for all damage to third parties. (495)

Failure to attend the General Board gives rise to a fine. (496)

Persons committing offences to the prejudice of a Waters Directorate or of the proper use of the resource are debarred from holding office in the Directorate. (497)

The Administrator of the Directorate is responsible for reporting undue appropriation of water.

The statutes of the Waters Directorate of the Society of Farmers and Co-owners of the Chimborazo Canal provide for three types of penalty: warning, fines and removal from office. (498) Penalties are subject to appeal. (499)

The statutes of the Mocha-Tisaleo-Cevallos Directorate provide for a fine for failure to attend meetings of the Assembly. (500) It is prohibited for users to modify the means of water distribution, violations giving rise to civil, penal and administrative penalties. (501) Nor may they sell or lease waters, nor repair canals, catchments or conduits on their own account. (502)

Imposition of penalties, which may reach 100 soles, is the responsibility of the Council. (503) The Chairman of the Council is responsible for making investigations and preparing the report of the case. (504)

Contamination of waters is a criminal offence if the life or health of the users is endangered. Complaints are filed by the Council and the Legal Officer of the Association. (505)

The rules of procedure of the Association provide that fines are payable to the institution, but that they may be replaced by personal labour.

Mexico

No specific references to the question of penalties in the irrigation districts or rural development units were encountered. However, the principal data concerning the system of penalties in general have been compiled.

The Waters Act grants the public the right to file complaints for hoarding of water or for illegal acts by officials. (506)

Offences include the contamination and unauthorized use of waters, waste of waters, use of water in manners other than those authorized, the illegal exploitation or modification of works and the failure to maintain works. (507) Such acts are punished by fixed fines or suspension of use. (508)

Penalties are imposed by the Secretariat for Agriculture and Hydraulic Resources. (509)

Disobedience of and resistance to authority, damage and destruction of works and unauthorized exploitation are considered offences subject to the Penal Code. (510) Decisions are subject to appeal for irregularity or review. (511)

The Users' Associations deal with offences and penalties under the abovementioned articles of the Waters Act. (512)

Water misuse gives rise to fines for the general benefit of the Association. (513)

The Regulations on the organization and operations of the Water Boards provide for a series of penalties based on the earlier 1934 Act. It is understood that with the repeal of that Act, these provisions are replaced by those of the Federal Waters Act analyzed above.

Peru

The legislation specifically referring to users' participation lays down causes for the dismissal of users who, holding office in users' associations, take personal advantage of their position, fail to attend meetings or are condemned to imprisonment. (514)

Decree No. 005/79/AA envisages no other offences or penalties, but the general principles dealing with the matter in the Waters Act are summarized below.

Water rights lapse for failure to use water, to pay fees and to comply with legal obligations. (515) They may be withdrawn for misuse of water, or for repeated undue appropriation or other repeated offences. (516)

The Act provides for fines, varying between a minimum and a maximum. At the same time, the offender is obliged to restore objects to their earlier condition, close off works he has constructed and pay any damages caused. (517) The minimum and maximum fines may be updated every five years. (518)

Within the Irrigation Districts the penalties are imposed by the Technical Administrator, after complaint and ocular inspection. The order imposing penalties is recorded in a special register. (519)

Venezuela

The penalties which may be imposed by the Water Magistrate imply compulsory compliance under pain of fine, imprisonment, suspension or limitation of service. (520) His decisions may be appealed to the civil authority or the Municipal Court, (521) but penalties imposed by the Municipal Council are final. (522)

No penal provisions specifically applicable to Users' Associations and Water Tribunals were encountered. However, a brief summary of the general principles of the Forests, Soils and Waters Act (1965) dealing with the matter is set out below.

The illicit use of waters in the public domain is punishable by a fine. The penalty is increased when urban water supplies are involved. (523)

Offenders are obliged to restore the waters to their original state, under pain of imprisonment and payment of the cost of repairs by third parties. (524)

Further, there exists a general penalty of fine for any offence not expressly contemplated in other provisions. (525)

Administrative penalties are without prejudice to ordinary damages. (526) They are imposed after a hearing and are subject to appeal. (527)

The 1976 General Act on the Environment provides for penalties of fines, security measures and imprisonment. (528): Simultaneously, measures may be taken to preclude the damaging effects of the offence, such as temporary occupation, closing of establishments, prohibition of activities, modification or demolition of structures and any other appropriate measures. (529) Further, preventive measures may be taken, (530), subject to the penalties of ordinary law. (531)

In associations subject to the Civil Code, Art. 1659 of the latter would apply; it provides that members of a society must compensate the society for damages for which he is responsible.

9. RELATIONS WITH THE AUTHORITIES AND THE CENTRAL ADMINISTRATION

Considering the importance of the users' bodies as the final link in the waters administration chain, it is important for the government to have adequate means of controlling their activities.

This supervisory capacity may appear through a wide range of prerogatives. The most obvious of these is the power to issue basic legislation, under which the users' bodies must establish their structures. To this power is added others, such as that of requiring compulsory establishment, the power to review registers and accounts, the approval of plans of works and services and, as a manifestation of total authority, the power to take direct control of a body which fails to execute functions deemed essential or carries out its operations in an unsatisfactory manner. (532)

In the execution of its supervisory activities, the central administration must be careful not to carry them to extremes, to such a point that they lead to a passive attitude. Its interventions should be calculated so as to foster the best possible combination of centralized planning and users' initiative, with a view to the effective attainment of the national objectives in the hydraulic sector.

A special case of control arises when the decisions of the bodies are subject to revision by higher authority when they affect particular interests, whether of members or of third parties.

The situation is as follows in the countries studied:

Argentina

In Mendoza Province, the River Inspectorate is subject to a series of controls. Elections must be approved by the General Department of Irrigation which, if elections are not held, designates an inspector. (533)

The inspector's budget and accounts are also subject to control, as are the tasks of canal cleaning and maintenance. (534)

It has been seen that in certain cases the funds of the Inspectorate are collected by the Department even when they are managed by the inspector,

When the Inspector settles de facto disputes, his decisions are subject to appeal before the Water Subdelegates, decentralized basin authorities of the General Department of Irrigation. (535)

It should be recalled that the user is a member of the Inspectorate in virtue of law, which also governs the activities of the Inspectorates.

The inspectors may be fined, suspended or dismissed for offences in discharging their duties, (536) and may be removed from office by the Department on the petition of two thirds of the membership.

Inspectors who fail to render faithful accounts may be debarred from office in the Waters Administration for five years. (537)

Further, the General Department of Irrigation may, ex officio or on the petition of an interested party, order the production of registers and accounts, and an inspector who refuses to comply or delays compliance may be dismissed. (538)

If necessary, the Department may assume direct control of the Inspectorate. (539)

In San Juan Province, membership of users in the Departmental Boards and Irrigation Commissions is required by law, which determines the forms of their constitution and methods of operation.

The Water Department (provincial government organ of water administration) appoints the staff nominated by the Departmental Boards, approves the assessment of costs which they submit, establishing it directly if the Board fails to submit it, establishes dates for cleaning canals as recommended by the Boards, authorizes loans for river conservation costs, supervises canal cleaning, conservation and maintenance works, settles in the first instance disputes among departmental boards, and in second instances questions arising among Users' Commissions, and decides on appeals against decisions of the Departmental Boards. It calls and approves the elections of Board and Commission members. It orders the assumption of direct control of Departmental Boards and authorizes the Boards to assume direct control of Users' Commissions. (540)

In both Mendoza and San Juan, the creation and activities of users' organizations are subject to rules which may not be modified by the users.

Chile

The control powers of the Chilean government take on different forms.

Act No. 16 640 empowers the administrative authorities to require the creation of users' organizations in what are designated as Rights Rationalization Areas. (541)

Failing creation of the organization, the government may establish provisional registers so that users may contribute to solving water management problems until the Users' Association is constituted. (542)

The General Waters Directorate may order users' organizations to submit to it their work programmes, budgets and scales of fees for future financial years and may amend them at its discretion. (543)

The Directorate may assume direct control of organizations failing to comply with such orders. (544)

In periods of extraordinary drought, the President of the Republic may declare water shortage zones. When this occurs, the normal powers of the Canal Users' Associations, Users' Commissions and Boards of Control may be suspended. (545)

The Executive Power fixes the fees for the rational and beneficial use of water. When Canal Users' Associations or Water Communities exist, these are the normal channel for contesting such fees, fixed by the Executive Power on the advice of the Waters Directorate. (546)

It has already been mentioned that the Waters Directorate plays a role in the approval of the statutes of users' bodies, its recommendation being required before the President of the Republic approves the statutes.

