REPUBLIC OF KENYA

IN THE ENVIRONMENT AND LAND COURT OF KENYA

AT NAKURU

ELC NO.405 OF 2017

JANE WAGATHUITU GITHINJI.....1ST PLAINTIFF

ISAAC KAMAU KABIRA.....2ND PLAINTIFF

JACKSON GICHUKI KABIRA.....3RD PLAINTIFF

VERSUS

SOJANMI SPRINGFIELDS LIMITED.....1ST DEFENDANT

NATIONAL ENVIRONMENT

MANAGEMENT AUTHORITY.....2ND DEFENDANT

COUNTY GOVERNMENT OF NAKURU.....3RD DEFENDANT

JUDGMENT

(Plaintiffs owning land downstream; 1st defendant operating a flower farm upstream; land of the plaintiffs flooded with water which the plaintiffs claim is caused by activities of the 1st defendant upstream; plaintiffs further claiming that the water is contaminated; 1st defendant having built a dam which burst; burst dam leading to flooding of the land of the plaintiffs and creating a dedicated new water channel through the land of the plaintiffs; land of the plaintiffs severely degraded; direct connection between the degradation of the land of the plaintiffs and the activities of the 1st defendant; 1st defendant liable under the polluter pays principle and the Rule in Rylands- Vs-Fletcher; plaintiff further challenging the EIA licences issued by NEMA; NEMA issuing an EIA licence for the dam based only on a project report; Dams being contained in schedule 2 of EMCA which requires a full EIA study Report; wrong for NEMA to issue the EIA licence; various other orders issued based on questions relating to the integrity of the dam, alleged discharge of effluent, use of soak pits and directions issued on rehabilitation of the locality).

PART A: INTRODUCTION AND PLEADINGS

1. This suit was commenced through a plaint which was filed on 19 October 2017. The 1st plaintiff is the owner of the land parcels LR Number 1507/15 and LR Number 1507/16 both measuring approximately 16.253 hectares, the 2nd plaintiff the owner of LR No. 1507/09 measuring 12.10 hectares, and the 3rd plaintiff is the owner of the land parcel LR No. 1507/10 measuring 12.10 hectares as well. These parcels of land are located within Kang'utu village, Njokerio sub-location, in Njoro sub-county, Nakuru County, and are pleaded to be farms that are used for growing maize, Boma Rhodes grass for hay, Kalkadi, and also for dairy and mixed farming. It is averred that the 1st defendant operates a flower farm in Mwigito area towards the Mau Forest area of Njoro Sub-County, measuring about 45 hectares with 45 greenhouses. This farm is said to be on a hill and about 2 kilometres from the plaintiffs' farms and is separated by Michorui village with a population of about 300 peasant farmers' families. It is pleaded that in the farm, the 1st defendant has two dams with one serving an ornamental purpose while the main dam serves as a water reservoir for drain water from around 36 hectares of their greenhouses. It is pleaded that sometimes in August 2014, the 1st defendant's dam broke its banks and its waters raged downhill resulting in amongst others, the carting away of domestic animals, farm produce and the destruction of roads, property and farms, in Michorui, Kang'utu and Rurii villages. It is averred that the burst waters full of debris percolated on the 1st plaintiff's land and damaged her fence in addition to carting away approximately 3.3 hectares of Boma Rhodes grass for sale and Kalkadi meant for consumption by the 1st plaintiff's dairy cows. It is pleaded that the water also destroyed the 2nd plaintiff's fence bordering the road next to the 1st plaintiff's land and two acres of maize carted away. It is pleaded further that on its course, it also destroyed the boundary fence shared by the 2nd and 3rd plaintiffs and carried away 3 acres of the 3rd plaintiff's maize. It is stated that following this, the 1st defendant embarked on an exercise to compensate villages and

affected parties, for the crops and livestock that they lost, but the plaintiffs were excluded from such compensation. It is pleaded that sometimes in the year 2015, the general manager of the 1st defendant, one Kiran Nangare, together with other members of the 1st defendant's management , visited the 1st plaintiff's farm, apologized for the damage and offered to compensate her for her loss and damage to her land. The 1st plaintiff avers that she declined the offer but the parties instead arrived at a mutual agreement that the 1st defendant would create measures to ensure that their water is contained within their farm and that the 1st defendant would rehabilitate the 1st plaintiff's farm by filling in gulleys created and remove the debris dumped therein and return the same to its original form as far as humanly possible. It is pleaded that the 1st defendant under the guise of rehabilitating the 1st plaintiff's land and without the approval of the plaintiff, dug trenches in the 1st plaintiff's land, which trenches the plaintiffs believe were deliberately dug to serve as water channels for draining water from the 1st defendant's farm.

2. It is averred that in furtherance of their mischief, and despite the burst dam, the 1st defendant applied to the 2nd defendant, the National Environment Management Agency (NEMA), to extend the farm by 9 additional hectares of greenhouses, which permission was granted on condition that, the main dam being functional, 1st defendant would build an additional dam to hold the drain water from the additional 9 hectares. It is pleaded that in granting the said permission, the 2nd defendant failed and/or refused to ensure that there was public participation by the actual residents of the area especially those affected by the floods from the burst dam.

3. It is further pleaded that the Physical Planning Department of the 3rd defendant, the County Government of Nakuru, irregularly and illegally approved the development plans for the 9 hectares of greenhouses despite the 1st defendant failing to meet the conditions and regulations set down by the 2nd defendant.

4. It is averred that the 1st defendant proceeded to construct and utilize the 9 extra hectares of greenhouses with no pan area and consequently proceeded to release the water collected from the extra 9 hectares of greenhouses into private property and downhill to the plaintiffs' property. It is claimed that to further their breach, the 1st defendant proceeded to dig boreholes for their farm use instead of recycling water from the dam. It is contended that due to weakness of the existing dam, the 1st defendant releases effluent from the chemical spray areas, which mixes with water from the dam and runoff water from the greenhouses, and which effluent is then continuously released downhill in the trenches dug by the 1st defendant. It is averred that whenever it rains, the 1st defendant releases the accumulated dam water and effluent, which together with drain water from the extra 9 greenhouses forms a raging torrent, that sweeps debris into the 1st plaintiff's land and also causing landslides which have divided the 1st plaintiff's land into 3 portions with one being totally inaccessible and not able to be utilized. It is also averred that the 1st defendant releases effluent generated from the chemical process of the flower farm into the run water which runs through the peasant farmers farms destroying their crop and soil and finally percolating in the plaintiffs' farms. It is said that as a result, the plaintiffs have lost more than 6 hectares of land and crops, and their land has been wasted.

5. It is pleaded that the actions of the defendants have resulted in the following :-

(a) The formation of deep gulleys with persistently flowing effluent with consequent but devastating soil erosion.

(b) Turning the plaintiffs' 6 hectares of fertile agricultural and grazing pasture into unusable land.

(c) Destruction of wheat and other farm produce planted by the plaintiffs which get carted away and/or the land has become marshy.

(d) Threat to the plaintiffs' lives and that of their employees occasioned by the deep gulleys and the 'flash floods' of effluent caused by the 1st defendant.

(e) The death of the plaintiffs' livestock which fall into the gulleys and break their limbs and trauma resulting in death.

(f) The plaintiff's livestock suffer from liver fluke and leeches transmitted through the effluent waters deliberately released by the 1st defendant in connivance and abatement by the 2nd and 3rd and 4th (sic) defendants.

(g) Turning of the 2nd and 3rd plaintiffs' 2.5 hectares into a permanent swampy and mash (sic) land consistently percolated in effluent that harbours water snakes and other pests.

(h) Creation of gulleys which have rendered certain parts of the plaintiffs' land inaccessible, necessitating construction of foot bridges which consistently get swept away by the raging effluent.

(i) Significant depreciation in the value of the plaintiff's property.

6. In the suit, the plaintiffs have asked for the following orders :-

(a) Costs of rehabilitation and reinstatement of the plaintiffs' land;

(b) A permanent injunction restraining the 1st respondent from releasing, dumping, or in any way allowing the flow of effluent downhill into the plaintiffs' land;

(c) General damages;

(d) Exemplary damages;

(e) Costs of this suit;

(f) Interest on a, b, c, d and e, above;

(g) Any such and further relief as this Honourable Court may deem fit and appropriate in the circumstances.

