
CASE STUDY ON ENVIRONMENTAL LAW ENFORCEMENT AND COMPLIANCE IN COSTA RICA: WATER POLLUTION WITH TOXIC SUBSTANCES

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SUMMARY

In October 1999 a Criminal Tribunal sentenced Costa Rican property owner to five years in jail and the payment of civil compensation in the amount of \$4570 for "moral damages" for dumping poisonous substances into a river, polluting fresh and underground waters in a rural community of San Rafael de Tarrazu in the province of Cartago. The property owner used the substances in his coffee plantation but dumped left over residues and cleaned his contaminated equipment in the river.

The substance used by the defendant is known as "Biofox" or "Conter" which is a toxic chemical that can be lethal if it is not used appropriately. In the present situation, the pesticide was used in a negligent manner, polluting most of the drinking water sources in the community and causing serious health related illnesses to the local community.

The evidence included water tests from the National Water and Sewage Company, medical reports from victims and testimony from witnesses who saw on several occasions how the defendant dumped the substances into the river. The Environmental Prosecutor, in coordination with the local Court Prosecutor, played an important role demonstrating to the judges that there was enough evidence to sentence the defendant, who violated several articles of the Health Law, the Wildlife Conservation Law and the Forestry Law.

The decision in this case is particularly significant because it has been very difficult historically to sentence responsible parties in environmental crimes. The case received great attention from the press and was considered an important step forward for environmental enforcement in Costa Rica. It was particularly important for future environmental prosecution because of important advances in data collection and management, evidentiary requirements (burden of proof issues) and legal procedure. The discussion of this case seeks to explain the circumstance; rule of law issues and lessons learned from this exemplary case.

1 BACKGROUND

Legal complaints and actions involving environmental violations are rapidly increasing in Costa Rica. Some of the more common issues include illegal use of resources of the public domain including environmental crimes related to forests (mainly illegal logging in private and public areas), pollution of waters (dumping of solid waste, wastewater and toxic substances into rivers), illegal beach development (infrastructure development in

prohibited areas).¹ Other recent cases relate to damages to forests and underground soil in mining activities and pollution from industrial activities.

There are many limitations at the administrative and judicial level to ensure an appropriate level of enforcement and compliance of environmental legislation. Environmental damages are not usually considered "serious damages" since human beings often are not the direct victims of such harms. In addition, there is no clear notion of the valuation of natural

resources and in many legal processes sanctions are very lax.

In the present case the defendant committed the same crime for the second time in 1994. The farmer was responsible for three different crimes: cutting trees on the edge of a watershed,² removal of vegetation to plant coffee³ and dumping of toxic chemicals into a watershed and causing harm to the health of the members of the local community. The Court dismissed the first two crimes but sentenced the defendant in 1997 to six months in jail for the third crime. The Court decided to give the defendant the benefit of "conditional freedom"⁴ for a period of three years.

2 PRESENTATION OF THE SITUATION

2.1. Description Of Facts

The defendant in the case, is the owner of a property of 6986 m², located in the town of San Rafael de Tarrazu, in the province of Cartago, 22-km southeast of San Jose, the capital city of Costa Rica. Cartago is an important agriculture zone because the altitude of its lands that varies from 1435 to 3432m and offers ideal climatic conditions for many products. The variations in altitudes make the surface of the land very irregular with a lot of mountains and steep terrain.

The property is part of a watershed, which from its highest point flows down through a creek for about 75 meters straight to the water storage tank that provides drinking water to 13 families in the community of approximately 30 people. In addition to using the water for drinking purposes, this water is also used for cooking, laundry, watering plants, and for their animals. The watershed, the creek and the water storage tank are located on the defendant's property. The property is primarily a coffee plantation but the area around the watershed and the creek was covered with thick vegetation and trees that provided protection to this water source. The surface of the terrain is very irregular and the land next to the watershed and creek has a steep angle of 40%, which makes the zone very vulnerable to erosion

and landslides and causes any erosion or agriculture runoff to go directly into the water. (See sketch of the area)

When the defendant bought the property, in 1993, the previous owner warned the defendant about the existence of the watershed, the creek and the water storage tank on the property, told him about the obligation to keep the vegetation on the edges of the watershed and the creek and to avoid using toxic or unusual substance near the water because it is the drinking water source for the neighboring community. These are legal obligations included in the Forestry Law that require a protection area on the sides of watersheds, rivers, in order to protect the water source, and the Wildlife Conservation Law that prohibits discharges of untreated waste waters, toxic or unusual substances.