With regard to water management, the Directorate may require that water catchment points be consolidated or modified. (547) When it discovers irregularities in water distribution, it may assume responsibility for such action. (548)

It may order the removal of the board of directors of inefficient bodies and is empowered to assume direct control over them; as an intermediate measure it may send representatives to assemblies and meetings of the board of directors. (549)

These controls apply equally to all the bodies. It may also be added that in areas where the government undertakes dam construction it may render the creation of Boards of Control compulsory. (550)

Another type of control is the right to have recourse to the ordinary courts against decisions of the Directorate, when the parties concerned deem that they are affected by its arbitration. (551)

Matters concerning the existence of Water Communities and the rights of users of waters owned in common are dealt with by the ordinary courts. (552)

The members of a Board of Control who deem that their individual rights are affected by orders of the Directorate may have recourse to the ordinary courts. (553)

The provisional users' registers are supervised directly by the government. (554)

Colombia

Under the regulations of the Coello and Saldaña Districts, the District has broad control and supervisory powers over the Users' Boards. (555)

These powers have developed as the work progressed, and it should be emphasized here that they cannot be considered as limited by the powers of the Boards. Control over the Boards embraces technical, administrative and financial aspects. (556)

When a Users' Association is created, the Chief of the Irrigation District maintains the General Register of Users and the register of acts of the Association's meetings. (557)

The election of officers and staff of the Users' Associations must take place under the supervision of an official of the HIMAT; the call for elections is issued by the Chief of the District in which the Association is located, together with a roster of eligible users. (558)

The Users' Associations are subject to recognition by the HIMAT. (559)

The Board of Directors of the Association must call on the Chief of the District to protect the rights of its members and inform him of offences and abuses it discovers. (560)

Its rules of procedure are subject to the approval of the HIMAT, through its General Manager. (561)

When the Board of Directors of a Users' Association fails for three consecutive months to comply with its obligation to meet monthly, the HIMAT may order its removal and replacement by a new Board. (562)

The powers conferred upon the Board of Directors of a Users' Association may in no way be taken as limiting the technical, administrative and financial autonomy of the HIMAT. (563)

The Chief of the District is responsible for drawing up the operational budget. (564)

When the HIMAT delegates its functions to users' associations for district administration purposes, the associations must submit for its approval its accounting system, work programmes, budget of receipts and expenditures, staffing organization and designation of the Chief of the District. (565)

The Association is obliged to receive the technical advice of the HIMAT and to bear the costs thereof. (566)

The fees payable by the members of the association are fixed by the latter but must be approved by the HIMAT, to which the association must submit monthly accounts. (567)

Cases in which the HIMAT reassumes functions which had been delegated to an association include its dissolution, the suspension or loss of its legal personality, its failure to meet obligations undertaken to the HIMAT, financial difficulties endangering the position of the institution and a decrease of more than 40 percent in the number of original members. (568)

The HIMAT reserves the right to review and inspect the accounts and accounting documents of the association and the works the administration of which has been delegated. (569)

The association is subject to audit control by the Comptroller General of the Republic. (570)

Finally, it should be emphasized that the plans, programmes and regulations adopted by the HIMAT in the exercise of its functions have binding force on the association. (571)

The statutes of the Users' Association of the Coello and Saldaña Irrigation District provide that they are subject to the approval of the Ministry of Agriculture, (572) which further may order its dissolution (573) and approve amendments to the statutes. (574)

Similar stipulations exist in the statutes of the Recio River Users' Association. (575)

The Ministry of Agriculture maintains a register of users' associations. (576) Further, it is responsible for organizing national campaigns promoting the establishment of users' associations. (577)

Art. 5(f) of Decree No. 2259/76 assigns this responsibility to the HIMAT which, before delegating functions to a users' association, must ensure that it possesses legal personality, consists of at least 60 percent of the users, covers its regular budget totally and will comply with the HIMAT regulations and submit to HIMAT controls. (578)

Ecuador

In addition to controlling and promoting the creation of Water Directorates, the Ecuadorian Institute of Hydraulic Resources intervenes in all disputes arising between directorates, deciding upon measures for their solution. (579)

It controls the technical, legal and administrative aspects of their operations and ensures their compliance with the orders and directives it issues in view of proper water management. (580)

The Irrigation Directorates are required to submit to it annual reports on work and investments and also on the accomplishment of their functions. (581)

The decisions of the Institute with regard to users' bodies have binding force. (582)

The regulations of the Irrigation and Drainage Commissions are subject to the approval of the Institute, and the Commissions' cropping and water management plans must satisfy the rules laid down by the Institute. (583)

The Irrigation and Drainage Commissions are supervised by the INERHI, which ensures the accomplishment of their purposes and functions; its decisions have binding force. (584)

The Commissions draw up their cropping plans in consultation with the INERHI, (585) and are required to comply with the technical provisions and standards it lays down. They are further obliged to communicate to it the information they collect in the exercise of their functions. (586)

In addition, the INERHI determines the fees payable by the users and the supply of water required by each user. (587)

Control is exercised through the requirement of creation; the relationship of subordination; control of budgets and work plans; technical, civil, administrative and accounting assistance; requirement of works and services; designations of observers; power of veto with regard to persons; and designation of auditors. (588)

The INERHI is the general controlling agency. (589) It lays down general rules to be observed by physical and legal persons building irrigation and drainage systems. (590) It expresses its views on each individual project, (591) promotes the creation of users'

organizations, laying down rules for the administration and protection of irrigation canals, approves the rules of procedure of the boards of directors (592) and furnishes technical assistance to public or private bodies, including those created by users. (593)

The INERHI approves the rules of procedure of the Waters Directorates after ensuring that they comply with the provisions in force. (594) It may also require ex officio the constitution of Irrigation Directorates. (595)

Some bodies are subject to other legal provisions. Thus, the Irrigation Cooperatives are supervised by the National Directorate of Cooperatives of the Ministry of Welfare, (596) which also audits their accounts, (597) while the Farm Workers' Associations are registered with the Ministry of Welfare and Labour. (598)

This may be reflected in some incoherence in programmes and controls. The system requires unification.

Mexico

Mexico appears to present a situation unique among the countries analyzed: a consistent, continuing policy of promotion of irrigated agriculture.

An important element of this policy is the union of forces between the government and the users. The latter find their place within water management structures created and directed, or at least advised, by the government.

Relationships with government agencies vary according to the type of body. Thus, the irrigation districts, in which users constitute the boards of directors, are created and directed by the government (599) which, notwithstanding the user participation, decides on the essential problems of the district, such as fees and budgets which, like the overall national plans of agricultural production, are approved by the Secretariat for Agriculture and Hydraulic Resources. (600)

The Secretariat is responsible for imposing penalties for failure to pay fees. (601)

A lesser degree of intervention is observed in the Rural Development Irrigation Units, where the users are responsible for management, through the Association in which they are assembled, the government's activities being mainly to provide advice and audit. (602)

It has been stated that the lack of greater government participation is detrimental to the irrigation units, considering the feeble technical and economic capacity of the users. (603)

The irrigation units are established by the Secretariat for Agriculture and Hydraulic Resources, (604) which also, through the secretary, participates in the boards of directors of the rural development units and thereby supervises each Irrigation Unit (605) within its area of competence.