7. The 1st defendant in its statement of defence, admitted operating a flower farm in Mwigoto area and stated that it has two dams. It is pleaded that before the dams were constructed, an Environmental Impact Assessment (EIA) was done in accordance with the Environmental Management and Coordination Act, 1999 (EMCA) and the Environmental Impact Assessment and Audit Regulations, 2003, and that there was public consultation. It is averred that the construction of the two dams was duly approved by NEMA and the Water Resource Management Authority [WRMA now renamed Water Resources Authority (WRA)]. It is pleaded that in the year 2014, one of its dams burst due to no fault on the part of the 1st defendant and that a crop damage assessment report was made, and all those people who were affected were duly compensated and the matter amicably settled and closed. It pleaded that the dam burst due to the high water table which was caused by natural high water pressure from underground and that this natural cause of natural pressure was beyond human control. It is averred that following the bursting of the dam in 2014, the 1st defendant took measures to avert the mentioned natural high pressure from underground, by lining the dam with High Density Polyethylene (HDPE) to strengthen the dam and to avoid any leakage. In addition, it is averred that the 1st defendant has installed a network of water catchment drains below the HDPE liner to control seepage water and channel it to a holding tank which water is then pumped back to the dam for its use in irrigation, cleaning and other domestic use. It is denied that Mr. Kiran Nangare accompanied by other members of the 1st defendant's management team, visited the 1st plaintiff's farm and apologized for the damage. It is also denied that the 1st defendant entered into a mutual agreement with the 1st plaintiff to rehabilitate the 1st plaintiff's land as alleged in the plaint.

8. The 1st defendant admitted applying to NEMA for the extension of 13 greenhouses and approval was granted after due process was followed, and that prior to the approval, an EIA was done and a report submitted to NEMA. It is averred that there was public participation. It is further averred that the 1st defendant has done an EIA for the additional dam and is awaiting response from NEMA. It has denied any form of irregularity and/or illegality. It has admitted drilling two boreholes which are aimed to meet its rose flower production which require a stable supply of water and that this borehole water supplements the water from the dam, which is its main source. It has stated that it pays the requisite usage fee to WRMA. The 1st defendant has denied discharging effluent and has stated that it has a highly effective Effluent Treatment Plant (ETP) where effluent is properly treated and chemical analysis done. It has stated that it has chemical spray areas where high level integrated pest management control strategies are employed. It is averred that all waste water drainages are cemented to avoid percolation of effluent into the ground before treatment. It has pleaded that it has a valid Effluent Discharge Licence (EDL) from NEMA which is applied for annually, and that before issuance of the licence, it does comply with the requisite environmental audits.

9. With regard to water pollution, it has averred that it has designed mechanisms to contain spillages, including use of approved Pest Control Products Board (PCBP), designed for standardized soak pits next to chemical and fertilizer stores spray shade and grading hall. With regard to impacts on flora and fauna, it is stated that the 1st defendant was commended for adopting an integrated pest management (IPM) system, through the use of biological agents like bacteria, predatory mites and plant extracts, and that it monitors fertilizer and pesticide use to minimize the effects of overuse and misuse of pesticides. With regard to liquid waste management, it is stated that all waste water from its operations are directed into the allocated soak pits as per PCBP standards. It is asserted that water collected in its dam is free from any effluent and is pumped back into the farm for use. It is contended that this suit is brought in bad faith and that it is an attempt to embarrass the 1st defendant to purchase 6 acres of land belonging to the 1st plaintiff at the sum of Kshs. 4 million an acre, which the 1st defendant has declined, because the 1st plaintiff's land is in a valley and is a wasteland. It is stated that about 20 acres of the 1st plaintiff's land cannot be put to use because it is wetland and that the 1st defendant cannot purchase another wetland, which position has angered the 1st plaintiff and made her make unfounded accusations against the 1st defendant. It is further contended that the plaintiffs filed this suit after the 1st defendant declined to purchase the 1st plaintiff's parcel of land.

10. On the part of the 2nd defendant, it is pleaded in its defence that if the plaintiffs were aggrieved by issuance of any EIA licence to the 1st defendant, they had the option of appealing against such decision before the National Environment Tribunal. It is pleaded that the allegations of failing to ensure public participation by the 2nd defendant, are vague and baseless and brought too late in the day, for such allegations can only be substantiated against a specific EIA licence. It is pleaded that upon receipt of complaints from the plaintiffs, the 2nd defendant did conduct a joint site visit with WRMA where it prepared a report, and issued a restoration notice on 28 September 2017 to the 1st defendant, seeking it to comply with various breaches. It is averred that the report had not been completed by the time this suit was filed.

11. The 3rd defendant on its part pleaded in its defence that it is a stranger to the pleadings of the plaintiff and denied having irregularly or illegally approved the development plans for the 9 hectares of greenhouses. It pleaded that the development plans presented by the 1st defendant were approved by the physical planning department in line with the Physical Planning Act.

12. Together with the plaint, the plaintiffs filed an application for injunction. Interim orders were not granted, and when the application came up before me on 21 November 2017, after discussing the issues, there was consensus from all parties that it is necessary for them to have experts assess the sites in issue and come up with reports. I thus gave directions for each party to give access to the other party's experts for purposes of them preparing their report. I further gave directions to NEMA and WRMA, to do separate and independent reports to address the following issues :-

(i) The source of effluent, if any, flowing into the plaintiffs' parcels of land being LR Nos. 1507/15, 1507/16, 1507/9 and 1507/10;

(ii) Confirm whether there was any river or stream flowing on LR Nos. 1507/9, 1507/10, 1507/15 and 1507/16, prior to the year

2014;

(iii) Confirm the source of the water flowing into the land parcels LR Nos. 1507/9, 1507/10, 1507/15 and 1507/16;

(iv) Determine whether there has been degradation of the parcels of land LR Nos. 1507/9, 1507/10, 1507/15, 1507/16 in terms of use of the land parcels;

(v) Whether there has been compliance with any restoration orders issued to the 1st defendant;

(vi) Whether the 1st defendant has got an effluent treatment plant;

(vii) Whether the 1st defendant has valid effluent discharge licences;

(viii) Determine where the 1st defendant discharges all of its effluent;

13. The parties did proceed as above and prepared their respective reports. The application for injunction was otherwise not deemed necessary to be prosecuted and there was consensus that parties proceed straight away to the hearing of the suit.

14. The hearing of the matter took place partly in court and partly on the sites in issue.

B : SITE OBSERVATIONS

15. The court alongside the parties and their counsel visited the site in issue and observed the three parcels of land in this matter and their surrounding area, and also the 1st defendant's flower farm. The court also walked from the plaintiffs' parcels of land to the 1st defendant's farm for purposes of assessing the plaintiffs' claim that the water from upstream is from the 1st defendant's farm and to have a general assessment of the topography, hydrological system and the environment of the area.

16. The land of the plaintiffs is off the Nakuru-Mau Narok tarmac road after Egerton University main campus. There is a dirt road from the tarmac road for which you proceed for a couple of kilometres before getting to the plaintiffs' parcels of land. From this dirt road, the 1st plaintiffs' land is on the left whereas the land of the 2nd and 3rd plaintiffs, which abut each other, is on the right. During the first site visit on 9 May 2018, it was explained that this dirt road proceeds behind the land of the 1st plaintiff so that the 1st plaintiff can also access her land from the approach of the road and also from behind it. This road where it separates the land of the 1st plaintiff and that of the 2nd and 3rd plaintiffs was completely flooded and it was explained by the 1st plaintiff that before the bursting of the 1st defendant's dam, the road was passable and that is where the public used to pass. Owing to the flooding, the public have cut a path inside the land of the 1st plaintiff to enable them access the rest of the road ahead. From the road, the flooding water proceeds to flow into the land of the 2nd and 3rd plaintiffs. The land of the 1st plaintiff has a small forest on the middle right side and the 1st plaintiff explained that she used to plant wheat on the left side of this small forest and Kalkadi behind this forest on about 5 acres. On the near side, she mentioned that she had been planting Boma Rhodes grass.

17. The court noted a deep gulley (main gulley) through which water flows from upstream. There were hanging fencing posts above the gulley which leads one to assume that they were entrenched in the ground but the gulley has washed away the top soil to expose them. This gulley has cut off a triangular part of the 1st plaintiff's land and separated it from the rest. There were also three trenches which the plaintiff stated were the ones dug by the 1st defendant's employees, and which connect to the main gulley draining water into it. It was apparent that the main gulley collects water from upstream and spills it through the public road into the land of the 2nd and 3rd plaintiffs. The court noted that there was significant drying of acacia trees on the 2nd plaintiff's land which the 2nd plaintiff stated was caused by the flooding. This flooding has also caused a swamp to be created on the land of the 2nd and 3rd plaintiffs.