A few months later, the defendant destroyed all the vegetation on the edges of the creek and cut all the trees of 5 and 10 centimeters of diameter to plant coffee. At approximately the same time, the defendant used some chemical substances on his coffee that caused contamination of the water. At that time the Criminal Court of Cartago found the defendant guilty and sentenced him to six months in jail with "conditional freedom."

By June 1997, the vegetation had grown back around the edges of the watershed and creek. The defendant then removed all the vegetation for a second time and planted new coffee plants.

On July 7, 1997, early in the morning the defendant accompanied by three sons and his employees sprayed the pesticide known as "Conter" or "Biofox"⁵ on the new coffee plants and then washed their equipment and buckets in the watershed. This product is highly toxic and poisonous when it is mixed with water turns into a dangerous poison that can be lethal to humans and animals that ingest it. Some members of the community, who were aware of such risk, warned the entire community and decided not to drink the water from the community water source.

The next day, the rain came and the chemical was washed off the plantation

causing the waters to have an intense smell. In addition, many in the community became very sick with diarrhea, vomiting and others with even more serious complications were taken to the hospital. The evidence will be discussed later.

2.2. Impacts And Reactions

The described facts seriously alarmed the entire community because many of them are farmers and know about the risks from the exposure or ingestion of the chemical has on human health.

Immediately after the incident the neighbors who saw the defendant contaminating the water warned the rest of the community to avoid drinking the water from the watershed. The entire community became very concerned about the situation and immediately stopped drinking water from the watershed. In addition to the serious health risks, the situation presented economic implications for the community. They all had to buy bottled water and had to pay for doctors, hospital bills and medicine.

The defendant is known in the community as a powerful and wealthy coffee farmer. The members of the community tried to approach him to demand an explanation for his actions. Apparently, he chose not to talk them and was reported to be "arrogant and rude." The same day of the events the community members went to the local office of the Ministry of Health and the local police to file a complaint but they were told that they needed a legal representative to do so. They returned the next day with a lawyer and filed a legal complaint on July 8, 1997.

The community was very skeptical and many of them considered that the complaint was a waste of time because this type of offenses is rarely punished. In addition they believed that since the defendant as a wealthy farmer he would have the means to control the situation. The community was hoping to find a response from the Judicial System and to be compensated for the harm they were experiencing.

Inspectors from the Ministry of

Health, Ministry of the Environment, the National Service of Waters, local police and an investigator from the local prosecutor's office visited the site the following day, where they observed that there were coffee plants on the edge of the watershed and the creek, as well as the presence of bags of pesticide and an unpleasant smell in the water.

After the inspection, the Prosecutor's Office of Tarrazú received the complaint from the members of the community that felt harmed by the defendant's actions. The Prosecutor's Office conducted a preliminary investigation, gathered evidence such as testimony of some of the witnesses and visited the site. However they did not gather any physical evidence such as bags, and did not take any water samples. The case was mainly built based on the information provided by the witnesses, neighbors and affected parties. The prosecutor presented a formal case to the Court Tribunal in Cartago based on the violation of several dispositions of the Health Law, the Forestry Law and the Wildlife Conservation Law.

2.3. Legal Case

The prosecutor of Tarrazu, in coordination with the national environmental prosecutor, worked diligently to prove the facts and show to the Tribunal that the defendant was responsible for the crimes of destroying a protected area under the Forestry Law, polluting the water and causing harm to human health. However the main limitations faced by the team was the lack of a water test to serve as technical evidence and to show the presence of the chemical substance in the water. Nevertheless, they built a strong case based on the evidence presented by technical experts and the testimony of witnesses and victims in the case.

Some of the preliminary testimonies gathered by the Prosecutors to build the case were by affidavit. Then the Court decided to hear the case and opened the forum for live testimony in court.

3 EVIDENCE PRESENTED BY TECHNICAL EXPERTS

3.1. Results Of The Investigation

The investigation performed by the technical experts demonstrated that the defendant planted coffee on the edge of the watershed and creek and there were traces of the use of a chemical product.

A chemist with the National Service of Waters said that the property is in a forestry protection area⁶ with a watershed and a creek that has coffee plants on each side. He confirmed that there is a supply tank with three pipes that distribute the water to 13 families in the community. He also reported the presence of bags of the pesticide Conter just one meter from the watershed.