It is interesting to note that the approval of budgets and fees of the irrigation units has not been left in the hands of the users' associations but has been assigned to the Irrigation Unit Boards of Directors. (606)

The purpose of this is to prevent the users from weakening the operation of the units by endangering their infrastructure through limited budgets and low fees. (607)

The Regulations for the operation of the Abala Unit Users' Association provide that the Association must adjust its activities to the directives of the Board of Directors and of the Secretariat for Agriculture and Hydraulic Resources. (608)

The latter further supervises the protection and operation of the installations, oversees and advises on proper water use, compiles statistics, establishes the volumes available for each crop cycle and implements the orders of the Irrigation Unit Executive Committees on behalf of the government. (609)

The Association is bound to comply with all the instructions of the Secretariat, even those concerning restricted turns in the irrigation water supply. (610)

The Waters Boards are registered by the Secretariat for Agriculture and Hydraulic Resources, which approves their establishment and lays down their regulations. (611)

Further, the Secretariat approves the budgets of the Boards, which are obliged to inform it of their election and installation and their transfers of funds. (612)

The Secretariat for Agriculture and Hydraulic Resources is empowered to inspect the works of the Waters Boards and, if it finds them defective, to replace the responsible officers or designate a trustee. (613)

Peru

The associations of users fit into the administrative pattern of the irrigation districts, whose technical administrator is a public official with broad powers over the activities over such associations.

The administrator draws up the register of users, which lists those who are eligible for election to office in the users' associations. (614)

The Waters Authority is responsible for holding such elections. (615)

The users' associations are bound to coordinate their activities with the irrigation district technical administration. (616)

The users in turn must attend meetings called by the Technical Director of the district and inform him whenever for any reason they cease using the waters. (617)

Recognition of the Users' Commissions and Committees is granted by the Technical Administrator of the Irrigation District after having verified their legal existence, while the Users' Boards are recognized by orders of the Ministry of Directorate.

Art. 70 of Decree No. 005/79/AA confers on the Waters Authority the power of general supervision of the activities of the Users' Associations.

Venezuela

Civil societies acquire legal personality by their entry in the branch office of the Public Register of their domicile, (618) which is a public agency. Their legal existence depends on their registration with a government agency.

The Local Conservation Committees are created by the Ministry of Agriculture and Stock-Breeding, which also determines the system of technical and financial assistance applicable to them. (619)

The Water Tribunals are established by the National Executive; their decisions may be appealed to the ordinary courts. (620)

In both these cases, the establishment of the body in which users participate depends on acts of the government, through its administrative branch.

Further, the Water Tribunals are subject to the jurisdiction of the ordinary courts.

The Executive appoints the members of the Tribunals through the Ministry of the Environment and Renewable Natural Resources, and of these members the President and Secretary are public officials. (621)

The Tribunal submits to the Ministry of the Environment a detailed monthly report of activities, (622) and its decisions are executed through the District Court. (623)

There is thus a double control: on the one hand, the Tribunals contain public officials, and on the other there is a monthly reporting requirement. In addition, the Tribunals have no power of execution, which lies with the ordinary courts.

The Users' Associations receive government support and collaboration, and their works must satisfy the provisions of law. (624)

These bodies may be created by order of the government, (625) and the administration is always empowered to intervene in defence of the proper use of the waters and lands benefitted. (626)

The Users' Associations' projects for works are subject to the approval of the Ministry of Public Works. (627)

The Associations under the Agrarian Reform Act are created before the Ministry of Agriculture and Stock-Breeding, which may require, for its approval, a number of members greater than the legal minimum. (628)

It appears from the foregoing that both the creation and the operations of the Users' Associations take place with government intervention.

The Water Magistrates are subject to administrative and jurisdictional control, in that their decisions may be appealed to the civil or judicial authorities. (629)

10. CONCLUSIONS

1. Ways and Means of Participation by Irrigation Water Users

1.1 Summary

As has been seen throughout this study, irrigation users may participate at the policy formulation level, or in public agencies for administration and management, or merely in the execution of work in the field through bodies composed exclusively of users.

Thus, in Mendoza and San Juan Provinces of Argentina, users intervene directly in the River Inspectorates, the Departmental Boards and the Users' Commissions. Users also participate in the General Department of Irrigation and in the Water Directorate, in which they contribute, even if only partially, to defining aspects of water policy and general management of the resource.

In Chile, users' participation is limited to bodies of the users themselves, who do not participate in government bodies.

In Colombia, the statutes of some associations envisage the possibility of their members sitting on the boards of public agencies such as the Colombian Agrarian Reform Institute (INCORA) and the National Institute for Renewable Natural Resources and the Environment (INDERENA).

At the operational level, the Colombian user is a member of the Irrigation District Boards, Users' Associations, and the Advisory Committees of the Irrigation Districts and the Community Undertakings.

A situation similar to that in Chile can be observed in Ecuador, as regards the participation of users in public institutions responsible for defining policies and programmes for the general administration of waters.

At the operational level, users participate in Waters Directorates, Cooperatives, Irrigation and Drainage Commissions and Farm Workers' Associations.

Mexican users participate in bodies where they act jointly with public officials: the Boards of Directors of the Irrigation Districts and of the Rural Development Irrigation Units.

Other organizations, such as the Waters Boards and the Users' Associations, are composed exclusively of users.

Participation at the level of centralized government administrative bodies is not to be found in Mexico, but users intervene in the planning and policy formulation process through the Boards of Directors of the Irrigation Districts and Irrigation Units.

In Peru, users have their place at public levels of management: the Irrigation Districts. Participation at the policy formulation level or in the central waters administration bodies was not observed, but users form part of organizations operating within the limits of the District.

Certain bodies in Venezuela, such as the Water Tribunals, include public officials and private users. However, the users' organizations in general are without government participation, and it was not found that users participate in public agencies of policy formulation or administration.

1.2 Conclusions

In the countries analyzed it was found that the extent of participation of users in policy formulation is limited or non-existent. This may be due to two basic reasons: a) structural inadequacy to the point that the machinery for policy formulation is rudimentary or non-existent, and b) the non-inclusion of users in such machinery where it exists.

It has been seen that at the level of government administrative bodies, there is some participation of users in Mendoza and San Juan Provinces of Argentina and in the Irrigation Districts and Boards of Directors of the Irrigation Units in Mexico, in which users act jointly with public officials.

The most common type of participation is users' bodies with operational functions directly related to water management and use.

1.3 Recommendation

It may be suitable to reinforce user participation in the governmental structures for policy formulation and general water administration, since this would result in the direct incorporation of the parties concerned in the public decision-taking machinery.

2. Types of ssociations

2.1 Summary

Users may participate in bodies with or without legal personality, whose existence is compulsory or voluntary, and which operate under public or private law.

In Mendoza and San Juan Provinces of Argentina, the establishment of users' bodies is compulsory; they are governed by the provisions of public law and do not enjoy legal personality.

Users' organizations in Chile are considered to be private-law bodies. Notwithstanding this, they have certain characteristics of public-law bodies, as was observed in the relevant chapter. The law expressly authorizes legal personality for the Boards of Control and the Canal Users' Associations, precludes it for Users' Communities and is silent in this respect with regard to the Provisional Registers of Users.

In Colombia, users participate through bodies whose existence is compulsory under the law and which are governed by public law: the Section and District Boards of the Irrigation Districts. These bodies do not enjoy legal personality. In order to meet this problem, private-law users' associations with legal personality are established.

There also exist other bodies assembling users, whose status is not expressly defined in the legislation. They may enjoy legal personality; whether this be under private or public law depends on the specific purposes of the body in question.

De facto organizations without legal personality are also to be found.

The users' organizations of Ecuador enjoy legal existence and personality. Although the legislation does not specify whether this is under public or private law, certain organizational and operational characteristics appear to indicate that the Waters Directorates and the Irrigation and Drainage Commissions are public-law bodies, while the Irrigation Cooperatives and Associations and the Farm Workers' Associations operate under private law.

De facto organizations also exist.

In Mexico, users participate through public-law bodies, most of which do not enjoy legal personality.

Thus, neither the Irrigation Districts, nor their Boards of Directors, nor the Rural Development Units, nor the Boards of Directors of the Irrigation Units enjoy legal personality.

As already set out, the question of the legal personality of the Users' Associations and the Waters Boards is open to question, and it would appear desirable for the matter to be settled by law, regulations or an authorized decision.

The Peruvian bodies assembling users exist under the law; they are public-law bodies and, except for the Users' Committees, enjoy legal personality.

Venezuela provides for user participation through public- and private-law bodies, and de facto organizations also exist.

2.2 Conclusion

As will be seen from the foregoing summary, users participate through de facto or de jure bodies, under public or private law, with or without legal personality.

2.3 Recommendation

In all countries it might be desirable to establish expressly a means of integrating the user into the system of administration of hydraulic resources.

This recommendation is made because legal personality is essential to act and contract; the body must have certain de imperio powers in order to fulfil its mission; and the government needs means of encouraging the organization of the users.

