The Case of the Trifinio Plan in the Upper Lempa: Opportunities and Challenges for the Shared Management of Central American Transnational Basins

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2. Sergei Vinogradov, Patricia Wouters and Patricia Jones, Transforming potential conflict into cooperation potential: The role of international water law, UNESCO-IHP, 106 p.


11. Viktor Duchovny and Vadim Sokolov, Lessons on cooperation building to manage water conflicts in the Aral sea basin, UNESCO-IHP, 50 p.


13. Peter Nachtmans, Donnabe case study, UNESCO-IHP (to be published)


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THE CASE OF THE TRIFINIO PLAN IN THE UPPER LEMPA: OPPORTUNITIES AND CHALLENGES FOR THE SHARED MANAGEMENT OF CENTRAL AMERICAN TRANSNATIONAL BASINS

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(SC-2003/WS/47)
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ACKNOWLEDGMENT

This article was elaborated by the Foundation of Foreign Service for Peace and Democracy, FUNPADEM, with the technical support and sponsorship of the Global Water Partnership, GWP. It is a generous offer to UNESCO’s International Hydrological Programme contribution to the World Water Assessment Programme.
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THE TRIFINIO PLAN IN THE UPPER LEMPA

The upper watershed of the Lempa River is shared by Guatemala, El Salvador, and Honduras, as outlined in the Trifinio Plan. Its management represents a novel experience for Central America. It reveals the advances made in the management of the natural resources of a trans-national watershed, through the political will of the countries at the highest level, institutionalized through an international treaty, making way for a new form of organizational management. The watershed was considered from a territorial planning perspective, rather than one of water management. The Trifinio experience shows the limits to processes that are stimulated from above and therefore not accompanied by strategies designed by the local actors, whose support is necessary to ensure long-term functioning and sustainability.

Lessons Learned

1. The case reveals that, in order to advance towards the integrated management of the hydrological resources of trans-national watersheds in Central America, political will (at the highest levels) of the participating countries is essential.
2. It is necessary to establish common institutional frameworks for managing the territory of the shared watershed.
3. Coordinated mechanisms for information gathering, conceptualization, and interventions are needed.
4. Efficient mechanisms are needed to ensure local participation throughout the process – from planning to decision making and carrying out actions.
5. There should be investment in processes of building up local capacities associated with the management of natural resources.
6. This case reflects a series of limitations related to the lack of efficiency and sustainability of actions that are planned from the top down, as well as a centralized approach to management in which resources have been exhausted in carrying out actions by the ministries involved.
7. The pattern of intervention needs to change to allow a natural resources management that is possible through an integrated management of watersheds.
8. The study shows the limitations of merely incorporating risk and vulnerability management, as associated with land use and flooding, into the management of a shared watershed.
9. The Trifinio Commission is not financially viable and has not achieved the establishment of its own coordinating inter-sectoral planning mechanism among local institutions, municipalities, environmental funds, and the private sector.

Relevance of the Case for Integrated Management of Hydrological Resources

This case reflects the importance of political will in advancing the building of frameworks for institutional trans-national watersheds. At the same time, it reveals the obstacles in the transition from those processes that are stimulated by a top-down approach towards a process involving strategies arising from the local actors. Strategies by local actors inherently lend the necessary support to the functioning and sustainability of actions, and in the long run tend towards the integrated management of trans-national watershed hydrological resources.

Finally, the case reveals the predominant focus to be on natural resource management for watersheds on behalf of the principal actors of participating institutions within the region, rather than integrated management of water.
1. DESCRIPTION

1.1. General Characteristics

The Trifinio region covers an area of about 7,500 km$^2$ in the border areas of Honduras, Guatemala, and El Salvador. It converges around the mountain mass known as the Montecristo Cloud Forest. The region is made up of forty-five municipalities. Twenty-two belong to Honduras within the departments of Ocotepeque and Copán, fifteen are situated in Guatemala corresponding to the departments of Chiquimula and Jutiapa, and eight are in the departments of Santa Ana and Chalatenango in El Salvador. Five types of forest are found within Trifinio: cloud forests, transitional forests, mixed forests consisting of pine and oak, subtropical dry forests, and tropical forests. Also in the region there are several basins: the Lempa River basin, the only transnational watershed in Central America, which is shared by Guatemala, Honduras, and El Salvador; the basin of the Motagua River, which flows towards the Guatemalan territory; and the Ulúa River basin in Honduras.