18. The court then proceeded to the 1st defendant's farm. The court noted several greenhouses. They are your standard greenhouses made of polythene material. Greenhouses are roofed and these roofs cover a wide area and collect water more or less in the same way that the roofs of houses collect rainwater which may be harvested and stored. I noted that most of the rain water from these greenhouses drains into a dedicated channel made of concrete and into a dam. I noted that the dam was almost filled up. There is a smaller set of greenhouses which drain water through the concrete channels but into a swampy area which the parties referred to as a wetland. At the site, it was explained by Ms. Bokea, a witness of the 1st defendant, that 36 greenhouses channel water into the dam whereas 9 drain into the wetland. We could not complete the visit on this day as it started raining and we had to adjourn.

19. The second site visit was done on 25 May 2018. I purposed that we walk from the plaintiffs' farm to the 1st defendant's farm so as to assess the general topography and possible sources of water leading to the plaintiffs' farms. On this day, the court noted an actual increase in the flow of water in the main gulley and a new smaller channel next to the gulley. It was apparent as we walked upstream, that the source of water in the smaller channel and in the main gulley was the same. I observed that this gulley is quiet deep, about 6 feet deep, and according to the 1st plaintiff, it was formed when the 1st defendant's dam burst. I noted the Mwihoti Water Project which is a borehole about 100 metres from the edge of the 1st plaintiff's farm. On the way, we met a lady, Rose Auma, who was trying to create a bridge across the road, for the road had been washed away and subsumed into the deep main gulley. Ms. Auma stated that the road was previously passable and was used to access a quarry, but because of the deep gulley, the road is cut off and no longer passable. She also stated that they have been trying to create a bridge since schoolchildren find difficulty crossing to access their school. Away from the main gulley, there were small rivulets running down the walking path. The source of these rivulets was disputed, the 1st plaintiff believing to be from the 1st defendant's farm, whereas the 1st defendant's expert witness, Dr. Taruru (and who later testified as DW-2) stating that they are natural drains of water. These

rivulets lead into the main gulley thus draining into the 1st plaintiff's land and later the land of the 2nd and 3rd plaintiffs. At some point, the gulley ended up in a rock channel, without any soil, which was explained by Dr. Taruru to be due to erosion. The court also noted concrete culverts, which were not too old, but which had been washed down by the heavy and fast flow of water in the gulley. It was mentioned while in this area, that previously and prior to the bursting of the 1st defendant's dam, what was present was a seasonal stream which would drain into a farm owned by one Mr. Kiberenge and which formed a small swamp on his farm. This appears to be the position as an inquiry by the court addressed to a passerby, one Mr. John Njenga, brought forth the same answer, that there was only a seasonal stream, and a small bridge which was washed away when the dam burst, and since then, the flow of water has been continuous. We reached a fork where two streams meet and drain to form the one stream which leads to the gulley downstream. It was explained that one of the two streams is natural and the other stream is from the 1st defendant's farm. An interview by the court to another bystander, one Richard Tanui, elicited the explanation that the stream was seasonal without a deep channel but the flow became strong about a couple of years back.

20. By consensus, we followed the stream leading up to the 1st defendant's farm which led us to another fork. There was agreement that one of these emanates from the 1st defendant's dam, whereas the other emanates from the wetland in the 1st defendant's farm. Following the water said to be from the dam, the same again forked into two. It was clear that one source is from two pipes from under the dam. What was not clear was whether the two pipes drain water from the bottom of the dam, or from underground beneath the dam. The later would be a sort of drain from the dam itself, whereas the former would be a drain of underground water. There was also an adjacent waterlogged field (not the wetland) which the court observed received part of its water from some greenhouses which channel their water into this field. At the dam, there was noted to be floating plants which the plaintiffs' expert (PW-5) stated was evidence of high fertilizer levels. The court noted evidence of soil and debris at the edge and it is highly probable that there had been some spillage owing to an overflow despite this being denied by the person manning the dam, one Mr. Paul Simiyu. We walked into the fertilizer and water mixing chambers with no issue being raised. Ms. Bokea a representative of the 1st defendant (and later DW-1), led us to the effluent treatment plant and explained how chemicals are treated. We then proceeded to Sigotik area, the source of the stream, which was said to be a seasonal natural stream.

21. In essence therefore, the whole of the land in dispute, the surrounding area, and the farm of the 1st defendant was comprehensively observed by the court.

C : EVIDENCE OF THE PARTIES

22. PW-1 was the 1st plaintiff and her first bit of evidence was taken on site. She mentioned that she purchased her parcels of land in the year 2005, and she would plant crops on the whole of the land save for the area that had a small forest of trees and a quarry. She stated that when she purchased the land, there was no river nor gulley, and the same was pure farmland. She pointed out to the gulley in her land and the flooded road which separates her land from that of the 2nd and 3rd plaintiffs as resulting from the activities of the 1st defendant. She averred that the road was previously passable and used by the public before the damage, but because of the flood, people have now cut a path through her land. She pointed out that the gulleys had cut off a triangular section of her land and separated it from the rest. In the year 2014, she learnt about the bursting of the 1st defendant's dam and she stated that the water came down with debris including dead donkeys, stones and sand, all of which was dumped in her land parcel No. 16. Her workers informed her that personnel from the 1st defendant and their insurers were compensating people. In the year 2015, she stated that she met the 1st defendant's General Manager, Mr. Kiran Nangare and Ms. Beatrice Bokea, together with other members of management and they promised to return the land back to the way that it was. She claimed that what they proceeded to do was to dig the three trenches observed at site in the guise of rehabilitation. She stated that she cannot now allow her cows to graze freely, as they risk falling into the gulley. The cows would also drink water which she believes is contaminated by the 1st defendant. She complained that about 30 of her cows died, 10 of them being her best milkers. She testified that how the gulley developed is that in the year 2015, she started noticing a small stream which could not be explained.

23. In the year 2016, she decided to follow its source which led her straight to the farm of the 1st defendant. She saw the two pipes draining water from the dam into the channel which water runs into the gulley. She also observed the wetland and the other water drained by the greenhouses. After she ascertained the source, she tried to reach Mr. Nangare in vain. She stated that on 21 September 2017, when the 1st defendant's dam was almost full, they broke part of it and all the water drained into the gulley. It is also about the same time that she noticed the extra acreage of greenhouses which had no water pan. She opined that her land is now degraded because of the activities of the 1st defendant. She was also of opinion that the 1st defendant drains its chemical and fertilizer laden water from inside the greenhouses merging it with the harvested water.

24. On the same day, 21 September 2017, she prepared a complaint letter to the 2nd defendant. She then received two NEMA reports dated 21 September 2017 and 28 September 2017. She also got a lab report prepared from samples of water in her land. She stated that earlier on 14 July 2017, she took one of her dead animals to the pathology lab which revealed that it died from nitric poisoning. In total, 6 animals had died, though only one was taken for sampling. These reports were produced as exhibits. She did mention that the situation continues to become worse.

25. Cross-examined, she stated that she has a problem with NEMA for approving the flower farm without consultations nor public participation. Owing to this , they have now been exposed to a changed topography, greenhouse gases, effluent and other attendant harmful practices. She stated that they were also not consulted before approval was given to the 1st defendant to increase its greenhouses, despite the history of the burst dam in 2014. She also faulted NEMA for continuing to allow the 1st defendant to operate despite the 1st defendant having breached its licence conditions. She stated that licences were issued despite her going to NEMA offices to complain.