3. Creation and Membership

3.1 Summary

The creation and membership of bodies assembling users are described in Chapter 3.

In San Juan and Mendoza Provinces in Argentina, the fact of practicing irrigation implies necessarily the status of member of River Inspectorates, Departmental Boards and Users' Commissions.

The existence of Users' Communities and Provisional Users' Registers is compulsory in Chile, the user being a member by the sole fact of holding water rights. The Canal Users' Associations and the Boards of Control are established under formal procedures, whether among individuals or through a court decision, and their existence is subject to the approval of the Executive Power.

All users, whether physical or legal persons, are members of these organizations.

The Colombian Ministry of Agriculture is responsible for promoting users' bodies. Users participate in bodies whose establishment is voluntary, such as the Users' Associations, or compulsory, such as the Irrigation District Boards and their Advisory Committees.

Users must be listed in the General Register to be eligible for membership in the associations. At times, a minimum number of users is required for setting up the bodies, whose statutes are subject to the approval of the Ministry of Agriculture.

In Ecuador, the establishment of a users' organization may take place at public or private initiative.

A minimum number of users is required to set up Waters Directorates, but when this number is attained, constituting the Directorate is compulsory, and all users are members. This is not true of the Irrigation Cooperatives, membership in which is voluntary.

When users' associations are created, their statutes are subject to the approval of the authorities.

The Mexican Irrigation Districts and their Boards of Directors are created by government decision, as are the Rural Development Irrigation Units.

When an Irrigation Unit is installed, the users are legally obliged to be members of the Users' Association of the Unit. The Association is subject to government

approval. The Water Boards, on the other hand, are set up at the request of the government or of private individuals.

The Users' Boards and the Users' Commissions and Committees of Peru contain representatives of the different categories of users. Their creation is subject to official recognition, and they operate within government management areas.

Venezuela possesses certain bodies constituted exclusively of users, and others consisting of users and public officials. Some organizations are created by the government, others by the users at their own initiative. In some cases, a minimum number of users is required for the establishment of the body. There are some formalities, such as registration of statutes or creating the body before the authorities.

3.2 Recommendations

It may be considered that in countries concerned with promoting users' participation there should exist a type of organization with compulsory membership, whose existence would derive from the single fact of a community of interests among different users.

The basic rules for its operation should normally be laid down in advance in generally applicable legislation, and the formalities for its establishment, recognition and registration should be held to a minimum. This suggestion is made because excessive formalism, the proliferation of procedures, the lack of the requirement of compulsory membership and the requirement of minimum numbers of members are factors that can discourage organized user participation.

Consideration might also be given to the possibility of creating a structure in which the government appoints officials to sit in users' organizations, in order to attain an adequate combination of efforts. This should not preclude the possibility of establishing other organizations at the initiative of the users, provided that membership in the former organizations is compulsory.

It should be borne in mind that the combined activity of the users alone, without the more general organization of government water administration and without the support of the public sector, would be of little or no usefulness.

In development zones, the best formula is probably the creation of irrigation districts or areas managed by the government, within which the users' organizations would play a role.

In zones where irrigated cultivation and joint management already exist, importance should be attached to existing rules for use and participation, in order to avoid departing from traditional practices. If changes are made in this respect, they should be introduced gradually, not concurrently, and the reasons calling for the change and the benefits it is expected to bring about should be explained to the groups concerned.

4. Territorial Competence

4.1 Summary

The extent of the jurisdiction of users' bodies raises the question, already discussed, of the cohesion of small groups and the adaptation of the water distribution organization to natural hydrological parameters.

Approaches to a solution to this problem have been different:

Thus, in Mendoza Province of Argentina, no second-level organizations exist. Users participate at the irrigation-canal level, management of basins or sections of basins lying with government agencies, although the views of the users are heard through the Honorary Users' Boards and the incorporation of users into the government bodies.

In San Juan Province, on the other hand, there exist primary organizations at canal level and secondary organizations at the departmental level.

Chile's users' organizations define their area of jurisdiction in their statutes or, failing this, by the extent of community of interests existing among the membership.

At the second level, there are basin organizations also composed of users.

In Colombia, the territorial jurisdiction of the users' bodies is defined differently in different cases. Thus, it may be determined by irrigation districts or zones, by political subdivisions (departments), by hydrological limits (the basin), or by areas served by the irrigation and drainage canals operated by the organization. There is also the case of statutes specifying that the organization's jurisdiction extends as far as the course of its affairs permits.

Ecuador defines areas of jurisdiction differently according to whether the body is a Waters Directorate or an Irrigation and Drainage Commission. For the former, jurisdiction is determined by the area of influence of the source exploited in common, while in the latter it is established in the rules of procedure. In addition, the individual statutes of each Directorate, Cooperative or Farm Workers' Association establish with great precision the area of jurisdiction of the body concerned.

In Mexico, the area of jurisdiction of irrigation organizations is defined differently according to the type of organization.

For the Irrigation Districts and Units it is prescribed in the government documents creating them. The boundaries are laid down administratively for areas defined in the same way.

The jurisdiction of the Irrigation Unit Boards of Directors is determined by the political boundaries of the district or state in which they operate.

The Users' Associations establish their physical limits on the basis of the Irrigation Unit to which they belong.

The Waters Boards define their area of operations on the basis of the area of influence of the watercourse or reservoir in respect of which they were established.

Peru defines the jurisdiction of the District Boards on the basis of the district boundaries, which in turn are determined by limits of one or several basins. The Users' Commissions operate within administratively defined irrigation areas or sectors, while the Committees function with respect to single canals or small hydrological units.

In Venezuela, jurisdictions are defined on the basis of the interests of the users, the area of influence of the body of water used, or administrative determinations based on rivers or zones.

4.2 Recommendations

The area of jurisdiction of users' bodies should be a function of two variables: the extent of common interests of their members and the irrigation and drainage area determined by waters originating in a common source.

Consequently, this implies two types of projections: with respect to third parties and with respect to the members of the body. With respect to third parties, the users' organization should be in a position to enter into all the agreements necessary for the achievement of its purposes, no matter where the agreement is made or fulfilled. With regard to its membership, the authority of the body should extend to the limits imposed by the presence of shared interests, derived from the utilization of common water supply and drainage systems.

It may also be found important to provide an organizational structure with different jurisdictions, at the level of tertiary, secondary and basin distribution systems, according to the characteristics of the zone and on the basis of plans and programmes put forward.

5. Organization, Distribution of Power of Decision. Administrative Structure

5.1 Summary

In Argentina's Mendoza Province, all the functions of the River Inspectorate are carried by a single organ: the River Inspector.

Both here and in San Juan Province, the number of votes to which each user is entitled depends on the number of hectares he irrigates, but as the area increases the proportion decreases until a maximum is reached, after which the number is unchanged no matter what the area.

Chile's bodies have a deliberative organ, the Assembly, and an executive organ, the Directorate. In this country, too, there is a ceiling to the voting power derived from the dimensions of the area irrigated.

The Colombian Section and District Boards consist of a chairman, a secretary, a legal officer, a treasurer and other members. The boards must contain representatives of farmers holding more than 20 hectares and less than 20 hectares, greater representation being allowed to the latter category.

The Users' Associations in this country take their decisions through an Assembly, the executive body being the Board of Directors. In the latter body, greater representation is allocated to the smallholders, the criterion for defining this category being whether the holdings are greater or smaller than 20 hectares. The Associations also have a control organ, the Auditor.

The regulations provide for one vote for each user, but certain statutes adopt the proportional system.

The members of the Board of Directors may be paid.

The right of minorities to be heard is guaranteed.

In Ecuador the users, assembled in Waters Directorates, are entitled to a single vote, independently of the water rights they hold or of the areas irrigated. The organs are the Board (executive) and the Assembly (deliberative).

In the same country, the Cooperatives have, in addition, a manager with executive functions and a control body, the Board of Control.

In Mexico, users participate in the deliberative organ of the Irrigation District through its Board of Directors. The other Mexican bodies have deliberative organs (Assembly) and executive organs (Executive Committees).

As has been seen, a control body, the Control Council, also exists.

It has also been noted that in the Irrigation Unit and Irrigation District Boards of Directors, the government participates along with the users.