In the year 2000, it was estimated that the region’s population fluctuated at around 670,000 inhabitants, with an average population density of eighty-nine persons per km$^2$. For the same year it was also estimated that 70 percent of the population lived in rural areas, with a strong prevalence of conditions of both relative poverty (87 percent) and extreme poverty (53 percent). This situation serves to explain, among other factors, the shortage of productive activities as well as the lack of employment and income-generating activities. Seventy-five percent of the Trifinio region is mountainous, with shallow soils that limit agriculture. The majority of the lands are semi-arid with scarce vegetation coverage. Agricultural and related activities predominate, constituting part of the subsistence for the inhabiting families.

1.2. Previous Situation

Historically, the Trifinio region was characterized as a marginalized and deprived territory, and there were no systematic efforts by the three countries to develop it. This has been reflected in the efforts made to invest and provide for the basic infrastructure necessary for the region’s development. In the mid-1990s, this situation began to be reversed through important infrastructure works, which in recent years have improved the region’s road system. Yet efforts towards improving the secondary road system remain insufficient for the majority of the rural population. This continues to be a critical factor for improving the conditions necessary for commercial fishing in the area, particularly in Honduras where there has been less public financing. Despite this marginalization, a “natural” integration has developed in Trifinio, especially between the municipalities of Esquipulas, Ocotepeque, and Metapán. This integration, founded upon a dynamic and systematized commercial relationship, can be explained in part by the marginalization and lack of communication between these territories and the population centers of the respective countries, as well as by the recent processes of generation and interconnection among these municipalities.

1.3. Motives for Taking Action

For several decades now, the governments of El Salvador, Honduras, and Guatemala have shown interest in conserving the Montecristo mountain mass, a natural area in a territory shared by the three countries. The initiative of the Trifinio Plan came about in the 1980s as part of the regional peace processes that culminated in the signing of the Esquipulas peace agreements in 1987. Within this framework and under the strong leadership exercised by Roberto Carpio Nicole, the Vice-President of Honduras
at that time, a process was initiated which led to subscription to the Treaty in 1986, for carrying out the Trifinio Plan by El Salvador, Guatemala, and Honduras.

Later, with the support of the General Secretariat of the Organization of American States (OAS) and of the Inter-American Institute for Agricultural Cooperation (IICA), these countries proceeded to formulate the Trifinio Plan. The plan was oriented towards the development of the three countries’ trans-national region. In accordance with its original spirit, the Trifinio Plan would allow for joint actions of cooperation to be carried out by Guatemala, El Salvador, and Honduras in a natural area of great value. At the same time, it would serve as an example of practical efforts towards integration in Central America. The initial idea was to have an international park shared by the three countries. As such, interventions were limited to the conservation and protection of the Montecristo Cloud Forest and the Fraternity biosphere. From the beginning, this marked a strong and concentrated focus on the management of the natural resources of the area. Only in El Salvador were actions associated with the need to carry out protective works to reduce vulnerability to flooding. These actions were carried out in the municipality of Metapán, where flooding was due to the degradation of the upper part of the Montecristo land mass. The intervention focus was largely based upon the logic of protecting the landmass through reforestation.

1.4. Problem Resolution

Given the aim of the Trifinio Plan of contributing to the integration of Central America, joint actions should have been oriented towards the integrated, harmonious, and balanced development of the trans-national region belonging to the three countries. To this end, the vision of the plan sought to outline actions with a focus on sustainable development based upon citizen participation, decentralization, and the sustainable management of resources, equity, and the incorporation of a gender perspective. As such, the plan delimited strategic lines of action such as the following:

- Social development oriented towards improving the population’s quality of life – economic development as a permanent process for increasing productive capacity with ecological integrity.
- Tri-national integration, understood as a process for facilitating the flow of goods, services, and people between the three countries.
- Environmental protection, understood as a process geared towards reversing increasing degradation from the over-exploitation and irrational management of land and natural resources.

The interventionist model developed within the Trifinio Plan focused on attending to the ever-increasing exploitation of forested areas, the loss of land for cattle breeding and agriculture, and the flooding caused by the deforestation of mountainous areas.