26. Cross-examined by counsel for the 1st defendant, she testified that she was not present when the dam burst but she visited the land the following day and observed debris and (dead) animals on the land. She repeated that she saw the management of the company who offered compensation but all she asked them to do was rehabilitate her land as she believed that the bursting of the dam was an accident. She stated that the company representatives verbally promised to rehabilitate her land. She was not present when the trenches on her land, aimed at rehabilitation, were dug up. She stated that she delivered her letter of complaint to the office of Mr. Ashish Mishra of the 1st defendant and had a meeting, though no minutes were taken, and they later met with Mr. Ashish at her farm, and Mr. Ashish apologized to her. While at the

farm, Ms. Bokea called her aside and informed her that the company had decided to buy off 8 acres of her land to put up a dam and she called one Mr. Inder Naim, the MD of the 1st defendant in her presence. She informed Ms. Bokea that she can consider selling on condition that they stopped the flow of effluent. She sent Ms. Bokea an email to that effect making the offer to sell at Kshs. 4 Million an acre but she later withdrew the offer because the flow of effluent did not stop. She believed the water is contaminated with nitrates which caused the death of her cows. She insisted that the water in her farm comes from the 1st defendant, for prior to 2014, there was no stream, gulley or flow of water in her farm, and she used to farm the whole land. She refuted the insinuation that the water from Sigotik flowed to her land and stated that there was only a seasonal stream which ended up at the farm of Mr. Kiberenge where there was a swamp. She also refuted the claim that there was underground seepage in her farm and pointed out that if this was the case, she would not have been able to plant wheat. She believed that having complained she ought to have been one of the persons consulted before any additional greenhouses were approved. Re-examined, she stated that there before, she had a cordial relationship with the 1st defendant's managers, and their meetings were informal, but this changed when she realized that they were deliberately discharging into her land. She stated that she has a borehole which is 250 deep and reiterated that the water from her land is from the 1st defendant.

27. PW-2 was the 2nd plaintiff, the owner of LR No. 1507/09. He also partly testified when the court visited the site on 9 May 2018 and he continued his evidence in court. His land is 30 acres. He stated that after the dam burst, the flow of water has never stopped. He now farms on about 20 acres of his land but there before he was farming on the whole 30 acres. His land is now divided into two portions separated by a swamp which was not there before. To access the other portion, he has to go round for about 3 kilometres or beg his neighbours to allow him access through their land. He stated that about 3 to 4 acres is now swampy. His farming is now affected. He also thought that the water flowing into his land is contaminated and as a result his hay has turned yellow which cannot be purchased. His crop yield is also now poor. Due to too much water, the acacia trees that were in his land also dried up.

28. Cross-examined, he repeated that there is no other source of water into his farm apart from that from the 1st defendant and that the seasonal streams never got to his land.

29. PW-3 was the third plaintiff, the owner of LR No. 1507/10. His evidence was more or less the same as that of PW-2. He mentioned that about 3 acres of his land is affected and he cannot now farm on the same because it is marshy and overgrown.

30. PW-4 was Francis Gachathi Mwaura, employed in May 2012 by the 1st plaintiff as her caretaker. He is familiar with the area and was born here. He stated that in the past, there was no dam or swamp, nor any river, and that they used to source water from Mwihoti borehole. He was in the farm when the dam burst and brought with it debris. Later some persons from the 1st defendant came and dug trenches on the land. He did state that some of his employer's cows have died because of drinking this water which emanates from the 1st defendant and it is now not possible to graze cattle in the affected area as they risk falling into the gulley. He also cannot now easily access his home for the water has washed off the road.

31. PW-5 was Charles Lwanga Mayende. He studied Range Management at the University of Nairobi and graduated in the year 1997. He is currently studying a Masters Degree in Surveying and Environmental Management at the School of Civil Engineering. He thought of himself as a Natural Resource Management Scientist trained in Environmental Management. He stated that he has 21 years experience in water resource management, infrastructure, energy and other sectors. He is registered by NEMA since 2007. He is the principal environmentalist in the firm of Charles and Barker, a firm of experts registered by NEMA and licenced in environmental management and monitoring. He also sits in the Technical Committee of Hydropower development of the Kenya Bureau of Standards. He also mentioned that he has been involved in various environmental and social safeguards studies including the implementation of the northern collector tunnel in Muranga, the Nakuru-Nairobi highway, and Ol-Karia 4. He stated that he is an expert in environmental impact assessments.

32. He testified that he visited the site based on the 8 questions framed by the court and which the parties could seek expert advice on. He observed the site between 4 and 8 December 2017, took water samples, held interviews and reviewed the available documents. He eventually prepared a report dated 15 January 2018. His report had the following summarized findings :-

- That the source of effluent is from the 1st defendant.

- That there are deep gullies along the section between the plaintiffs' land and the 1st defendant's land.

- That the water from the land of the 1st defendant is indicative of contamination.

- That a wetland/marshland had formed in the land of the 2nd and 3rd plaintiffs which was not there before.

- That there is seepage from within the 1st defendant's greenhouses going into the 1st defendant's dam and wetland and that there was no wastewater treatment system or wastewater treatment plant and no water quality monitoring strategy as required by the effluent licence issued by NEMA and have no legal register for compliance.

- That on the licences, the 1st defendant's effluent licence had expired in 2016 and that the application for a licence made in 2017 was backdated to read 2016 ; the licence No. 23757 from the Pesticides and Pest Control Board had also expired; the EIA licence No. 0015956 had been executed i.e that they had done what they were required to do; the licence for NEMA audit No. 2589, an annual licence, was valid.

- That the reports from the 1st defendant's experts failed to take into account the principles of environmental management, i.e, developments must take into account environmental concerns, public participation, recognition of social and social values traditionally used in an area of operation, international cooperation and best practices in management and wise use of natural resources; inter and intergenerational equity in natural resource use; polluter pays; and the precautionary principle.

- That the dam liner had failed and was discharging water from the dam underground and that this dam water is a combination of storm water harvested from the greenhouse roofs mixed with water from the greenhouses. He formed this opinion because he found that the water being drained from under the dam liner was contaminated.

- That there were significant cracks within the wall of the dam.

- That the community uses the water for washing and watering their cattle but they do not use it as they believe that it is contaminated.

- That there was a lot of damage to the roads and people make use of makeshift bridges as the roads have been rendered impassable and prone to flash floods.

33. He opined that there was no adequate public participation and no precaution exercised on issues such as discharge of storm water; that the community was not consulted so that they could incorporate their knowledge; that the developments did not take into account environmental concerns. He stated that it was the responsibility of NEMA to ensure compliance with the audit report but he did not see any corrective plan from NEMA. He stated that NEMA could have conducted a controlled audit, that is, an audit over a critical matter that is deemed of concern and addresses a specific issue that may have come out of a complaint or report. He mentioned that the 1st defendant properly filed its audit report but NEMA did not follow up with a review or response.

34. He explained that the dam was made of compacted earth with a PVC liner to ensure that water does not go through. He stated that seepage from the dam causes cracks which he saw at the dam. He warned that there is a risk of the dam failing due to interference of underground and seepage water and he recommended an integrity test to confirm whether it can withstand the pressure being applied to it. If it failed the test he recommended that the dam be decommissioned.

35. He classified the 1st defendant's site as high risk and recommended that the 1st defendant needs to properly manage its waste water by appropriate impoundment, storage and treatment. He found that the quantities from the 1st defendant's facility is so massive that it has changed the hydrological cycle. He explained the natural hydrological cycle, which is rain from above, naturally seeps into the ground. However, because of the presence of the greenhouses, there is no percolation and no evaporation from this area. The greenhouses cover 200 acres which he stated was significant but that the 1st defendant does not have capacity to collect all the water, which means that they will always need to discharge it from their site for they cannot recycle and reuse all of it. He believed that the tributaries leading water to the plaintiffs' farms are from the roofs and from inside the greenhouses of the 1st defendant. He formed the opinion that the environmental goods and services in this area have now been overpowered and the equator principle lost. In his words, we are borrowing from the future generation. He thought that the 1st defendant is punishing its neighbours. He recommended the 1st defendant do re-engineer its waste water treatment system so as to comply with the effluent discharge conditions and further that water from inside the greenhouses should not be discharged into the dam and invest in a waste water treatment plant. He thought that the use by the 1st defendant of septic tanks was not sufficient and he explained that septic tanks are used for handling biodegradable organic waste and not chemical waste which is handled by using waste water treatment plants. The storm water should also be managed through proper infrastructure. He also proposed an engagement with the community for a lasting solution to the hydrological changes in the area, rehabilitate private lands and roads, and also compensate.

36. Cross-examined by Mr. Ngara for the 2nd defendant, he testified that he reviewed three documents from NEMA, being the EIA licence, the Environmental Audit acknowledgment and the Effluent Discharge Permit. He explained that the environmental audit carries with it a monitoring strategy and that NEMA ought to respond to the report and strategy. NEMA could then give a restoration order after a site visit. He was referred to a restoration order dated 28 September 2017 which he took note of but which he stated that he had not seen before.