In the Waters Boards, each person has one vote, independently of his water rights.

The structure of the Peruvian organizations is based on a Board of Directors and an Assembly.

Majorities are calculated by persons voting, and the respect of the minority is guaranteed.

Venezuela has a similar organizational pattern, except for the Water Tribunals.

5.2 Conclusions

From the foregoing summary it will be seen that the most common organizational pattern consists of an executive-type administrative organ and another for taking decisions. At times a control organ is foreseen, while in other cases a manager is responsible for executive tasks.

A tendency can be observed to guarantee the rights of the small user, limiting voting rights as the area held by a single person increases, granting one vote per user independently of his water rights, and guaranteeing the rights of minorities.

Some systems envisage the possibility of paying honoraria, and others of having permanent staff.

5.3 Recommendations

If model statutes are prepared, they should, at the least, provide for two types of organs for users' organizations: one for decision-taking, the other executive. The first would guarantee that the various interests and viewpoints of the users were considered, the second that they were satisfied.

It might also be desirable to limit voting rights so that they are not directly proportional to the areas irrigated by each user, with a view to precluding an excessive preponderance of the economically stronger sectors. It should similarly be accepted that payment be made for services rendered in the various bodies of the organization and that professional or administrative support staff be employed for specific functions. It is believed that measures of this nature would contribute to improving the efficiency of the services rendered by the organization.

6. Purpose, Functions and Powers

6.1 Summary

The users' organizations of Mendoza and San Juan Provinces, Argentina, engage in three basic activities: distribution of water among their members and control of its use, settlement of de facto disputes and canal cleaning and maintenance. They also adopt or recommend the budget of the organization and the fees to be paid as a consequence. In Mendoza they are empowered to impose penalties, while in San Juan they must request the central administrative bodies to do so.

In both provinces they are obliged to verify the condition and licitness of the irrigation elements and works.

The basic function of the Chilean users' bodies is to control water distribution and use. The Canal Users' Associations, Users' Communities and Provisional Users' Registers fulfil this function at the level of the artificial watercourse. The Boards of Control operate at the level of basins or sections of basins.

They establish fees to cover the cost of maintenance, operation and construction of joint works and settle disputes among the user members.

They prescribe water distribution schedules. The Boards of Control may proclaim periods of water shortage and request the President of the Republic to declare that a given source is dried up.

The basic purpose of the Colombian Irrigation District Boards is to cooperate with the district authorities in the proper operation, administration, conservation and rehabilitation of the areas under their jurisdiction. They are obliged to ensure that their members use waters correctly and maintain conduits in good condition. They also have consultative and advisory functions.

In general terms, it can be said that the purpose of the other users' bodies in Colombia is to ensure the best use of water, to control its distribution, to maintain works and to cooperate and participate in the definition of government irrigation policies and programmes.

Operationally speaking, these objectives are reflected by the possibility that the government can delegate functions to the users' associations, grant them powers to contract, to impose contributions, to require that users execute works and other tasks, to define plans and programmes, to appoint and remove staff, to impose penalties, to draw up projects of work, to draft regulations, etc.

The general functions of the Ecuadorian users' organizations do not differ fundamentally from those summarized for the preceding countries.

The purposes of user participation in Mexico have special characteristics. In some of its forms it deals not so much with the execution of work in the field as with integration in the decision-making process with regard to general administration programmes. This is particularly clear for the Irrigation District Boards of Directors, in which the users contribute to defining irrigation and cropping plans, means of promotion, fees, budgets and the distribution of surplus water.

The Irrigation Units are multipurpose servicing bodies, operating through works construction and rehabilitation.

The Irrigation Unit Boards of Directors have as their purpose to promote proper water use, user organization and the growth of irrigation.

The Users' Associations are responsible for concrete administrative, control and water conservation tasks and for proper water distribution.

Peru provides for the active participation of users in water use and conservation, coordinating their activities with the authorities. Users are bound to respect titles of concession and constitute and maintain the works in good condition. The users' organizations perform advisory and consultative functions, define their work programmes and establish fees to cover their costs.

The users' bodies of Venezuela have as their purpose the defence of common interests. The different types of organization distribute waters among the users, prescribe schedules, utilize jointly-owned works, and are responsible for procuring their own funds and settling disputes among users.

6.2 Conclusions

The survey indicates that the users' associations may, jointly or individually, perform three basic functions: decision-taking, settlement of disputes and executive or administrative tasks. It also is found that in order to guarantee the proper performance of these functions, the organizations must have certain powers and certain internal parameters for the assignment of functions.

6.3 Recommendations

The organizational criteria should be such as to provide deliberative and executive structures.

The objectives should be defined clearly and concretely.

The deliberative function might include the taking of decisions on works, irrigation and cropping plans and programmes; agreement on water distribution methods; issuing regulations; approval of budgets and fees; and the appointment of executive authorities and professional, technical and administrative staff.

It might also be desirable to include in these activities the hearing of appeals against penalties imposed by the executive organs and against decisions of the organs responsible for settling disputes.

The executive functions could include preparing plans and programmes for subsequent approval by the deliberative body; proposing budgets and fees; control and daily surveillance of water distribution and use; execution and protection of works; cleaning canals; fee collection and funds management; contracting; representing the organization before the courts and administrative authorities; and imposing penalties. They could further include the appointment of staff.

Similarly, it might also be desirable for there to be internal machinery for settling de facto disputes among members or between the organization and its members. It will be appreciated that settling de jure disputes should not lie within the competence of the users' organization, inasmuch as these, affecting not the exercise but the possession of rights and the means of exercising them, would lie within the competence of the ordinary courts of the country.

7. Fees, Incentives, and Financial System

7.1 Summary

Users' organizations can cover their costs from three types of receipts: charges to their members, possible government subsidies and loans from public or private sources.

In Mendoza and San Juan Provinces of Argentina, the only source of income is users' fees. No government subsidies or credit lines are available to River Inspectorates, Departmental Boards and Users' Commissions. Contributions may be paid in cash or in kind.

The sum due from each user is a function of his water rights and is arrived at by assessing the annual budgeted costs pro rata among the users.

In Chile, users are required to pay fees as a function of their rights, obtained by distributing the costs foreseen in the budget. No subsidies exist, but government credit lines are found. Certain bodies are empowered to issue negotiable instruments or to guarantee their debts with the accounts receivable from their members. Fines should also be included among their financial resources, but considering their problematical nature, they are to all intents marginal.

The situation in Colombia is similar to that in Chile, except that the budgets of the District Boards and the fees of associations to which government functions have been delegated require government approval.

No government credit lines or subsidies were observed. However, the absence of subsidies specifically for the users' bodies as such does not preclude the existence of implicit subsidies for the irrigation sector as an activity.

Fees are fixed and are based on volume. The first component, invariable, is assessed on the basis of the area irrigated; the second varies according to the volume of water used.

A wide variety of alternatives is noted in Ecuador: the users pay fees according to their rights, public and private credit is available, fines are entered in the accounts as income, and irrigation receives certain government subsidies. Certain bodies assess fees on the basis of their members' income, while the funds of others include an initial capital contribution of their members. The fees of the Irrigation and Drainage Commissions are subject to government approval, and are payable whether or not the water is used.

In Mexico, the legal principle is that the user should cover the cost of all the benefits received, and fees are fixed on the basis of water volume, land area cropped, District costs and amortization of government investments.

Fees are subject to updating. The Water Boards and Users' Associations are required to submit their budgets and scale of fees for government approval.

Failure to pay fees may give rise to suspension of the service; payment may be made in kind.

Peru provides for resources derived from users' fees, loans, interest on capital and other income. Fees are based on rights; loans must be obtained and used for specific purposes.

Venezuela provides for subsidies. Contributions must be paid, under pain of damages.

7.2 Recommendations

The users' associations should be authorized to receive, as a minimum, the following income: fees, loans, subsidies and fines.

Fees should be assessed on the basis of the water rights of each user and should be compulsorily payable whether or not the water is used.

Fees could be fixed by dividing the body's budget pro rata among the members' rights and could contain a fixed and a variable element.

Payment could be authorized in cash or in goods and services. Payment in kind may be found to be particularly desirable, since it would make possible the capitalization in irrigation works and services of labour and material that would otherwise be unused or underemployed.