1.5. The Evolution of Decisions Since the Start of the Plan

The legislative assemblies of the three countries ratified the Trifinio Plan. A Tri-National Commission was created to carry it out, and a rotating Executive Secretariat was created for periods of four years. This Secretariat consisted of three national directors, the Tri-National Technical Entity, and the Consulting Committee, the last of which was made up of departmental governors, mayors of the region, the Trifinio Associations for Sustainable Development (ATRIDEST) of each country, non-governmental organizations working in the region, and other civil society organizations.
Since 1987 the Trifinio Plan’s Tri-National Commission, made up of the vice-presidents of Guatemala, El Salvador, and Honduras, has approved and adopted a strategy for financing studies and for carrying out the twenty-eight tri-national projects outlined in the plan. In this way, requests for financial assistance were presented to the Central American Bank for Economic Integration, to the European Economic Community, to the governments of the United States, Spain, Holland, Sweden, Federal Germany, Canada, and Japan, as well as to the UN Rotary Fund for the Exploration of Natural Resources, the Organization of American States, and the International Union for Nature Conservancy.

In 1989 the European Union approved a pilot project aimed at strengthening tri-national institutionalization, and at the same time developing a massive reforestation program. This pilot was faced with the problem of land ownership, since the majority of critical zones selected for reforestation were (and still remain) private properties. This circumstance determined to a large extent the process and development of the project, which had been envisioned for a period of five years and yet ended up lasting ten. With the support of the European Union, a socioeconomic analysis and a regional development plan were carried out, identifying thirty-one projects requiring an investment of approximately $800 million.

The agreement supported by the European Union had a geographic coverage of 700 km$^2$ (10 percent of the Trifinio’s total area) and a value of $10 million. It focused on the social, economic, and institutional components, with an emphasis on employment generation. From the very beginning, the interventions were not designed from the perspective of the particularities of the hydrographic watershed and the management of its hydraulic resources. The hydrographic watershed was considered, but only from a territorial planning perspective, concentrating actions on the use of land and the protection of coffee crops and species of high biodiversity in the highest areas. Interventionist actions were limited by and to the management of water. Along with this project, practical field experiments began, and new spaces were made through the Trifinio Sustainable Development Associations (ATRIDESTs), which sought to open up the process to local participation. The ATRIDESTs have taken on a distinct profile in each of the countries, depending on their level of protagonism and operational capacity, which accounts for the difference in each one’s involvement.

The plan’s second phase, known as “Trifinio 2,” focused on the development of international watersheds, involving the Lempa, Ulúa, and Motagua river basins. In this phase, the goal of the pilot plan was to reforest some 6,000 hectares, seeking community participation and the generation of an environmental conscience within the region. By the end of the second phase, the reforestation of some 4,500 hectares had been achieved. According to members of the Executive Technical Unit, there were several side-effects of the project. These included the modernization of infrastructure in certain cities (e.g. Ocotepeque) that had deficiencies in communications and road networks. Ocotepeque is the most emblematic case of development because of its lack of infrastructure prior to the implementation of the plan. On the other hand, several small interventions were made from a biodiversity perspective through the Global Environmental Fund (GEF), in an attempt to strengthen the management of the region’s existing ecosystems.

Currently the project entitled “Sustainable Rural Development of Fragile Ecological Zones of the Trifinio” (PRODERT) is being carried out with the support of the OAS and the IICA. PRODERT has been carried out in an independent manner, with no consideration for the coordinating role that the Tri-National Commission might have played. The Tropical Agronomy Center of Research and Teaching (Centro Agronómico Tropical de Investigación y Enseñanza, CATIE), has developed capacity-building programs in the coffee and horticulture areas of the region. More recently, the National University of Costa Rica and the international humanitarian organization CARE have signed a cooperation agreement with the Tri-National Commission to
systematize the Trifinio experience. It is hoped that this experience will be publicized via widespread consulting within the region.

In 1997, talks with the Inter-American Development Bank (IADB, or BID in Spanish) began for a $150 million loan for the financing of the Tri-National Program for the Sustainable Development of the Upper Watershed of the Lempa River, which is to be contracted out by the three countries. Four components are identified:

- the management of natural resources
- economic diversity
- physical works
- risk and vulnerability management.

The project amount was subsequently reduced to $32 million because of the low borrowing capacity of the countries. It is hoped that, along with this program, actions may be developed that are more focused upon hydraulic management as a dynamic element in the territory’s sustainability.