37. Cross-examined by Ms. Momanyi for the 1st defendant, he explained that he did an electrical conductivity and a pH test for the water; electrical conductivity being a measurement of irons in water and raw water pH range should be between 6.5 and 8.5. He stated that he picked high pH values of 8.93 and 9.12 within the water in the land of the 1st defendant. He mentioned that there are no regulations for electrical conductivity, but the higher it is, the more irons you have in the water. He stated that he did not submit his results to a laboratory but only screened the site using his own gadget. He was questioned on his findings which he denied being contradictory. He acknowledged seeing soak pits and septic tanks but stated that these do not conform to the kind of industry the 1st defendant deals with, for which, in his opinion, a water treatment plant is required. He reiterated that there are cracks at the dam and that the dam liner is prone to damage. He acknowledged that not all the water in the area is from the 1st defendant but stated that the 1st defendant provides a significant source of surface runoff.

38. Cross-examined by Mr. Kahiga for the 3rd defendant he stated that intervention ought to have come from NEMA as they are the final decision makers.

39. Re-examined, he stated that there are separate soak pits for domestic waste and hazardous waste and mentioned that soak pits can lead to contamination of ground water. He stated that the high pH and electrical conductivity levels would classify the water as effluent and affirmed that the hydrological cycle had changed owing to the 1st defendant's activities.

40. PW-6 was Sam Musyoka, a licenced surveyor with almost 30 years of experience. He holds a Bachelor's degree in Survey from the University of Nairobi, a Masters degree from the same university in survey and photogrammetry and a doctorate degree in geodesy from Karlsruhe, Germany. He presented a survey report prepared by Benson Kimeu Makau of Nile Surveys and Geosolutions Limited. Mr. Makau is a survey assistant currently working under PW-6, but at the time of the report, was working under one Mr. Okumu, a licenced surveyor. He explained that the report was a topographical survey report (a survey showing the physical features of certain land) of the plaintiffs' parcels of land. The report noted the gulley and swamp in the plaintiffs' parcels of land.

41. PW-7 was Isaac Lunalo Wirunda, a land economist. He holds a Bachelor's degree in Land Economics from the University of Nairobi

(2002) and is a registered valuer. He prepared valuation reports in respect of the plaintiffs' parcels of land. For the land of the 1st plaintiff, he noted that the area affected was 0.18 acres for the plot No. 15 and 6.53 acres for the plot No. 16. The values of the affected parcels of land are Kshs. 470,000/= and Kshs. 16,300,000/= respectively. He then added a 15% disturbance allowance to come up with the sum of Kshs. 19, 285,500/=.The rehabilitation cost was assessed at Kshs. 1,800,000/ and Kshs. 2,100,000/= in loss of earnings. For the land of the 2nd plaintiff, he noted the affected area to be 1.356 acres which he valued at Kshs. 3,400,000/= and added a 15% disturbance allowance to come up with the figure of Kshs. 3,910,000/=. He estimated the loss of earnings at Kshs. 944,000/=. He did not advise on rehabilitation since the land was already a swamp and the water had chemicals. For the land of the 3rd plaintiff, he stated that the area affected is 2.73 acres and he gave a value of Kshs. 6,800,000/= and added a 15% disturbance allowance to come up with the sum of Kshs. 7,820,000/=. He calculated loss of earnings at Kshs. 995,000/=. He placed a disclaimer that the cost of land may have increased and also the rehabilitation value for the gulley could have widened with time.

42. With the above evidence, the plaintiffs closed their case.

43. DW-1 was Beatrice Kemunto Bokea, the 1st defendant's corporate affairs and human resources manager. By training, she holds a degree in Human Resource, and a diploma in Business Administration. She is currently undertaking a post-graduate degree in human resource from the Jomo Kenyatta University of Agriculture and Technology. She is predominantly working as a human resource practitioner.

44. She explained that the 1st defendant has a flower farm of 45 hectares where they produce flower cuttings for export. She recalled that one of their dams burst in the year 2014 upon which they contacted WRMA, the area chief, the Ministry of Agriculture, Livestock and Fisheries. They held a *baraza* (a public gathering and meeting of persons usually with the local administration where issues are discussed) with the District Commissioner (DC) and from the *baraza*, the villagers appointed representatives for purposes of finding out those affected and the level of compensation that they may require. A crop assessment report was prepared and compensation done according to the report. She produced the report and 62 compensation agreements as exhibits. She stated that the cause of the dam burst was suspected to be due to high pressure from underground. The 1st defendant thus took measures to strengthen the reconstructed dam by adding a high density polythene dam liner to avoid leakage. They also placed some pipes below the dam liner to get out seepage water underneath the dam liner. They constructed a holding tank next to the dam so that the seepage water is collected and pumped back into the dam for use for irrigation and other purposes. She stated that the dam is of compacted soil and seepage water occurs due to the high water table in the area. She mentioned that before constructing their two dams, they did an EIA and conducted public participation. Approval was given by NEMA and WRMA and the two dams were constructed. She produced the EIA report dated 8 January 2013.

45. She stated that she is not aware that water from the burst dam went into the land of the plaintiffs and destroyed their grass and crops and was not sure if the plaintiffs were captured in the crop assessment report. She stated that the names of those affected was given to them by the appointed team and that all persons appearing in the list were compensated. She stated that the plaintiffs did not lodge any claim for compensation with them.

46. She stated that she first met the 2nd and 3rd plaintiffs in court. For the 1st plaintiff, she met her in the year 2017 when she lodged a complaint over the destruction of her farm. She was not aware of any promise made by Mr. Nangare that the 1st defendant would fill up the gulleys in her farm or that the company would rehabilitate her land. She was also not aware that the company entered her land and dug up trenches.

47. She admitted that after the dam burst, the company added 13 greenhouses. She stated that approval for this was granted by NEMA after they did an EIA. They also did an EIA for an additional dam and she produced the EIA report, dated 31 January 2017, for the additional dam. She denied the claim that no public participation was done. They did two dams in 2014 and it is one that burst, the other being intact. She produced the EIA licences for the construction of the two dams which was issued on 8 February 2013 and a no objection letter from WRMA. In 2017, they sought authority to construct a third dam but a licence for this is yet to be issued although the EIA report has been submitted to NEMA.

48. She added that the company has two boreholes licenced by WRMA which are aimed at ensuring a continued supply of water. These are also licenced after an EIA and she produced an EIA dated October 2014 for the boreholes alongside the WRMA licences.

49. She denied that the company discharges effluent and stated that the company has an effluent treatment plant for the spray room and chemical store. She stated that they also have treatment areas; three for the spray units and one for the chemical area. She testified that the company uses soak pits before releasing any washed chemicals from the chemical mixing tanks (which are periodically washed) into the environment. They do tests on a quarterly basis which are sent to NEMA. She added that these soak pits use the design from the Pest Control Products Board (PCPB) and she produced the standard format of the same. She mentioned that PCBP issue an annual licence and that they monitor and check spray units and the soak pits. She had a licence issued on 13 January 2017. She added that they also employ pest management control strategies which uses insects. She stated that the company has an effluent discharge licence issued by NEMA which is valid for a year and she produced one dated 19 January 2017.

50. She denied that the company releases water to the plaintiff's land. She asserted that they collect 100% of rain water from the greenhouses and that the chemicals and spray units discharged cannot reach the dam as it goes to the soak pits. She had not observed any landslides.

51. She testified that when the 1st plaintiff came to their farm in 2017, she complained that the company was releasing water with effluent into her farm. They invited the plaintiff to demonstrate to her how their soak pits work and how they harvest water from greenhouses. She stated that the 1st plaintiff wanted to sell her land to the company but did not give reasons why she wanted to sell it. She was then asked to write an email, which she did on 20 September 2017, and mentioned that she was willing to sell 7 acres at Kshs. 4 Million per acre, the offer being open for 7 days.

52. She stated that after the 1st plaintiff complained, an inspection meeting was held by the Cabinet Secretary of Nakuru County, together with a team that included the D.O, Njoro, the area chief, the police, the area Member of County Assembly (MCA) and community members

and that the company was given a clean bill of health. She produced the minutes of the meeting.

53. She pointed out that they do annual environmental audits and produced one prepared on 4 April 2017.

54. Her view of the matter is that the company followed due process and that the dam burst was not due to their fault but due to pressure from underground seepage water.