A Regional Officer of the Ministry of Health explained that he visited the site in 1998 and saw a creek with no vegetation on either side, but with coffee plants instead. He determined that the coffee was planted on a land that was previously covered with natural vegetation and trees on both sides of the creek. He also mentioned seeing some white bags on the side of the creek.

3.2. Type Of Terrain Angles And Use Of Land

The prosecutor's objective was to demonstrate that the defendant changed the use of land on a very steep hill causing instability of the land and making it more vulnerable to erosion and slides.

A forestry engineer of the Ministry of the Environment explained that there is an angle of more than 40%, that makes the surface very irregular and unstable. This area is a forestry-protected zone and is only suitable for forestry activities. The topsoil is thin and not very productive and will require a lot of fertilizer to carry out agriculture activities. He also explained that a change in the land use in this site was not appropriate.

According to the chemist with the National Service of Waters and the Regional Officer of the Ministry of Health,

the defendant's property has a steep hill and it is obvious that with the rainfalls the agricultural runoff would pollute the watershed since the leaching is very fast on the surface and under ground.

3.3. Risk To Human Health

The main concern of the prosecutor's was to show that the defendant was undertaking a very risky action because of the type of product he was using and the type of terrain on the site. The technical experts explained that any presence of the chemical Conter is harmful to human health in the short and long time and is considered by the World Health Organization (WHO) as toxic for human health. The technical experts presented in Court are public officials working with government agencies that have an established reputation and credibility in their fields of expertise. These officials represent the National Service of Waters that is the agency responsible for ensuring the quality of drinking water, the Ministry of the Environment that is the agency responsible for protecting natural resources and enforcing protected areas, land use limitations, and pollution of water sources among others; and the Ministry of Health that is responsible for protecting human health, ensuring quality of drinking water and enforcing health standards among others. The evidence from the WHO was not supported with any specific documentation but the defense did not make objections during the testimony. In addition, the forestry engineer of the Ministry of the Environment said that Conter "is a highly toxic pesticide that can be residual and its gases can pollute the creek by evaporation or as part of the runoff."

The Regional Officer of the Ministry of Health demonstrated that there could be infiltration and contamination by runoff into the waters because of the angle of the terrain.

3.4. Impacts On Health

The prosecutors needed to prove the negative impacts that these chemical substances have on human health and the

vulnerability of the watershed and creek for being exposed to environmental risks.

The chemist with the National Service of Waters assured in his testimony that the symptoms of intoxication could be very severe including stomach pain and nausea or chronic when the person has been exposed to small quantities of the substance for several years. He also stated that small children and the elderly are at higher risk of become ill.

The Regional Officer of the Ministry of Health stated that when the watershed is not protected by trees or vegetation there is a higher risk of contamination of the waters and he noted that there is higher risk for the health of children.

The forestry engineer testified that Conter is a very toxic pesticide. "It emits toxic gases in extremely hot and humid areas. It can intoxicate people with evaporation and rainfalls. The product was applied to a coffee plantation. Coffee is very erosive and all the substances applied to it will run off to the river." The other product Biofox is applied twice a year during the rainy season to make it last longer but is highly toxic and could even cause the death of workers when applying the product without safety equipment. "There were empty bags one meter from the water tank that shows that the fumigation pumps were cleaned there," he added.

3.5. Impacts On The Ecology, Watershed, Creek And Waters

This argument was a difficult one for the prosecutors to support with technical evidence because the water laboratory tests were performed one year after the actions took place and there was almost no trace of the substance.

The Regional Officer of the Ministry of Health, testified that it is a fact that the application of a chemical product so close to the watershed will cause some contamination in the water.

However, the chemist, explained in his testimony that the lab test performed showed an alteration in the bacteria concentration, color (due to organic decompo-

sition) and muddiness (due to erosion), but no traces of a chemical substance. In addition, he stated that when the watershed is not protected it is more susceptible to contamination.

The forestry engineer of the Ministry of the Environment, mentioned in his testimony that "the ecosystems were damaged, the forest suffered a decrease in its economic value, its capacity to sequester CO₂, its scenic value and an evident impact on the social, ecological and economic value of the area."