1.6. Involved Actors and Key Factors of Implementation

The tri-national institutionalization built into the framework of the Trifinio Plan has required that the vice-presidents of the nations play an important role. This has enabled conflicts to be minimized, and has generated better opportunities for building a foundation for the sharing of information and cooperation among the three nations. From the perspective of the vice-presidents, this institutionalization of Trifinio has provided adequate room for foreseeing, attending to, and resolving conflicts of all kinds generated between the three participating nations. Mechanisms for fluid communication at the vice-presidential level were created not only in order to get the Trifinio Plan under way and follow it up, but also for other themes of a commercial and trans-national development nature. For the nations’ technical representatives, the experience has been a positive one in terms of coordination and support at the executive level of the respective governments for the recommended actions. The model for intervention relies, however, on the executive capacity of the respective ministries, which led to a low level of participation among other social actors.

Because of its complexity, the institutional framework entails bureaucratic and troublesome processes, which create long intervals between the political initiatives and the final approval of projects. In addition, the organizational and functional structure of the Trifinio Tri-National Commission is financially costly in its level of representation, as well as in the existing requirements of functionality. The commission’s resources have not permitted the creation of a permanent technical team for ensuring a sustainable and continued management of initiatives. In general, the resources of the countries are limited to a basic budget for the functioning of the commission, and very few of these resources are geared towards effective investment.

Direct intervention is fundamentally a property of the executive capacity of the respective ministries, leading to a low level of participation from other social actors. The representatives of the environmental funds involved in the Trifinio efforts (Environmental Fund of El Salvador – FONAES, VIDA Foundation in Honduras and the Guatemalan Fund for the Environment – FOGUAMA) manifested their views on the low level of support and of community organization arising from the implementation of the plan. As a matter of fact, the efforts of these environmental funds have been oriented towards supporting community-based organizations for building up local support. Such local support could contribute to consolidating the process initiated by the ATRIDESTs, who have also assumed a vital role in the promotion of organized participation within the region.
The municipal representatives see the Trifinio Plan from another perspective: as an opportunity for participation and management that could promote local development and their respective municipal agendas. In this sense, there are high expectations among the municipalities of achievements in the Trifinio region. It is acknowledged that, to date, the economic, social, and environmental impacts of actions have been limited. Yet the plan, with political backing and will at the highest level in each country, allows for the active role of national entities in the area. A general preference exists for improving the levels of integration and participation by the local governments and authorities of Trifinio. The planning processes initiated at various levels could lead to more participatory management processes. Each municipality has its own plans, and any initiative within the area should be adapted to them for the purposes of cooperation. Community organization and the building of municipal alliances could respond in a strategic manner to local needs by acting under central government guidance.

In recent years, the tendency in the region has been towards more proactive participation on the part of the municipal authorities of the three nations, in any action stimulated by the Trifinio Plan. Participatory local development is perceived as a strong component for all future interventions, based on efforts to formulate local development plans created by the municipalities, and sustained in participatory social processes for their formulation.

The self-evaluation undertaken by ATRIDEST representatives, with respect to the role they have been playing in the Trifinio Plan, reveals that they have been functioning quite well. The ATRIDESTs recognize that many of their actions have had a relevant local impact, while their relationship with municipal governments and authorities has been somewhat more modest. In recent years, within the context of greater levels of responsibility and leadership on behalf of the region’s local governments, the Tri-National Trifinio Commission and the ATRIDESTs have begun to ponder their relationships with local governments. For their part, representatives of community organizations recognize their dependence upon executive bodies, such as the ATRIDESTs, national technical entities, and even the tri-national unit. Currently, the community organizations consider that the Tri-National Program for the Sustainable Development of the Upper Lempa River Basin will facilitate an increased level of community participation. It is assumed that this provides a new opportunity for promoting and improving local capacities and autonomy, for advancing towards processes of appropriation by the population, and of expanding visions for the region’s development.

1.7. Problems Faced

The existing level of poverty and the lack of access to means of production among the population of the Trifinio region, along with the low active participation of the population, have placed increasing pressure upon the sustainable management of natural resources, which are crucial for the poor. Ensuring the promotion of processes for social and economic development within the area is definitely one of the main challenges.