55. Cross-examined by Mr. Ngara for the 2nd defendant, she did state that the 1st plaintiff's complaint came through the letter dated 21 September 2017 and thereafter, NEMA visited the site on the same day, and issued a restoration order. She stated that the company took action to comply with the restoration order and were to report within 21 days of 28 September 2017 but this suit was filed on 19 October 2017 before NEMA had time to assess compliance with the restoration order.

56. Cross-examined by Mr. Chege for the plaintiffs, she affirmed that she is a human resource practitioner and not an expert in environmental issues. She knew Mr. Nangare who was the farm manager but stated that he left about 3 to 4 years back. She was not aware that he had met the 1st plaintiff to discuss issues of compensation with her. She reiterated that the dam burst in the year 2014, and thereafter, NEMA issued a letter dated 25 November 2014, giving a condition that the dam needed to be repaired with the supervision of a dam engineer. They were then to make a report after the reconstruction. She did not know whether the plaintiffs were in the list of those to be compensated. She was questioned on the EIA report and licence for the boreholes but could not explain how come the EIA report, which is dated October 2014, appeared to come before the licence, which was issued on 4 February 2013. She recalled a second email from the 1st plaintiff withdrawing the offer to sell and noted that the proposed sale was based on some conditions.

57. DW-2 was Dr. Darius Taruru who described himself as an environmental expert. His educational background is that he holds a Bachelor's degree and a Masters degree from Wyoming in Entomology. He also holds a PhD in Entomology Insect Physiology from Nebraska (1984). He worked at Egerton University as a lecturer from the year 1995 and retired in April 2018. He stated that he operates a company known as Universal Work Health & Safety Consultants Limited. He is the chairman of the company and also a shareholder. He testified that the company is registered by NEMA and he himself is a NEMA certified lead expert.

58. He testified that his company was engaged by the 1st defendant to establish water sources, effluent management and effluent discharge, within the farm and its environs. He was of the view that the 1st plaintiff's land is located in a wetland ecosystem at a lower grading where all the water from the surrounding higher ground flows into, including that from neighbouring farms, and that the area that surrounds the farm is a total wetland ecosystem. He stated that the company discharges rain water into its dam and some into the natural ecosystem which holds this water and releases it slowly. He mentioned that the farm experiences water seepage from the ground which also appears in its greenhouses. This seepage is exacerbated by increased rainfall. He stated that the seepage water collects and flows into a stream through the plaintiffs' farms. He mentioned that the water forms a funnel that flows water into the lowest areas including the plaintiffs' farms. He explained that water will naturally flow to its lowest point and was of the view that the 1st plaintiff's farm is at the lowest point. He believed that the water from Sigotik dam meets the water from the 1st defendant's farm and flows down into the plaintiffs' land and its environs. He further stated that he observed that the community dig small water puddles, called 'mukuru' to water their animals which he offered was an indicator of a high water table. He thought that the rain regime has changed due to restoration of the Mau forest and he gave the example of Lake Nakuru which has overflowed. He averred that a majority of the water from the 1st defendant's greenhouses goes to the dam. He also mentioned that another neighbouring farm, Kihika farm, channels its water to the 1st defendant's farm.

59. He defined effluent as waste water or water from sewer systems. He averred that with regard to the 1st defendant, effluent is discharged from the greenhouses and that each greenhouse has a collection point and channelled into soak pits. He pointed out that surrounding farms are not monitored to find out what they are discharging to the environment and that the community's activity of using the rivers for cleaning also discharges detergents which activities contribute to pollution. He stated that every 3 months, water quality analysis is done within the soak pits and he pointed at his observations of the quality of water in his report. He averred that he took water samples to WRMA from the natural wetland within the 1st defendant's farm, the stream water from the 1st defendant's farm, and water in the 1st plaintiff's land and he provided the results. He believed that the water from the 1st defendant's wetland ecosystem and that from Sigotik stream and the water entering the 1st plaintiff's land have no contaminants but the water exiting her farm is contaminated. He thought that the contamination occurs somewhere between entry and exit from the 1st plaintiff's farm. He averred that effluent management must be a concern of all stakeholders including small scale farmers and that land owners need to control what passes through their land to control upstream pollution. He mentioned that he observed greenhouses near the plaintiffs' farms. He testified that the 1st defendant uses fertigation, where fertilizer is sprayed onto the leaves of the plants, and not hydrophonics, which is use of liquid to raise crops, thus its seepage into the soil is less and what drains is collected into the soak pits. He stated that what many flower farms are encouraged to have are wetlands which extract chemicals. In his view, the soak pit was sufficient for the 1st defendant's farm.

60. Cross-examined by Mr. Ngara for the 1st defendant, he explained that he did not dwell much on the restoration orders issued by NEMA. He stated that NEMA have not issued a licence for a third dam owing to advise from WRMA which thought that the area was a natural water ecosystem.

61. Cross-examined by Mr. Chege for the plaintiffs, he acknowledged the importance of public participation in preparation of EIAs and further acknowledged that the public to be consulted is that most likely to be affected. He did offer that he has done several EIAs for the 1st defendant. He mentioned that his firm did the EIA in 2013 for the proposed construction of two dams, a proposed flower farm in 2012, proposed two boreholes in October 2014, proposed extension of greenhouses in 2014, and proposed construction of a dam in 2017. He was shown the EIA for the two dams prepared in 2012, but he refuted the signature therein, despite bearing his name as signatory. He however insisted that public participation was conducted. The EIA for the proposed 2017 dam was also put to him. He acknowledged that it has only one questionnaire of the chief, but refuted that he was the only one consulted, insisting that the 1st defendant must be holding other forms. The questionnaires were not dated. The list of persons said to have been compensated because of the burst dam was put to him and he acknowledged that the people therein may not appear in the questionnaires distributed for purposes of public participation. He explained that

their role was to take the questionnaires to the 1st defendant for the 1st defendant to identify who they were to interview although he did again state that it is them (as the expert) who circulate questionnaires and not the company. What the company would do is to give them one of their staff to help them distribute the forms and they would forward some to a public *baraza*. He was also questioned on the environmental audit report which he acknowledged to have signed, and part of it had the company Xpressions Flora, which is not the 1st defendant. He did state that an EIA report is done before the EIA licence may be issued. He conceded having signed the EIA report for the two boreholes dated October 2014, but could not explain how the EIA licence had already been issued the previous year. He was questioned on the holding capacity of the wetland in the 1st defendant's farm, but he stated that he did not carry out its capacity vis-à-vis the water flowing into it from the greenhouses although he did aver that wetlands are prolific and can contain lots of water. He did state that dams are constructed with spillways and that the current dam has a spillway into the water valley. He was not aware of any measures to control the flow of water from the spillway. He acknowledged that the plaintiffs do bear the impact of water flowing from the 1st defendant's farm and that from Sigotik dam. He mentioned that wetlands have capacity to absorb elements which purify water.

62. Re-examined, he testified that the EIA that he did in 2014 is not the one that led to issuance of a NEMA licence in 2013 and mentioned that no licence was issued pursuant to his EIA of 2014.

63. With the above evidence the 1st defendant closed its case although I believe that it is only fair to mention that the 1st defendant applied to call another witness, said to be a dam expert, but I declined to allow the 1st defendant to introduce the witness, as the said witness had not been discovered before and was only sought to be introduced at the defence stage. I gave my reasons for refusal in my ruling delivered on 25 October 2018.

64. The 2nd defendant called one witness, Ms. Daisy Wambui Maina, an environmental officer working for NEMA in its Nakuru office. She has been working in this office since the year 2016 although she has worked with NEMA since the year 2013. She gave a brief mandate of NEMA which is to coordinate various agencies and regulate activities. She acknowledged that the 1st plaintiff called on their office in September 2017 and complained that the 1st defendant was releasing effluent downstream. She was advised to make a formal complaint which she did in her letter dated 21 September 2017 and they visited the farm on the same day. They then issued an improvement order which had five observations being :-

> *(a) That the 1st defendant do collect its effluent discharge licence and follow the conditions noted therein.*
>
> *(b) That the 1st defendant do seek advice from Water Resources Authority within 21 days.*
>
> *(c) That the 1st defendant do submit a report on how storm water from its proposed greenhouses will be handled taking into consideration that its existing dam is already overwhelmed and they were instructed to seek advice from Water Resources Authority.*

65. They also engaged WRA and made a second site visit on 28 September 2017 together with officers from WRA and the Environmental Department of Nakuru County. This led to a joint report which was released on 1 November 2017 (after this case had already been filed) and a second restoration order which was issued on the same day. The recommendations in the report was for the 1st defendant to construct a dam to capture water from the 10 greenhouses whose water is not captured by the existing dam; secondly, make a courseway to channel water to the dam; thirdly, seek advice from WRA on its water balance; fourthly, collect water samples and have them analysed by WRA.