3.6. Recommendation And Measures To Take

It was evident that the newly planted coffee caused serious damages to the ecosystems and the watershed. The technical experts made the following recommendations:

1. to install a pipe to protect the water from watershed that was flowing into the tanks;
2. to enforce the legal protection of 100 meters on each side of the watershed;
3. to eliminate the coffee, and allow the regeneration of vegetation on 100 meters of the sides of the watershed and creek.

4 TESTIMONY OF THE COMMUNITY MEMBERS

The Prosecutors' case was also based on the testimony of the members of the community that either witnessed the defendant's illegal actions or experienced some health and other impacts from such actions.

4.1. Ownership Of The Property

The member of the community that testified in Court stated that the defendant who bought the land from another neighbor owns the property. They also pointed out that the previous owner did protect the watershed, which was covered with trees and vegetation in the area of the creek.

4.2. Removal Of Vegetation On The Side Of The Watershed

There is very clear evidence that the defendant removed the vegetation cover in a protected area as was stated by the technical experts that visited the site and the testimony of the members of the community that witnessed such actions said they saw the employees of the farm removing the grass and vegetation on both sides of the watershed.

The prior owner of the property testified that the area around the watershed was previously covered with grass and vegetation but some time later was completely clean. He also stated that he told the defendant that he had the responsibility to take care of the watershed to prevent any problems. Others said in their testimonies that the defendant cut all the vegetation as soon as he bought the property.

One neighbor mentioned in his testimony that in the countryside they all have the awareness and tradition to protect the watersheds and the water, and that they do not destroy the vegetation. He personally believes that protecting the watersheds on his property is important for the quality of water for humans and animals.

4.3. New Coffee Plants

The community witnesses also testified to the fact that the defendant planted new coffee on the side of the watershed; some 50 cm from the edge and that he then sprayed the plants with the pesticide. An attorney with the National Service of Waters also testified that there were small coffee plants very close to the watershed.

4.4. Use Of Pesticide

The witnesses reiterated that they saw the defendant, his sons and employees spraying pesticides in the coffee plantation and on the plants on the edge of the watershed. Another neighbor testified that he saw the defendant with two employees and his sons spraying pesticide (Conter), which is very hazardous, on the edges of the watershed and the creek. This product is granulated and comes in medium size

bags. It was in the defendant's truck and they were taking it out of the bags with gloves and their bare hands. "I run to the community and warned all the neighbors not to drink the waters because all the contamination goes directly into the tank." He also saw the employees and sons dumping leftover quantities of the substance into the water and washing the equipment directly in the watershed. When the product is mixed with water it makes a lot of foam and the smell is very intense.

Other witnesses testified that they saw the bags on the side of the watershed and the day after the pesticide was applied it rained and the smell became very strong and the water tasted like pesticide. One witness said that her family had to buy bottled water to drink but she had to use the water from the tank to do laundry and for cooking.

4.5. Harm And Effects On Human Health

The pesticide used by the defendant is known to be highly toxic and harmful to human health. In this situation, many people in the community became very sick from exposure to the vapors of the chemicals and drinking contaminated water. A neighbor said in his testimony that there are 13 families in the community and all of them drink the water that comes from the watershed. "I am a farmer and know that this poison is very bad and that is recommended to wear mask and goggles when using it. I saw them dumping the product in the water because when mixed with water it creates a lot of foam. The sad thing is that the defendant knows that the community drinks the water from this watershed, and even his employees drink from it. When we realized that the watershed was contaminated we had to get the water from another watershed. There have never been so many people sick in this community. The doctors said that a toxic substance or bacteria caused the diarrhea. My daughter was seriously ill but the doctors could not figure out the cause. I had to take her to the children's hospital downtown where the doctors said that the girl was intoxicated. My wife became sick a few days later as many

other neighbors including the elderly that were in bad conditions. We had to buy bottled water and could not use the watershed for any use. The smell was also very strong and lasted for over 20 days.”

Another witness said that “Both my son and daughter got sick to their stomach and had to stay in the hospital several times. The doctors agreed that they were sick because of exposure to toxic substances. I have gastritis, which I never suffered before, others got different stomach illnesses.” Another testified that the people started with vomits and diarrhea and the doctors recommended not drinking from that water. Her baby was seriously ill and almost died. He was then taken to the Children’s Hospital where the doctor said he was intoxicated. The baby just had her mother’s milk and boiled water. All her relatives became ill including her grandfather, cousins, uncles, brothers and their children.