In this sense, the weak presence and low participation of local actors in defining the actions and priorities of the region only ensure that these processes remain within the central spheres of each government included in the agreement. These have been defined by the central entities of each government that signed the Treaty. The low levels of organization obtained to date enormously limit the role of demand and social control. This role could, and should, be played by local actors in initiatives such as that of the Trifinio Plan, to ensure its sustainability. The risk exists of creating instances of participation that, because of their low representation or strong political links, reduce the potential for active participation and intervention in the long term.
The equilibrium between national and tri-national representation is quite complex. The nations' officials with their respective political forces have a weighty influence, limiting the vision and commitment to the tri-national process, which need to be consolidated in the long term.

The Trifinio Commission's limited economic backing, the low level of support in terms of governmental direct investment resources, and the absence of a strategy for empowering the more active local bodies, all serve to decrease possibilities for mobilizing local resources, both public and private.

Finally, the limited knowledge and application of integrated water management concepts in the Trifinio experience strongly limit its impact from the perspective of the sustainable management of water in a trans-national watershed. The more traditional launching of watershed plans and programs stemming from the management of natural resources has predominantly determined the low profile of water in the planning process, and the actions carried out within the areas of influence covered in the Trifinio Plan.

2. FULFILLMENT

2.1. Results

The plan’s implementation highlights the carrying out of the pilot project for the development of the Trifinio region (supported by the European Community) with the aim of contributing to the physical integration of the borderland belt. This implies promoting socioeconomic development along with the conservation of the Montecristo Cloud Forest and the Fraternity Biosphere Reserve. The project only benefited nine municipalities directly, and twenty-two of the region’s forty-five municipalities indirectly. As a result, there is now a perimeter ring made up of the highways of Metapán, Esquipulas, and Ocotepeque. In the case of El Salvador, there are essentially two poles (Metapán and San Ignacio), which because of the absence of roads for communication and connectivity between them, have received a distinct treatment in terms of their involvement and of the actions that were carried out.

As a response to the need for access to potable water for the health and hygiene of the families, ten infrastructure projects were carried out. These projects improved the access of poor communities who had previously never had potable domestic water, benefiting 80,128 inhabitants of nine municipalities within the three countries. However, such projects were limited to the construction of infrastructure. They lacked a social management component that would have ensured that the communities took ownership of them. Another important shortcoming was in the management of the local watershed to guarantee the sustainability of water sources. In this sense, the experience was presented as a traditional case of natural resource management and associated infrastructure works, rather than focusing on the water itself.

As an alternative, the use was promoted of Finnish-type stoves, which reduce the consumption of firewood by 50 percent. An agreement was also signed with the petroleum company Shell for implementing the use of ovens with propane gas burners for the production of lime. They carried out about 1,500 hectares of soil conservation works, for which 50,000 workers were employed. In the process approximately 198 km of back roads were improved, employing an additional 18,000 workers, and improving the flow and connectivity between the producers and the commercial centers.

Other activities included the creation of nurseries, the promotion of forest protection, and the development of capacities in the area of forestry. The incorporation of both organized and non-organized productive fishing sectors was promoted, and the army was utilized as labor in the overseeing of reforestation works. In other cases, reforestation options for commercial purposes were defined, founded
upon management plans. These did not, however, include subsistence farmers. Still, there was no general acceptance of the reforestation component within the pilot project. For some landowners, the major success was in the upper areas. There were cases of transfers of land ownership in which the owners did not respect the agreements and cut down trees that were planted during the project.

One very successful result has been the creation of environmental committees in each of the countries. These serve as vehicles for citizen participation in environmental protection and conservation. Small-scale tree planting and solid waste management projects, along with consciousness-raising campaigns on the importance of environmental management and conservation, helped in the promotion of these committees. In turn, this has allowed these committees to play a more active public role, both locally and nationally.

2.2. Impacts

The Trifinio Plan is the largest of its type, and is the most advanced in terms of real territory integration and cooperation in Central America. It has succeeded in creating an institutional mechanism at the highest level, involving the vice-presidents of the three nations, and has even led the process with the support of the relevant ministries, especially those of agriculture. In this way, the Trifinio experience has become the main laboratory for territorial integration within Central America. This defines the experience as having great value in terms of establishing tri-national institutions that could aid the consolidation of the Central American integration process, as well as the search for new mechanisms of cooperation and development among shared watersheds. In general, the evaluation of efforts developed to date has been positive, in terms of the level of tri-national institutions created, as well as in their levels of competence for project implementation and for actions developed within the region.