Failure of timely payment could give rise to financial penalties or to suspension of the water supply.

Scales of fees and the works and services budget should be subject to the approval or, at the least, review of government agencies, in order to:

- a) avoid ambitious and unrealistic budgets and fees so high as to be uncollectible;
- b) avoid budgets so reduced and fees so low that the body could not operate for lack of resources;
- c) make it possible to include budgetary estimates for chapters of interest to the government, with corresponding provision of resources to cover the expenditure.

When credit lines exist for users' bodies, the latter should foresee that they are allocated specifically, so that they will serve as instruments of hydraulic policy and programmes and that unauthorized use will not be made of them.

Responsibility in this respect should be carried jointly and severally.

It may be found suitable for countries interested in promoting participation in irrigated agriculture to envisage special subsidies and loans to users' organizations.

With this in view, it may be found advantageous to subject the grant of government subsidies and loans to users to proof that the applicant is a member of a users' organization and that the latter concurs with the use which the borrower intends to make of the funds requested.

Fines would appear to be a necessary consequence of the punitive powers of users' organizations with respect to offenders.

8. Offences and Penalties

8.1 Summary

In Mendoza Province, the River Inspectorate may fine users. The Inspectors, on the other hand, are subject to fines, removal from office, replacement and debarment for unsatisfactory performance of their duties.

In San Juan Province, users' organizations are bound to report proved offences.

Chilean users are subject to fines after a hearing. The amounts of fines may be updated in the light of monetary inflation. Users condemned for offences concerned with water use and management are debarred from holding office in the organs of users' bodies. Certain penalties are imposed by these organs, while others must be requested of the central administration.

In Colombia, provision exists for fines and the suspension of the irrigation service as penalties for acts affecting water use or the normal operation of the District. They may be imposed by the Directors or Chiefs of Irrigation Districts or by the Administrators of Users' Associations. Penalties imposed at the District or Users' Association level are without prejudice to the relevant penal action and civil responsibility and imply the restoration of objects modified by illicit action to their prior condition. Penalties are imposed by an order stating the reasons therefor, and are subject to appeal before organs of the Association.

Ecuador foresees penalties of fines, suspension of the water supply and restoration of the objects illegally modified to their prior condition. They are imposed by the Waters Council of the Directorate. Offences to the prejudice of a Directorate debar their author from holding office therein.

Penalties, imposed after a hearing, are imposed for misuse of water and failure to comply with requirements laid down by the users' organization.

In Mexico, a general system of penalties, consisting of fines and the suspension of rights of use and imposed by the Secretariat for Agriculture and Hydraulic Resources, was observed. As reported, it is noteworthy that hoarding of water is an offence in respect of which the public may file complaints.

A Peruvian user who takes advantage of his position as officer of a Users' Association for his personal benefit, or who is negligent, or who is condemned to imprisonment, is removed from office.

Apart from this principle, there are no specific rules applicable to users' associations.

The general penalties are lapse of rights, expulsion and fines. In Irrigation Districts, these penalties are imposed by the Administrator.

Penalties of fines, arrest, suspension and limitation of services are found in Venezuela. The penalty is without prejudice to reparation of civil damages and the restoration of objects to their prior condition. Fines are the most general penalty. A prior hearing is required, and appeals may be filed.

8.2 Recommendations

It may be found desirable for the model statutes to envisage a system of specific penalties for the misuse of waters and failure to meet obligations created by membership in a users' organization, and applied at the organization level by its executive organs.

It may be felt that the imposition of certain penalties at the local level can contribute to improving the efficiency of the organizations in question, by reason of the administrative, geographic and temporal proximity between the offender and the punitive body, and between the offence and the penalty.

Decentralizing certain punitive measures to the user level would further lighten the task of the government agencies, making it possible for them to devote time and human resources to other business.

Not all punitive measures should be taken at the users' organization level, but only those for offences directly related to the operations of the organization or to misuse of waters within its territorial jurisdiction.

The users' organization should be empowered to request the central water authorities to impose penalties on non-members who commit actions prejudicial to the organization or to its members.

Penalties applied at the users' organization level should be fines and suspensions of water supply. The fines might be dissuasive, progressive and cumulative.

At this level the imposition of more serious penalties would be imprudent, but they could be requested of the competent authorities.

The directors and officials of the association should be subject to a system of specific penalties for unsatisfactory performance or malfeasance; such penalties should be imposed by the central authorities.

Procedures for the imposition of penalties should be rapid and economical. Immediate oral procedures may be found suitable. Prior hearings and the possibility of appeal are fundamental.

9. Relations with the Authorities and the Central Administration

9.1 Recommendations

It would be fruitless to summarize the principles in this regard as reflected in the legislation, considering that they are very similar and that the matter has already been dealt with in great detail in Chapter 9.

This section will therefore be limited to examining on the basis of what principles the relations between users' organizations and agencies of the central administration should be structured.

In the first place, there should exist a linkage between the central administration and the users' organizations. It should be based on the fact that the latter are, in the final analysis, waters administration institutions and possible vehicles for water policy.

It follows that they should adapt their activities to certain rules laid down at a higher level, and that their management and their results should be subject to control and inspection by the central water authorities.

Such control by higher administrative agencies is also justified by the fact that the organizations' activities or decisions may affect the rights and interests of their members or of third parties.

The control system should be moderate so that, while ensuring uniformity, equity and efficiency in the management of the organizations, it is not so rigid as to compromise their individuality, converting them into extensions of the central administration.

The basic principles founding relationships between the government and the organized users might be as follows:

- In the first place, the government--i.e. the central waters administration--should have an open attitude toward the interests and preoccupations of the organized users. Consequently, they should establish administrative machinery to implement this principle.

This machinery should be structured by means of offices at the level of the central administration or through permanent or periodic representation with the users' organizations.

- In another connection, the government should require that users' organizations be established, and should prepare model statutes for them.
- It should control their plans of works and services, and to this end be empowered to require the execution of those which it considers necessary and evaluate compliance therewith.
- Penalties might be provided for users failing to join an organization or negligent in fulfilling their obligations thereto.
- The central waters administration should be empowered to hear appeals against or to review penalties imposed by users' organizations.

In order to preclude operational problems due to low levels of scales of fees and budgets, they should be submitted to the central authority for evaluation and any observations it may deem necessary.

The users' organizations should be subject to assumption of direct control by the authorities in case of unsatisfactory administration. The power might also exist to designate officials ex officio in the absence of their regular designation, and to remove officials from office for inefficiency or corruption in the performance of their duties.

Further, fines or suspension for minor offences might be foreseen for staff of the organizations who are remiss in the performance of their duties.

The waters administration should be empowered to require the production of the accounts and documents of the organization, in order to verify its activities.

Documented accounts of the budgets of receipts and expenditures and of the use made of them should be submitted to the waters authorities.

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333. Art. 33, Estatuto Río Recio, art. 36, Estatutos Río Coello, Colombia.
334. Art. 41, Estatutos Coello, Colombia.
335. Art. 62, Estatutos Coello, Colombia.

336. Art. 12, Estatutos Cosecheros y Rastrojos, Colombia.
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338. Arts. 31, 32, Decreto 40/73, Ecuador.
339. Arts. 36, 39, Decreto 40/73, Ecuador.
340. Art. 47, Decreto 40/73, Ecuador.
341. Art. 2, Estatutos de Directorio de Aguas Mocha-Tisaleo-Cevallo, Ecuador.
342. Art. 10, Estatutos de Directorio de Aguas Mocha-Tisaleo-Cevallos, Ecuador.
343. Art. 14, Estatutos de Directorio de Aguas Mocha-Tisaleo-Cevallos, Ecuador.
344. Art. 16, Estatutos de Directorio de Aguas Mocha-Tisaleo-Cevallos, Ecuador.
345. Art. 18, Estatutos de Directorio de Aguas Mocha-Tisaleo- Cevallos, Ecuador.
346. Art. 23, Estatutos de Directorio de Aguas Mocha-Tisaleo-Cevallos, Ecuador.
347. Art. 36, 37, Estatutos de Directorio de Aguas Mocha-Tisaleo- Cevallos, Ecuador.
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349. Art. 39, Estatutos de Directorio de Aguas Mocha-Tisaleo-Cevallos, Ecuador.
350. Art. 52, Decreto 40/73, Ecuador.
351. Art. 3, Cooperativa de Riego Fray Mariano Benítez Ecuador.
352. Art. 6, Cooperativa de Riego Fray Mariano Benítez, Ecuador.
353. Art. 10, Cooperativa de Riego Fray Mariano Benitez, Ecuador.
354. Art. 19, Cooperativa de Riego Fray Mariano Benítez, Ecuador.
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357. Arts. 2, 3, Estatutos Asociación de Trabajadores Agrícolas San Vicente y Tigua, Ecuador.
358. Art. 4, Estatutos Asociación de Trabajadores Agrícolas San Vicente y Tigua, Ecuador.
359. Art. 5, Estatutos Asociación de Trabajadores Agrícolas San Vicente y Tigua, Ecuador.
360. Art. 9, Estatutos Asociación de Trabajadores Agrícolas San Vicente y Tigua, Ecuador.
361. Art. 32, Estatutos Asociación de Trabajadores Agrícolas San Vicente y Tigua, Ecuador.