A witness testified that 5 years ago a woman from the community had a spontaneous abortion that might have been caused by toxic substances in the water. “Just recently she had a baby that was born very sick and was taken to the Children’s Hospital where the mother was told that the baby was poisoned. Many children in the community suffered from diarrhea and vomiting. I also got gastritis and now have to buy bottle water all the time,” she added.

One witness testified that a few days after the pesticides were sprayed he felt nauseous and wanted to go to the toilet all the time, his children and wife got diarrhea and vomiting, many others got also sick and the doctors thought it was caused by intoxication. “There were never so many people sick in this community.”

4.6. Conclusions From The Prosecution

The Prosecutors’ concluded that it was evident that the defendant’s actions were the cause of contamination of the watershed.

Were there other sources of contamination? The Prosecutors’ explained that this was not likely because there are just two other neighbors that have proper-

ties near the watershed. Both of them testified that they do not use that type of chemicals. They also testified that the only access to the watershed is through these private properties and the owners know all the members in the community and did not notice any stranger doing anything unusual near the watershed.

Why the harm was not more severe? The Prosecutors’ concluded that the experts made clear in their testimonies that the chemical Conter is toxic and even lethal if a person ingests the product. They testified that there were no casualties from this incident mainly because the community took extreme measures to stop drinking water from the watershed. The community members were warned immediately after the watershed was contaminated and did not drink water coming from it.

4.7. Defense Arguments

The defendant’s attorney argued that there was not sufficient evidence to demonstrate what type of chemical was used. He added that it could not be stated as a fact that the defendant used a substance known as Conter, which is highly toxic, because there was no technical evidence to prove it. The defense witnesses explained about the toxicity of Conter.

A farmer from the community who witnessed the defendant’s actions, testified that from his experience he knows that if a person ingests Conter, he or she will die. “I had a pig that died because it drank from a bucket that was rinsed and probably had some residue of the product. It is not appropriate to apply the product on the edge of a watershed because is poisonous.” Another farmer from the community (witness of the defendant), testified that he knows from his experience that the chemical is very dangerous, if someone had dumped Conter into the tank, a lot of people would have died.

In addition the defense attorney attempted to discredit the prosecutor’s evidence because it was based completely on the testimony of the community members and that was not strong evidence to support the alleged facts.

The defense further argued that

there was also no evidence to prove the cause and effect link between the alleged actions of the defendant and the health related problems suffered by the community members. The defense explained that the watershed is exposed to many sources of pollution and is also near other properties. The only water test result showed that there were no traces of chemical substance in the water.

In his testimony, the chemist with the National Service of Waters explained that the lab test performed showed an alteration in the bacteria concentration, color (due to organic decomposition) and muddiness (due to erosion), but no traces of a chemical substance. In addition, he stated that when the watershed is not protected it is even more susceptible to contamination. The doctors testifying for the defendant concluded that they couldn't tell whether the symptoms came from toxic substances, or from bacteria, which presumably could have been an alternate cause.

The defendant's attorney argued that his client was not guilty because there was no clear evidence against him and there existed reasonable doubt that he was responsible for the health problems suffered by the members of the community.

5 CONSIDERATIONS OF THE COURT

5.1. Rule Of Evidence

The tribunal decided to use its discretion to analyze existing evidence stated in the Civil Law Principle "Immediacy of the Evidence" which allows judges broad discretion to analyze and evaluate evidence using the common sense, logic and psychology as main elements. This discretionary principle was confirmed in a ruling of the Constitutional Court⁷ that stated:

"Judges in the Criminal Process have the right and obligation to analyze the evidence presented during the trial according to the rules of common sense, using their discretion and applying objective criteria. The principle "immediacy of the evidence" gives a broad discretion to the

judge to analyze and to value the evidence, that has to document the content of the evidence and his rationale to prevent arbitrary or erroneous interpretations"

5.2. Facts Accepted By The Court

The Tribunal accepted as true facts that the defendant provided maintenance to his coffee plantation by applying agrochemical products to the roots of the plants, washing the equipment in the watershed on his property, and that the watershed supplies drinking water to 13 families in the community. In addition, the Court accepted as fact that the defendant dumped left over substances and residues into the water that then was to be drunk by the people of the community. This fact was demonstrated without contradictions during the oral hearing, where all witnesses, including the defense witnesses, agreed that the watershed and the creek are on the property of the defendant.