Although the Trifinio Plan does not rely on the integrated management of the upper Lempa watershed’s hydrological resources, it does seem that the new programs are geared towards the creation and strengthening of management tools which can in fact lend support. As one of the main beneficiaries of any positive management activities for the main sources of superficial waters within the upper Lempa, El Salvador should assume a leadership role, in terms of conceptualization and implementation of these types of program, as well as in the evolution of mechanisms that allow for the sustainability of hydraulic management affecting lower waters.

Other interventions have been developed surrounding the institutions created by the pilot project. With financing from the environmental funds of the three nations, there are projects for supporting the ATRIDESTs and community organizations with small-scale environmental, educational, or conservational actions within the area. These actions are too marginalized to establish significant impacts in the region, although they do pave the way for the promotion of innovative environmental management practices in organized communities of the Trifinio region.

Projects within Trifinio’s geographical area of focus that do not recognize the mandate and role of the Tri-National Commission in the area serve to limit the spirit of the plan, and make vulnerable the advances made to date in terms of coordination and representation. Ensuring that the nations (and the institutions created by the plan) establish clearly competent and complementary mechanisms is indispensable for reducing this type of situation.

A good part of the actions within other areas of the Trifinio Plan’s implementation has been limited to demands for social infrastructure projects. In the majority of cases, these actions led to a dependence on the provision of services by outside actors, and were characterized by low levels of active and proactive participation by the beneficiaries, who currently are dissatisfied with the process.
3. LESSONS LEARNED

3.1. Potentials

- The clear and active participation of the vice-presidents of the three nations, along with the creation of a continued and systematic space for communication, have been qualitatively fundamental factors in maintaining the effort for so many years. This has also generated positive outcomes from the specific actions in the Trifinio region that transcend the plan and impact upon the management of diverse conflicts between the participating nations.

- The empowering of the process by means of citizen participation, and the consolidation of spaces as forums for consultation and decision making for projects within the Trifinio area, could serve as a foundation for the true sustainability of the process. This includes natural resources conservation and the potential for improving the socioeconomic conditions of the population along the Upper Lempa basin.

- The start of environmental educational campaigns for children and their teachers could lead to processes of raising environmental awareness in the long term, which should relate to the socioeconomic development of the area.

- The environmental funds have become promoters of local organization and role models for organizations (such as the environmental committees in each country) with a commitment to medium and long-term actions for the region’s environmental sustainability. These organizations increasingly represent key actors, which have become intrinsically involved in the operations of local and national government needed to ensure viability of the actions of the Trifinio Plan.

- The introduction of new production practices in the area presents novel alternatives for small and medium-scale farmers for living in balance with nature. Examples include soil conservation, forestry, and crop diversification. The diversification in income generating activities from fishing-related services serves as a window of opportunity for the Trifinio population.

- The Upper Lempa Basin Program could generate the mechanisms for the protection and sustainable management of the watershed, as well as tools for responding to the needs of managing the region’s hydrological resources, which to date remain almost entirely unmet. This opens up the possibility of designing a program based on the dynamic element of integrated management of the upper Lempa’s hydrological resources. It also serves as a reference for other Central American situations, with their own particularities yet with certain common elements.

- The Trifinio experience reveals the need to guarantee a link with the region’s integration institutions. One possible example of this could be a regional unit for the management of trans-national watersheds, within the framework of the Central American Integration System (SICA). SICA’s mandate is to coordinate such efforts and ensure their link to the regional structure responsible for the integration. Another example could be operational units for carrying out projects.

3.2. Limitations and Obstacles

The organizational figures could become merely ornamental, lacking real authority and simply backing central decisions. There is a risk of creating instances of participation that do not truly exercise their role because of low representation or political links. The balance between national and tri-national representation is quite precarious and remains complex. A strong influence and bias exists among the active functionaries of the three nations with their respective political forces, which limits the vision and commitment to the tri-national process. This must be overcome.
At the operational level of the Trifinio’s institutions, the single representative from each nation has various responsibilities, and the boundaries between the roles of the national representatives are unclear. This is because of the absence of clarity in their mandates. In some cases this leads to conflicts in abilities and decisions, which slow down the processes of implementing actions. Reversing this dynamic is fundamental for guaranteeing efficiency in meeting the Trifinio Plan’s mandate.