66. On the EIA reports, she refuted that they backdated their licence and explained that the reference number in the EIA report is different from that in the licence meaning that they do not refer to the same project. She stated that they did their best to address the issue raised by the 1st plaintiff but they could not ascertain compliance as this case was filed.

67. Cross-examined by Ms. Momanyi for the plaintiff, she stated that an Effluent Discharge Licence (EDL) will not issue if the water quality does not meet the standards. She testified that there was an EIA report in respect of the greenhouses which were issued in phases. She was not aware of there being an EIA licence for the 10 additional greenhouses although an EIA report was submitted. She mentioned that WRMA did the water analysis report.

68. Cross-examined by Mr. Chege for the plaintiff, she stated inter alia that an EIA for the 10 additional greenhouses was done but their proposed site was declared by WRMA not to be an ideal site and she was not aware whether a licence had issued for these 10 additional greenhouses. She was referred to various issues in their report of 8 January 2018, and she did point out that a site visit in the year 2014 did reveal that there was no water treatment system in place for the waste water in the grading hall and a report was to be submitted on its management. She was referred to the joint report following the inspection of 28 September 2017, and observed that part of the report noted springs and spring water in some greenhouses although she did state that not a lot of the water flows into the greenhouses. She acknowledged that the water quality analysis report did show that some values were exceeded and there was recommendation for treatment and she was put to task on her statement that an EDL would not issue if standards are not met. She stated that the 21 days given for compliance in their report referred to 21 working days and not calendar days, which she stated was a practice she found in NEMA. She acknowledged that there were two restoration orders, one issued on 21 September 2017 and the other on 28 September 2017, the later which did not indicate the days for compliance but she assumed that it will take 21 days as the previous order. She stated that some orders were complied with, such as the collection of the EDL. She acknowledged that three years was probably a long time to allow the 1st defendant to proceed without having constructed a dam for the 10 additional greenhouses.

69. With the above evidence, the 2nd defendant closed its case.

70. The 3rd defendant closed its case without offering any evidence.

71. The hearing of the matter having closed, I invited counsel to file their written submissions which they did.

PART D : SUBMISSIONS OF COUNSEL

72. In his submissions, counsel for the plaintiff inter alia submitted that the plaintiffs, despite being people within close proximity of the 1st defendant's farm, were never consulted when the EIA reports for the farm were carried out. After the dam burst, they were also not consulted when a further EIA report for construction of more greenhouses was done. He referred me to Section 3(5) of EMCA on the principles of sustainable development and Section 42 of the same statute which prohibits deposit of substances into the aquatic environment without prior written approval of NEMA. He submitted that the 1st defendant failed to show any authorization for release of agricultural liquids from the hectares of greenhouses without a pan area into the wetland. He further submitted that the 1st defendant has failed to show the measures taken to prevent environmental degradation. He submitted that this was a failure on the part of the authorities and he referred to Sections 38 and 40 of EMCA. He also raised the precautionary and the polluter pays principle. He was of the view that his clients have a good case for a permanent injunction against the 1st defendant from releasing effluent into the plaintiffs' land and relied on the case of ***Giella vs Cassman Brown (1973) EA 358*.**

73. On the part of the 1st defendant, counsel reviewed the evidence, especially that of the two experts, and submitted that the 1st defendant has a proper mechanism for treatment of effluent i.e the soak pits which she argued are approved by the PCPB. She was further of the view that the water quality test of her client's witness was superior to that of the plaintiffs' expert who she argued had not demonstrated how genuine his equipment was, nor produce a calibration certificate for his equipment.

74. She referred me to Section 3 (3) of the Standards Act which prohibits a person from operating an equipment or instrument which should have been calibrated without a calibration certificate. She also faulted Mr. Muyembe for using the electricity conductivity test for the same is not provided for in Schedule 4 of the Water Quality Regulations. She was of the view that his evidence on the quality of water should be disregarded because the EC test is not in the regulations; that the EC test varies depending on time and the activities; that he failed to authenticate his equipment and failed to submit water samples in an approved lab. She submitted that the plaintiffs falsely accused her client of operating without an EDL licence which her client tendered as an exhibit. She further submitted that her client had a dam liner to avoid leakage; that the area is a natural wetland; that her client compensated based on the list that was given to her; that there was no evidence that Mr. Kiran Nangare had any mutual agreement with the plaintiffs; that her client followed the statutory requirements before constructing the dam. She pointed out that her client prepared an EIA report and was issued with licences from NEMA and WRMA, and that her client has been conducting annual audits. She also submitted that an EIA for the 13 additional greenhouses was done and permission granted and that her client has conducted another EIA for the construction of an additional dam. She submitted that public participation was done in all these. She further submitted that her client has an EIA for the boreholes in its farm. On the death of the 1st plaintiff's livestock, caused by nitrate poisoning, she submitted that there was nothing to show that her client caused their death. She further submitted that the survey report of the plaintiffs should be disregarded for breach of Section 35 of the Evidence Act and further sought that the valuation reports should be disregarded. She submitted that the flow of water into the plaintiffs' farm was an act of God as water would flow downwards. She also did not think that the plaintiffs have proved that her client discharges effluent to the plaintiffs' farms. She pointed out that there are many farms between her client's and the plaintiffs' and they also use pesticides and fertilizers. She relied on the case of ***Haroun O. Nyamboki vs Catholic University of East Africa (AMECEA) (2017) eKLR*** to support her point. She submitted that each property owner bears the responsibility to receive and convey storm water but some factors such as rain intensity are variables not within the control of the property owner. She asked that the plaintiffs' case be dismissed with costs.

75. On the part of the 2nd defendant, it was submitted inter alia that the plaintiffs have unfairly sought to portray the 2nd defendant as having employed a carefree attitude which was without any shred of truth. Counsel was of the view that the evidence of the plaintiffs does not support their pleadings against the 2nd defendant and he submitted that parties are bound by their pleadings relying on the case of ***IEBC & Another vs Stephen Mutinda Mule & 3 Others (2014) eKLR***. On the issue of public participation, counsel pointed me to Principle 10 of the Rio Declaration on Environment and Development, 1992, the Espoo Convention on Environmental Impact Assessment, Article 10 and 69 of the Constitution of Kenya, 2010, and the case of ***Luo Council of Elders & 8 Others vs County Government of Bomet & 24 Others (2018) eKLR.*** He submitted that in the current case, there was evidence that the 1st defendant communicated to all community members through the Chief's office that there was to be public participation at the Chief's grounds and that the meeting was attended by some community members who raised their grievances and the same were accommodated when the EIA licence was issued. He submitted that the mere fact that the plaintiffs did not attend the public participation meeting does not in itself invalidate the process. He was of opinion that there was compliance with the requirement for public participation. He submitted that the 2nd defendant addressed the plaintiffs' grievance by giving the 1st defendant the requirement to construct an extra dam for the additional greenhouses. He submitted that the 2nd defendant acted promptly on the complaint of the 1st plaintiff and issued a restoration order and a further site visit. He submitted that his client also roped in WRMA to undertake sampling and analysis of water samples and undertook a joint inspection which culminated in a report and recommendations. He thought that the plaintiffs rushed to court even before the joint inspection report could be released despite its recommendations being capable of solving this dispute amicably. He submitted that his client's conduct cannot be said to be one of collusion, laxity or a relegation of its duties as claimed by the plaintiffs. He did not believe that there was any nexus between the plaintiffs' alleged grievances and the actions of the 2nd defendant and asked that the plaintiffs' case be dismissed.

76. For the 3rd defendant, it was submitted inter alia that the plaintiffs' claim against the 3rd defendant is that its Physical Planning Department irregularly and illegally approved the development plans of the 1st defendant and as a result the plaintiffs have suffered. He submitted on what a cause of action in law means, citing several authorities, and submitted that there is no connection between the plaintiffs' claim and the 3rd defendant. He submitted that it is NEMA which issues licences and that the 3rd defendant's Physical Planning Department having been presented with a licence, had exercised enough due diligence. He pointed out that it is not the mandate of the 3rd defendant to assess the environmental impact of a project but that it is the responsibility of the 2nd defendant. He submitted that the plaintiffs ought to have challenged the EIA licences issued by the 2nd defendant and restrain the same from being approved. He also submitted that a challenge to an EIA licence should be ventilated through the National Environment Tribunal. He asked that the plaintiffs' case be dismissed with costs.