The Court also accepted as fact that the defendant bought the property around 1992, where there was previously a coffee plantation except near the watershed and the creek, which were covered by vegetation and trees. All the witnesses agreed that the defendant removed the vegetation and some trees to plant small coffee plants. However, the Court decided not to analyze the violation of the forestry law because according to the Criminal Process Law this crime cannot be longer argued in Court because of timing.⁸

The most important fact in this case is the action of the defendant when he, and others under his directions, applied the pesticide Conter in the roots of the new coffee plants located at a very short distance from the watershed and the creek. Many of the witnesses saw the defendant, with his sons and employees, conducting such action. The witnesses also identified the product as Conter and mentioned that there were bags of the pesticide left near the water. Most of the witnesses are farmers and can easily determine the smell of the pesticide. They all agreed that the chemical Conter was dumped in the water because they could smell it. In addition the

Water Judge⁹ from the local Municipality explained that the smell in the water indicated the presence of an agrochemical.

The Court concluded that, on July 7, 1997, the defendant, along with his sons and employees applied the pesticide Conter to the roots of the coffee plants located on the edge of the watershed and creek. He also washed the equipment and dumped chemical residues in the water.

The product used was Conter, which is considered highly toxic and dangerous for human health. The water smell and taste changed immediately after the defendant's actions. All the members of the community were directly or indirectly harmed by such actions. Some became very ill and had to visit doctors or be taken to the hospital. Others had to buy bottled water, representing a high economic burden for farm families with a very low income.

5.3. Rule Of Law

The rule of law applied to the present situation is in article 261 of the Criminal Code as part of the section on "Crimes against Public Health" and states the following:

"Water pollution with toxic substances:

Article 261: It will be a jail sanction from three to ten years, to any one that poisons, contaminates or adulterates, in a risky manner for human health, waters for public or community use. If the action results in the death of a person, the jail sanction will be from eight to eighteen years."¹⁰

5.3.1. "Contamination Of Waters For Public Or Community Use"

The evidence showed that the defendant's actions caused contamination of the creek and the watershed. The witness testimonies made clear that the defendant dumped the poisonous substance and washed the equipment in the watershed that supplies water to the community. The evidence also showed that the waters got an intense smell from the chemical substance and its color and taste also changed.

In Costa Rica all water sources are considered for public use, including rivers, creeks, watersheds, and wetlands, among others. In addition, the waters from the watershed and creek in the present case were collected in a water storage tank that supplied drinking water to the entire community. It is clear that the defendant's actions contaminated the waters. It is also clear that these waters are for the use of the community.

5.3.2. "In A Risky Manner For Human Health"

This is a crime where it is only necessary to show that the defendant's actions created "imminent danger." Risk associated with the action is enough to demonstrate the responsibility of the defendant. The law punishes the potential risk of the action because protecting human health does not require a specific harm or concrete result.

The defendant applied the chemical product Conter, which is toxic, harmful and even lethal, on the coffee that he planted on the edges of the creek and the watershed, where he even washed the equipment used in the fumigation. With his actions the defendant went beyond the "imminent danger" and caused an "actual harm" to human health.

It was demonstrated that most of the members of the community suffered some health related illnesses, including diarrhea, vomiting and gastritis. Many visited a doctor and some were sent to the hospital. Small children were taken to the Children's Hospital. The situation also caused emotional distress because of the uncertainty of their health problems and the economic expenses involved.

5.3.3. "Knowledge And Intent"

There is enough evidence to sustain that the defendant knew about the imminent danger of his acts because we had knowledge of the existence of the watershed and the creek inside his property. In his testimony, the previous owner of the property pointed out that he warned the defendant about the existence of the water-

shed and creek and their importance as the drinking water source for the community and its 13 families. In addition, as an experienced farmer the defendant also knew about the type of products he was using and their toxicity. He also knew that the plants were too close to the water and the steep angle would cause the chemical to runoff to the water.

Since the defendant had knowledge about the risks of his actions, it is clear that he intentionally contaminated the water because he could have taken appropriate measures to avoid causing such harm. It is obvious then that the actions of the defendant violated article 261 of the Criminal Code and that he was responsible for the crime of water pollution with poisonous substances.