Because of its complexity, the organizational and operational structure of the Tri-National Trifinio Commission is financially costly, both in terms of its level of representation and in the requirements of existing functionality. The reduced funding for the commission resources has made it impracticable to set up a permanent technical team for ensuring sustainable management and the continuity of initiatives.

Projects within the Trifinio’s geographical area of focus that do not recognize the mandate and role of the Tri-National Commission in the area serve to limit the spirit of the plan, and make the advances obtained in representation and coordination vulnerable. Only twenty-two of the region’s forty-five municipalities have at any time participated in the plan’s implementation. This number is quite low, given the dimensions of the territory covered by the treaty.

The role of local governments and community organizations is an enormous challenge for guaranteeing the strategic perspective of the sustainability of actions within the Trifinio. The lack of involvement by municipalities and community organizations within the processes, the lack of resources assigned to them, and the lack of economic tools that they themselves could apply, could in part be the explanation of the weak presence and participation that currently exists. This must be reversed.

The investments made in the region are dependent upon the vision and strategy adopted by the central governments via their ministries. In the majority of cases, these have been the bodies carrying out actions where private investment in the area has been absent. This makes projects and programs extremely vulnerable and subject to political discretion. As processes go from being strictly led by the public sector towards being shared with local actors, the invested resources allow for better development opportunities.

The financial support of the three countries for the functioning of the commission and its executive branches does not imply sufficient resources beyond the institutional operation of the technical offices. This limits the impact and sustainability of actions that are not accompanied by adequate support at the local level. In the same context, the permanent and non-financial support provided by the involved ministries for implementing the plan initiatives and actions is not formally registered. This represents an important challenge that must be overcome, given its importance for the mobilization of further diverse resources.

No clear or deliberate strategy for promoting private sector participation in the Trifinio exists. This has meant reduced local dynamism and few actions stimulated from the public sector, with the limitations mentioned above. The existing heterogeneity of land ownership in the three countries has become a determining factor in the implementation of reforestation and soil conservation processes. Incentives have had a limited impact upon actions. The promotion of reforestation and the use of soils in the Trifinio have excluded small-scale producers. The financial mechanisms used for promoting reforestation, forestry, and soil conservation have been insufficient, and in some cases inefficient. This is even further aggravated by the risk of droughts and fires.

A good part of the reforestation activities assumed the possibility of exploiting wood and generating income on a medium and long-term basis. Financing to change the use of land did not complement this. This situation has left a large portion of participating landowners unable to repay their debts.
The predominantly conservationist focus implemented in the Trifinio Plan remains quite detached from the need to promote interventionist processes and models that integrate the territory’s social, economic, and environmental dimensions. The perspectives of incorporating sustainability criteria have stemmed from local organization and participation. A good part of the actions in the other areas of the Trifinio Plan’s implementation have been limited to responding to demands for social infrastructure projects. In the majority of cases, these actions have led to a dependence upon outsiders for providing services, and are characterized by a low level of active beneficiary participation. Reversing this tendency depends, to a large extent, on promoting more participatory processes for joint or shared responsibility.

Integration of the management of the watershed’s hydraulic resources is very limited in the plan’s conception and implementation. The role of water in the plans, actions, and processes currently underway has a very low profile in relation to the attention given to land and forest resources, and its inclusion has mostly just been superimposed.

The Trifinio Plan has generally not incorporated an urban dimension. Sustainable strategies do not exist for overseeing processes of managing Trifinio’s principal urban centers (Esquipulas, Ocotepeque, and Metapán). These urban centers strongly influence development through the expansion of disorganized marginal urban areas, pollution, and the pressure placed upon land and vulnerable areas. This implies a need to design and develop urban management strategies and their links to rural areas, requiring the consideration of important efforts made by other actors.

4. REPLICABILITY

In general, there has been a very positive assessment of the cooperation among the three governments within the Trifinio experience. The experience is defined as a symbol of integration among the countries, which through joint and coordinated efforts have achieved a common intervention. The possibility of replicating the model in other trans-national initiatives is being considered by the vice-presidents. According to national representatives, in light of the Trifinio experience there is interest in proposing a trans-national organizational model. This model should be expressed in the institutional and legal frameworks of Central American integration, and its managing bodies should be based upon the results and institutional arrangements obtained in the Trifinio.