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363. Art. 68, Ley Federal de Aguas de México.
364. Art. 68, Ley Federal de Aguas de México.
365. Art. 68, Ley Federal de Aguas de México.
366. Art. 73, Ley Federal de Aguas de México.
367. Art. 76, Ley Federal de Aguas; art. 13, Reglamento Abala, México.
368. Art. 77, Ley Federal de Aguas; art. 3, Reglamento Abala, México.
369. Art. 35, Reglamento Abala, México,
370. Arts. 168, 169, Ley Federal de Aguas; art. 22, Reglamento Ley de Aguas de Propiedad Nacional, México.
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376. Art. 11, Decreto 005-79-AA, Perú.
377. Art. 12, Decreto 005-79-AA, Perú.
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397. Art. 115, Código de Aguas de Chile.
398. Art. 102, Código de Aguas de Chile.
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407. Art. 24, Resolución 18.338/68, INCORA, Colombia.
408. Art 19, Resolución 18.338/68, INCORA, Colombia.
409. Art. 24, Resolución 18.338/68, INCORA, Colombia.

410. Art. 24, Resolución 18.338/68, INCORA, Colombia.
411. Art. 25, Acuerdo 41, HIMAT, Colombia.
412. Art. 21, Estatutos Cosecheros; art. 4, 6, Estatutos Río Recio; art. 6, Estatutos Asociación Coello, nota nro. 14, Colombia.
413. Art. 12, Estatutos Asociación Cosecheros, nota nro. 14, Colombia.
414. Art. 11, Convenio 212/76, HIMAT, Asociación Río Coello, Colombia.
415. Art. 12, Estatutos Asociación Coello, nota nro. 14, Colombia.
416. Art. 42, Estatutos Asociación Coello, nota nro. 14, Colombia.
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419. Art. 51, Estatutos Asociación Coello, nota nro. 14, Colombia.
420. Art. 53, Estatutos Asociación Coello, nota nro. 14, Colombia.
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426. Art. 54, Ley 369/62, Ecuador.
427. BARRAGAN MALDONADO, Odino. Información verbal referida en nota 65, Ecuador.
428. Art. 40, Estatutos Mocha-Tisaleo-Cevallos, Ecuador.
429. Art. 41, Estatutos Mocha-Tisaleo-Cevallos, Ecuador.
430. Art. 43, Estatutos Mocha-Tisaleo-Cevallos, Ecuador.
431. Art. 4 inc. e), Estatutos Mocha-Tisaleo-Cevallos, Ecuador.
432. Art. 3, Estatutos Asociación de Trabajadores Agrícolas San Vicente y Tigua, Ecuador.
433. Art. 23, Estatutos Asociación de Trabajadores Agrícolas San Vicente y Tigua, Ecuador.
434. Art. 41, Estatutos Cooperativa de Riego Fray Mariano Benítez, Ecuador.
435. Art. 42, Estatutos Cooperativa de Riego Fray Mariano Benítez, Ecuador.
436. BARRAGAN MALDONADO, Odino. Información verbal referida en nota nro. 65, Ecuador.

437. Art. 64, Decreto 40/73, Ecuador.
438. Arts. 64, 65, Decreto 40/73, Ecuador.
439. Art. 67, Decreto 40/73, Ecuador.
440. Art. 69, Decreto 40/73, Ecuador.
441. Art. 69, Decreto 40/73, Ecuador.
442. Art. 70, Decreto 40/73, Ecuador.
443. Art. 53, Ley 369/72, Ecuador.
444. Art. 69, Ley Federal de Aguas de México.
445. Art. 71, Ley Federal de Aguas de México.
446. Art. 72, Ley Federal de Aguas de México.
447. Arts. 222, 224, Reglamento de la Ley de Aguas de Propiedad Nacional de México.
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450. Art. 79, Ley Federal de Aguas de México.
451. Art. 80, Ley Federal de Aguas de México.
452. Art. 16, Estatutos Asociación de Usuarios Unidad de Riego de Abala, Yucatán, México.
453. Arts. 19, 20, Estatutos Asociación de Usuarios Unidad de Riego da Abala, Yucatán, México.
454. Entrevista con el Ing. Espinosa de León, referida en nota nro. 71, México
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456. Entrevista con el Ing. Espinosa de León, referida en nota nro. 71, México.
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459. Art. 21, Decreto 005-79-AA, Perú.
460. Art. 22, Decreto 005-79-AA, Perú.
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462. Arts. 25, 26, Decreto 005-79-AA, Perú.
463. Arts. 6.3 y 6.5, Decreto 005-79-AA, Perú.

464. Art. 11, Decreto 005-79-AA, Perú.
465. Art. 16, inc. 2), Decreto 005-79-AA, Perú.
466. Art. 87, Ley Forestal de Aguas y Suelos, Venezuela.
467. An. 51, Ley Reforma Agraria, Venezuela.
468. Art. 1654, Código Civil de Venezuela.
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470. Art. 221, Ley General de Aguas de Mendoza.
471. Art. 221, Ley General de Aguas de Mendoza,
472. Art 21, Ley 2503, Mendoza.
473. Art. 35f Ley 322, Mendoza.
474. Art. 33, Ley 322, Mendoza.
475. Art. 57, inc. i) y i), Ley 886, San Juan.
476. Art. 113, inc. i), Código de Aguas de Chile.
477. Art. 116, Código de Aguas de Chile.
478. Arts. 282, 283,284,147, Código de Aguas de Chile.
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484. Art 99, Acuerdo 41, HIMAT, Colombia.
485. Art. 100, Acuerdo 41, HIMAT, Colombia.
486. Art 102, Acuerdo 41, HIMAT, Colombia.
487. Arts. 103,104,106,106, Acuerdo 41, HIMAT, Colombia.
488. Arts. 19,20, Estatutos Cosecheros y Rastrojos, Colombia.
489. Art 79, Convenio 212/76, HIMAT, Colombia.
490. Art 42, Estatutos Río Recio, Colombia.