5.4. Decision Of The Criminal Tribunal

On October 19, 1999, the Criminal Tribunal of Cartago¹¹ declared that the defendant was guilty of the crime of contamination of substances used for food or medicinal purposes committed against the public health, for which he was sentenced to five years in prison without parole. The jail sanction stated in the Criminal Code establishes a minimum of three years and a maximum of ten years for this specific crime. The Court considered that the action was serious enough to impose a sanction higher than the minimum. The Court decided to sentence the defendant to five years in jail without parole and ordered the removal of the coffee plants.

The Civil Actions filed separately by the State (in representation of the community) and by one individual (personally) were accepted. The amount awarded to the State was \$3050 (three thousand and fifty dollars) and \$1520 for "moral damages" to the individual.

5.5. Decision Of The Court Of Appeals

The defendant filled an appeal at the Court of Appeals¹² against the decision of the Court Tribunal based on three specific aspects: analysis of the evidence, reasonable doubt and incorrect application of

the rule of law. The Court rejected the appeal based on the reasoning explained below.

5.5.1. Analysis Of The Evidence

In his allegations the defendant argued that the Judges stated as a fact that he applied in his coffee plantation a substance known as Conter, which is highly toxic, without any technical evidence that really proved the use of such chemical. The defendant argued that the Court based its decision on witness testimonies and did not rely on the technical criteria of an expert on agrochemical products or medical reports from the victims. He also stated that the Court did not analyze the evidence based on "common sense" and applied its "free judgment" in deciding this case. In his appeal, the defendant claimed that the testimony evidence showed that the victims suffered vomiting and diarrhea because the water is not safe for human consumption due to the presence of some fecal coliforms and not because the waters were polluted with a toxic substance.

The Court of Appeals rejected the claim and explained that the Judges in the Costa Rican Judicial system have freedom to decide on the means of evidence and that there is not a method to define which means or aspects of the evidence have more weight in the case including technical reports. In this particular case, there are particular elements that provide technical evidence and that led to the decision of the Court. The plaintiff was accused of applying toxic chemicals to the roots of coffee plants located in the edges of the watershed in his property, for dumping residues and for cleaning the equipment in the river that provides water to the community. The chemical substances sprayed to the coffee plants infiltrated into the water contaminating it and changing its color and odor. These people received medical attention and the entire community had to find other sources for drinking water.

There are just 13 families in this small community, many of them were born there and are very familiar with the watershed that is their main sources of drinking

water. As soon as they noticed the contamination and the symptoms of some neighbors they alerted the rest of the community and called the police. The residents are also very familiar with coffee production and maintenance because they own coffee plantations or work in them. There were at least four members of the community that saw the defendant apply the product, which they know and identified without any doubt as Conter.

The Court of Appeals supported this position based on the witnesses' testimonies including one who testified, "...we filed a complaint because there were residues of the chemical Conter on the banks of the watershed. We inspected the site closely and saw the pesticide, we also saw the defendant and his sons applying the poison and dumping it into the river." In addition, another witness, said that he saw the defendant apply the pesticide on the roots of the coffee plants that were on the edge of the watershed, the smell was very intense because the product got mixed with the water.

Some of the technical experts corroborated these facts including the forestry engineer who said: "I saw many bags of Conter, a very toxic pesticide. It emits toxic gases in extremely hot and humid areas. It can intoxicate people with evaporation and rainfalls. The product was applied to a coffee plantation. Coffee is very erosive and all the substances applied to it will run off to the river. I also noticed some coffee plants that were recently planted on the edge of the river where the vegetation was removed."

Officials from the local Municipality and the Ministry of Health that inspected the site testified that they saw some granulated fertilizer and white bags from a chemical product, known as Conter, on the side of the watershed. They testified that the smell was very strong but they did not take water samples.

The Court of Appeals stated that although there was not a technical analysis on the situation the testimonies come from qualified individuals such as farmers, a forestry engineer and officials from the

municipality and Ministry of Health confirmed that the product used on the edges of the watershed is Conter because of its particular characteristics.

5.5.2. Reasonable Doubt

The defendant also challenged the decision based on the reasonable doubt regarding the cause-effect of applying chemicals on his property and the symptoms experienced by the members of the community. The defendant based this argument on the testimony of a witness who explained that the watershed is open, exposed to any source of pollution, without a fence, not protected and near a public pathway and that there could have been many other circumstances that caused the problems with the water. The doctors concluded that the cause of the symptoms was from a toxic substance or bacteria, and some bacteriologic analysis showed that the quality of the water is not up to recommended health standards. The defendant relied on the water tests that showed no evidence of chemicals in the watershed. In addition, the witnesses testified that Conter is such a toxic substance that any ingestion by humans could be lethal, and since there were no deaths in the community there is a strong indication that the origin of the symptoms was bacteria. The defense also pointed out that there are other properties with coffee plantations near the watershed and that they could also have been the source of the contamination.