There is a current consensus among the national authorities of Guatemala and El Salvador for the formation of an international legal instrument that would allow for a Bi-National Commission for the Peace River (Río Paz) watershed. The Trifinio experience, which has been assessed in very positive terms, generates expectations of such an experience being reproduced in the basin of the Peace River. Within this framework, applications have been made to the OAS to formulate a treaty responding to the Trifinio region’s conception, and creating an institutional structure with similar attributes and characteristics for the Peace River basin. Everything seems to indicate that the process initiated to replicate the Trifinio experience is irreversible. This is why now is the time to ensure that the management of hydraulic resources is given due importance within this new arrangement. The general observations made by the vice-presidents of both countries clearly indicate the need to design a legal instrument for establishing the Bi-National Commission, since its creation could access sources of international cooperation for implementing concrete actions within this basin.

In this sense, the observations made by the representatives of the vice-presidencies are important for incorporating the lessons learned from Trifinio. Above all, they all refer to the need for an active social foundation within the territory, which would include the local authorities and the community organizations. These could
guarantee the approval and sustainability of actions in the long term. However, despite the recognition and expression of the need to advance in this manner, all signs indicate that they would be unwilling to wait for a process initiated from the grassroots level because of the time that this would take. Because of this, it is assumed that within the process for the Paz River basin, the creation and signing of the Bilateral Treaty will be promoted simultaneously with local organizations. The scenario envisioned will again be the treaty and the establishing of a bi-national institution that will determine the margins of labor and actions of the local actors. This will serve to reproduce the Trifinio experience in a similar manner.

It is expected that the emphasis on managing hydrological resources will be different from that of the Trifinio experience. This will likely open up possibilities for the process in the Peace River basin to integrate the management of hydrological resources as a dynamic element in the activities of the watershed. There is a current consensus among the national authorities of Guatemala and El Salvador to move forward in the establishment of an international legal instrument that would allow for the creation of a Bi-National Commission for the Peace River watershed.

Replicating institutional schemes is not a mechanical act. In processes such as these, it must be guaranteed that the institutional framework being built can set up more concrete mechanisms for involving local actors. Beyond the vision of the functionaries, it would appear that Central America should not follow the path of reproducing treaties for each and every trans-national initiative.

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Guatemala and Honduras, for the balanced and harmonic development of the region’s tri-national area). Joint Declaration made by the Tri-national Trifinio Plan Commission.

**Interviewees**

Danilo Bueso Fiallos, Former Executive Secretary, Tri-National Trifinio Plan Commission.
Hernán Romero Chavarría and Daniel Oberti, Representatives of BID-El Salvador.
Juan Carlos Montufar, Coordinator of the Trifinio Plan’s Technical Unit, Guatemala.
Miguel Sandoval, Coordinator of the Trifinio Plan office in Metapán-El Salvador.
Héctor Arita, Coordinator of the Trifinio Plan office in Ocotepeque-Honduras.
Esperanza de Rivas, Assistant to the Vice-Presidency, El Salvador.
Giancarlo Angelucci, Private Secretary, Vice-Presidency, El Salvador, and National Director of the Trifinio Plan.
Julian Muñoz Jiménez, Representative for the Vice-Presidency of Guatemala and National Sub-Director of the Trifinio Plan.
Reginaldo Salazar, President of ATRIDEST, El Salvador.
Fernando Moreira, President of ATRIDEST, Honduras.

**Keywords:** transnational watershed, international cooperation, citizen participation, institutional development, erosion, flooding controls
Constitution of UNESCO (excerpt)
London, 16 November 1945

The Governments of the States Parties to this Constitution on behalf of their peoples declare:

That since wars begin in the minds of men, it is in the minds of men that the defences of peace must be constructed;

That ignorance of each other’s ways and lives has been a common cause, throughout the history of mankind, of that suspicion and mistrust between the peoples of the world through which their differences have all too often broken into war;

That the great and terrible war which has now ended was a war made possible by the denial of the democratic principles of the dignity, equality and mutual respect of men, and by the propagation, in their place, through ignorance and prejudice, of the doctrine of the inequality of men and races;

That the wide diffusion of culture, and the education of humanity for justice and liberty and peace are indispensable to the dignity of man and constitute a sacred duty which all the nations must fulfil in a spirit of mutual assistance and concern;

That a peace based exclusively upon the political and economic arrangements of governments would not be a peace which could secure the unanimous, lasting and sincere support of the peoples of the world, and that the peace must therefore be founded, if it is not to fail, upon the intellectual and moral solidarity of mankind...