491. Art 74, Estatutos Asociación Río Coello, Colombia.
492. Arts. 41 y 43, Estatutos Asociación Río Coello, Colombia.
493. Arts. 19 a 26, Decreto 40/73, Ecuador.
494. Art. 36 inc. j), Decreto 40/73, Ecuador.
495. Art. 41, Decreto 40/73, Ecuador.
496. Art. 43, Decreto 40/73, Ecuador.
497. Art. 43 inc. d), Decreto 40/73, Ecuador.
498. Art. 15, Estatutos Directorio Chimborazo, Ecuador.
499. Art. 16, Estatutos Directorio Chimborazo, Ecuador.
500. Art. 4 inc. b), Estatutos Directorio Mocha-Tisaleo-Cevallos, Ecuador.
501. Art. 5, Estatutos Directorio Mocha-Tisaleo-Cevallos, Ecuador.
502. Art. 6 y 7, Estatutos Directorio Mocha-Tisaleo-Cevallos, Ecuador.
503. Art. 18, Estatutos Directorio Mocha-Tisaleo-Cevallos, Ecuador.
504. Art. 23, Estatutos Directorio Mocha-Tisaleo-Cevallos, Ecuador.
505. Arts. 46,47, Estatutos Directorio Mocha-Tisaleo-Cevallos, Ecuador.
506. Art. 174, Ley federal de Aguas de México.
507. Art. 175, Ley Federal de Aguas de México.
508. Art. 176, Ley Federal de Aguas de México.
509. Art. 176, Ley Federal de Aguas de México.
510. Arts. 182,183, Ley Federal de Aguas de México.
511. Art. 184, Ley Federal de Aguas de México.
512. Art. 27, Reglamento Asociación de Usuarios Unidad de Riego de Abala, Yucatán, México.
513. Art. 28, Reglamento Asociación de Usuarios Unidad de Riego de Abala, Yucatán, México.
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525. Art. 123, Ley Forestal de Aguas y Suelos de Venezuela.
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528. Art. 24, Ley Orgánica del Ambiente de 1976, Venezuela.
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531. Art. 27, Ley Orgánica del Ambiente de 1976, Venezuela.
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534. Art. 33 y 34, Ley 322, Mendoza.
535. Art. 221 h, Ley General de Aguas de Mendoza.
536. Art. 221 i. Ley General de Aguas de Mendoza.
537. Art. 35, Ley 322, Mendoza.
538. Art. 33, Ley 322, Mendoza.
539. Art. 21, Ley 2503, Mendoza.
540. Ley 886, San Juan.
541. Art. 287, Código de Aguas de Chile. Art. 117, Ley 16640, Chile.
542. Art. 287 d, 290 a y b, 296 y 6 transitorio, Código de Aguas de Chile.
543. Art. 127, Ley 16640, Chile.
544. Art. 127. Ley 16640, Chile.

545. Art. 332, Código de Aguas de Chile.
546. Art. 105, Ley 16640, Chile.
547. SOLANES, Miguel R. op. cit. nota nro. 39, p.124.
548. Art. 288, Código de Aguas de Chile.
549. Art. 288, Código de Aguas de Chile.
550. Art. 23, Código de Aguas de Chile.
551. Art. 145 y 147, Código de Aguas de Chile.
552. Arts. 158, 157, 162 y 163, Código de Aguas de Chile.
553. Arts. 178, Código de Aguas de Chile.
554. Art. 39, Resolución 2903/76, Dirección General de Aguas de Chile.
555. Arts. 9 a 25, Resolución 18.388/68, INCORA, Colombia.
556. Art. 25, Resolución 18.338/68, INCORA, Colombia.
557. Art. 28, a, u, Acuerdo 41, HIMAT, Colombia.
558. Art. 16 1), 5), 6), Acuerdo 41, HIMAT, Colombia.
559. Art. 16 7), Acuerdo 41, HIMAT, Colombia.
560. Art. 22 1), 2), Acuerdo 41, HIMAT, Colombia.
561. Art. 22 9), Acuerdo 41, HIMAT, Colombia.
562. Art. 23 1), Acuerdo 41, HIMAT, Colombia.
563. Art. 26, Acuerdo 41, HIMAT, Colombia.
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565. Cláusula tercera Convenio 212/76, HIMAT, Colombia, Asociación Río Coello, Art. 19, Decreto 2259/76, Colombia.
566. Art. 21, Decreto 2259/76, Colombia.
567. Cláusula décimo primera, Convenio 212/76, HIMAT, Asociación Usuarios Río Coello, Colombia.
568. Cláusula décimo cuarta, Convenio 212/76, HIMAT, Asociación Usuarios Río Coello, Colombia, art. 22, Decreto 2259/76, Colombia.
569. Cláusula décimo sexta, Convenio 212/76, HIMAT, Colombia.
570. Cláusula vigesimo segunda, Convenio 212/76, HIMAT, Colombia.

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- 572. Art 91, Estatutos Asociación Usuarios Coelio, Colombia.
- 573. Art. 82 c), Estatutos Asociación Usuarios Coello, Colombia.
- 574. Art. 82, d) Estatutos Asocración Usuarios Coello, Colombia.
- 575. Arts. 48, 50, 56, Estatutos Río Recio, Colombia.
- 576. Art. 13, Resolucidn 061/68, Ministerio de Agricultura, art. 7, Decreto 755/67, Colombia.
- 577. Art. 5 y 6, Decreto 755/67, Colombia.
- 578. Art. 18, Decreto 2259/76, Colombia.
- 579. Art. 78, Ley 369/72, Ecuador.
- 580. Art. 27, Decreto 40/73, Ecuador.
- 581. Art. 18, 2), Estatutos Directorio Mocha-Tisaleo-Cevallo, art. 36, Decreto 4053, Ecuador.
- 582. Art. 49, Estatutos Directorio Mocha-Tisaleo-Cevallos, art 36, Decreto 40/73, Ecuador.
- 583. Art. 40, Decreto 40/73, Ecuador.
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- 586. Arts. 52, 53, Decreto 40/73, Ecuador.
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- 591. Art. 3 c), Decreto 1551/66, Ecuador.
- 592. Art 3 d), Decreto 1551/66, Ecuador
- 593. Art. 3 e), Decreto 1551/66, Ecuador.
- 594. Art. 3 n), Decreto 1551/66, Ecuador.
- 595. Art 46, Ley 369/72, Ecuador.
- 596. Art. 1, Estatuto Cooperativas de Riego Fray Mariano Benítez, Ecuador.
- 597. Art. 60, Estatuto Cooperativas de Riego Fray Mariano Benítez, Ecuador

598. Estatutos Asociación de Trabajadores Agrícolas del Caserío de San Vicente y Tigua, Ecuador.
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600. Art. 68, Ley Federal de Aguas de México.
601. Art. 72, Ley Federal de Aguas de México.
602. Arts. 77,81 y 83, Ley Federal de Aguas de México.
603. PALACIO VELEZ, Enrique, op. cit. nota nro. 24, p. 113.
604. Art. 73, Ley Federal de Aguas de México.
605. Arts. 75 y 76, Ley Federal de Aguas de México.
606. Art. 76, Ley Federal de Aguas de México.
607. Arts. 20, 21, Asociación de Usuarios Unidad de Riego Abala, Yucatán, México.
608. Art. 5, Asociación de Usuarios Unidad de Riego Abala, Yucatán, México.
609. Art. 7, Asociación de Usuarios Unidad de Riego Abala, Yucatán, México.
610. Art. 15, Asociación de Usuarios Unidad de Riego Abala, Yucatán, México.
611. Entrevista con el Ing. Picaso Tovar referida en nota nro. 70; arts. 223 y 224, Reglamento de la Ley de Aguas de Propiedad Nacional, México.
612. Art. 222, Reglamento de la Ley de Aguas de Propiedad Nacional, México.
613. Art. 225, Reglamento de la Ley de Aguas de Propiedad Nacional, México.
614. Arts. 1, 51, 59, Decreto 005-79-AA, Perú.
615. Art. 47, Decreto 005-79-AA, Perú.
616. Art. 3, Decreto 005-79-AA, Perú.
617. Art. 6.4 y 6.7, Decreto 005-79-AA, Perú.
618. Art. 1651, Código Civil de Venezuela.
619. Art. 87, Ley Forestal de Aguas y Suelos, Venezuela.
620. Art. 93, Ley Forestal de Aguas y Suelos, Venezuela.
621. Art. 188, Decreto 211/77, Venezuela.
622. Art. 190, Decreto 211/77, Venezuela.
623. Art. 192, Decreto 211/77, Venezuela.
624. Art. 50, Ley de Reforma Agraria de Venezuela.

- 625. Art. 50, Ley de Reforma Agraria de Venezuela.
- 626. Art. 51, Ley de Reforma Agraria de Venezuela.
- 627. Art. 31, Decreto 746/67, Venezuela.
- 628. Art. 32, Decreto 746/67, Venezuela.
- 629. SANCHEZ PULIDO, Eólida, op. cit. nota nro. 37, p.145.

ABBREVIATIONS

CELA. Centro de Economía, Legislación y Administración del Agua.

D.G.A. Dirección General de Aguas de Chile.

D.G.I. Departamento General de Irrigación de Mendoza.

INCORA. Instituto Colombiano para la Reforma Agraria.

INDERENA. Instituto Nacional de Recursos Naturales Renovables y del Ambiente de Colombia.

INERHI. Instituto Ecuatoriano de Recursos Hidráulicos.

HIMAT. Instituto Colombiano de Hidrología, Meteorología y Adecuación de Tierras.