The Court of Appeals rejected this argument and justified the decision of the Criminal Court that found the defendant responsible for the alleged facts. There is enough evidence to show that the defendant's actions contaminated the water and the community became sick after using the water from the watershed. The Court clearly stated that the defendant sprayed the toxic substance on the coffee plants in his property near the watershed with a product that is toxic and harmful. This statement is supported by the testimony of the witnesses, inspectors and officials from several government agencies. The water tests cannot be used as technical evidence

because they were performed one year after the facts. The concentration of chemicals does not last in the water for that long because the water flows so these tests are not conclusive for this case. The criteria of the chemist of the National Service of Waters, is that if the sample is not taken right after the fact it is not possible to find traces of the chemical.

5.5.3. Incorrect Application Of The Rule Of Law

The defendant argued that article 261 of the Criminal Code requires the existence of two elements for its application, which are: actual poisoning, contamination or adulteration and that such actions were undertaken in a risky manner. In his allegations the defendant explained that the Tribunal found him responsible for poisoning the waters, however the judges only looked at the witnesses' testimonies and did not consider the water tests that showed that there were no traces of chemicals in the water.

The Court of Appeals rejected the claim because the Tribunal made a clear statement of the facts and applied the rule of law in the right way. The questioning regarding the evaluation of the evidence was previously addressed.

6 FINAL CONSIDERATIONS

This sentence was very important because it has been difficult in the past to prove this type of crime and in many cases the investigations end without enough evidence to take the responsible parties to Court. The Tribunal of Cartago set a significant legal precedent and an important example to discourage other from undertaking this type of action.

In addition the press coverage helped publicize the Court decisions and the situation faced by the community. Many victims of environmental harm do not file a complaint because they do not believe that the responsible person could go to jail and in many circumstances they preferred to avoid the trouble of serving as witnesses in the legal process.

The court decision was a victory for the Community of San Rafael de Tarrazu, in Cartago and its 13 families who again can safely drink the waters from the watershed that supplies their drinking water. In addition the Court set an important precedent recognizing the civil responsibility of the defendant and awarding a compensation fee for the community.

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- 1 State of the Nation on Sustainable Human Development (Estado de la Nación en Desarrollo Humano Sostenible) a report sponsored by the United Nations Development Program, 1999, pp. 233
- 2 Articles 33 and 34 of the Forestry Law establish as protected areas, the areas located on the edges of permanent watersheds and prohibit cutting of trees located in protected areas.
- 3 This activity is considered as a change in land use and requires a permit.
- 4 Conditional Freedom is the equivalent of "probation" and is a benefit for a convicted person who does not have a criminal record. In the present situation the defendant was be on probation for three years and in the event of being sentenced for another crime the six months jail sentence is to be added to the new sentence.
- 5 "Conter" and "Biofox" are two different products but are equally highly toxic and harmful to human health. Some coffee farmers use these products to kill nematodes. In the present case the product was not specifically identified and was referred as "Conter or Biofox" For the purposes of this case study the product will be referred as Conter.

- ⁶ Article 33 of the Forestry Law establishes protected zones the areas around watersheds, and the sides of streams, creeks, and rivers, where the vegetation and trees cannot be removed. The limitation depends on the location and surface including: one hundred meters around the watersheds, fifteen meters (in rural areas) and ten (in urban areas) on the sides of rivers, creeks and streams and fifteen meters when the surface is irregular and steep.
- ⁷ Constitutional Court, Decision #1739-92, of July 1st, 1992)
- ⁸ The crime of “illegal removal of vegetation on the edge of a water source” cannot be prosecuted more than 18 months after it was committed.
- ⁹ The Water Judge is an administrative official that hears and decides on disputes involving water cases such as water rights, uses, permits and pollution of waters.
- ¹⁰ Article 261 of the Criminal Code of Costa Rica.
- ¹¹ Sentence N° 572-99, approved at fifteen thirty on October 19, 1999, at the Court Tribunal in Cartago.
- ¹² Sentence N° 733-00, approved at nine hours and fifty minutes, on June 30, 2000 at the Court of Appeals in San José