E : ANALYSIS AND DETERMINATION

77. It will be noted from the foregoing that the case of the plaintiffs is that the 1st defendant's activities upstream have led to damage to their

farms downstream. They have particularly singled out the bursting of the 1st defendant's dam in the year 2014 and what they believe is discharge of water from the 1st defendant's dam downstream as being the main cause of the gulley that has formed in the area, and in their farms, and which has led to spillage of water in their farms resulting into flooding and degradation of their land. There is also the complaint that this water is contaminated and has led to loss of livestock in the 1st plaintiff's farm. The 1st defendant has of course denied all these claims, its general line of defence being that it has abided by its statutory obligations and any drain of water downstream is a natural phenomenon for which it has no control. It has particularly stressed the argument that the locality is a natural wetland and water will naturally drain downwards where the farms of the plaintiffs are located. The 2nd and 3rd defendants have also distanced themselves from being responsible for the damage that has been caused to the farms of the plaintiffs and have asserted that they have performed their regulatory functions well.

78. Before I go too far, I feel the need to quickly address the submissions that the plaintiffs needed to channel their grievance to the National Environment Tribunal. This tribunal is established by Section 125 of the Environment Management and Coordination Act (EMCA), Act No. 8 of 1999. The mandate of the tribunal is contained in Section 129 of the statute which is drawn as follows :-

> *129. Appeals to the Tribunal*
>
> *(1) Any person who is aggrieved by—*
>
> *(a) the grant of a licence or permit or a refusal to grant a licence or permit, or the transfer of a licence or permit, under this Act or its regulations;*
>
> *(b) the imposition of any condition, limitation or restriction on the persons licence under this Act or its regulations;*
>
> *(c) the revocation, suspension or variation of the person's licence under this Act or its regulations;*
>
> *(d) the amount of money required to paid as a fee under this Act or its regulations;*
>
> *(e) the imposition against the person of an environmental restoration order or environmental improvement order by the Authority under this Act or its Regulations, may within sixty days after the occurrence of the event against which the person is dissatisfied, appeal to the Tribunal in such manner as may be prescribed by the Tribunal.*

79. It will be noted from the above, that NET generally hears complaints over the issuance of licences by NEMA and these will include EIA licences. If the suit herein was strictly one which only complained about issuance of an EIA licence by NEMA, I would probably have been persuaded that NET has jurisdiction, but it is apparent to me that the dispute before me is not one that is confined to the manner in which an EIA licence was issued to the 1st defendant. There are other matters raised, such as the bursting of the dam of the 1st defendant and compensation arising from the said incident, and questions about the continuous flow of water from the 1st defendant's land to the land of the plaintiffs, and these have nothing to do with the manner in which the EIA licence was issued. I feel the need of not saying more, because to me, I am persuaded that this case is properly before me.

80. There was the other argument by Ms. Momanyi that the surveyors report should be disregarded pursuant to the provisions of Section 35 of the Evidence Act, Chapter 80, Laws of Kenya. The said section of the law is drawn as follows :-

> *35. Admissibility of documentary evidence as to facts in issue*
>
> *(1) In any civil proceedings where direct oral evidence of a fact would be admissible, any statement made by a person in a document and tending to establish that fact shall, on production of the original document, be admissible as evidence of that fact if the following conditions are satisfied, that is to say—*
>
> *(a) if the maker of the statement either—*
>
> *(i) had personal knowledge of the matters dealt with by the statement; or*
>
> *(ii) where the document in question is or forms part of a record purporting to be a continuous record, made the statement (in so far as the matters dealt with thereby are not within his personal knowledge) in the performance of a duty to record information supplied to him by a person who had, or might reasonably be supposed to have, personal knowledge of those matters; and*

(b) if the maker of the statement is called as a witness in the proceedings:

Provided that the condition that the maker of the statement shall be called as a witness need not be satisfied if he is dead, or cannot be found, or is incapable of giving evidence, or if his attendance cannot be procured without an amount of delay or expense which in the circumstances of the case appears to the court unreasonable.

(2) In any civil proceedings, the court may at any stage of the proceedings, if having regard to all the circumstances of the case it is satisfied that undue delay or expense would otherwise be caused, order that such a statement as is mentioned in subsection (1) of this section shall be admissible or may, without any such order having been made, admit such a statement in evidence—

(a) notwithstanding that the maker of the statement is available but is not called as a witness;

(b) notwithstanding that the original document is not produced, if in lieu thereof there is produced a copy of the original document or of the material part thereof certified to be a true copy in such manner as may be specified in the order or the court may approve, as the case may be.

(3) Nothing in this section shall render admissible any statement made by a person interested at a time when proceedings were pending or anticipated involving a dispute as to any fact which the statement might tend to establish.

(4) For the purposes of this section, a statement in a document shall not be deemed to have been made by a person unless the document or the material partthereof was written, made or produced by him with his own hand, or was signed or initialled by him or otherwise recognized by him in writing as one for the accuracy of which he is responsible.

(5) For the purpose of deciding whether or not a statement is admissible by virtue of this section, the court may draw any reasonable inference from the form or contents of the document in which the statement is contained, or from any other circumstances, and may, in deciding whether or not a person is fit to attend as a witness, act on a certificate purporting to be the certificate of a medical practitioner.

81. I understand Ms. Momanyi as arguing that the survey report should be disregarded because the person who prepared it is not the person who produced it. To me that is a belated argument. If counsel wished to insist that the survey report be produced by the person who made it, what she needed to do was to raise an objection at the hearing when PW-6 testified, and raise an objection to PW-6 producing the report in place of the maker. No objection was raised, and as I have said, that issue has been overtaken by events as the report is already an exhibit before court. Again, I need not say too much on that point.

82. One last thing before I go deeply into the issues, I do note that Mr. Chege in his submissions, placed reliance on the case of ***Giella vs Cassman Brown (1973) EA 358.*** That case relates to interlocutory injunctions and provides the principles upon which a court will assess such an application. At that stage of the proceedings, the court is obliged to find whether the applicant has made out a *prima facie* case with a probability of success; whether there is proof of irreparable damage; and when the court is in doubt, it will decide such application on a balance of convenience. These principles have no place when the court is assessing whether or not to issue an order of permanent injunction. At this stage, the matter has already been heard and so it is superfluous for the court to make an assessment of whether there is a *prima facie* case with a probability of success or whether there is irreparable loss, and there certainly cannot be consideration of a balance of convenience. The case of ***Giella vs Cassman Brown*** is restricted to the interlocutory injunction. I thought it is useful for me to point this out given the submissions of Mr. Chege.

83. Now, to the issues, I think that it is important that I outline some important facts which came forth during the site visit and from the evidence of the parties. First, there is no question that there is serious degradation of the land of the plaintiffs. The 1st plaintiff's land has indeed borne the brunt of the deep gulley which channels water from upstream. This gulley has separated parts of the 1st plaintiff's land from the rest and has also created a marshy area. For the land of the 2nd and 3rd plaintiffs, part of their land is flooded and is now akin to a swamp, with swamp vegetation such as Egyptian reeds now taking over from what previously was land that was arable and graced with acacia trees. The source of this swampy area is the water from the gulley which spills into their land. Secondly, there is no debate that the 1st defendant operates a flower farm upstream. The flower farm comprises of several greenhouses which harvest rain water. A majority of the greenhouses, discharge this water into the dam that is in the 1st defendant's land, while some (9 according to the 1st defendant) discharge water into a swampy area, the so called "wetland" within the 1st defendant's farm. It is also common ground that the dam of 1st defendant burst in the year 2014. There is one important fact which is claimed by the plaintiffs but denied by the 1st defendant, and that is whether the source of the

water in the plaintiffs' farms is from the 1st defendant. That is the point that I opt to start with.

The source of water and flooding in the plaintiffs' land

84. It didn't come out very clearly when the 1st defendant started operating the flower farm, but I guess it is about the year 2012/2013 following the EIA reports on record. It seems that the 1st defendant shortly ran into serious challenges culminating in the bursting of the dam in the year 2014, which cannot be more than 2 years since they started operations. I have no doubt in my mind and I am persuaded from the evidence tendered, that the huge volume of water that spilled from the dam made a channel that was not present there before. Once such channel was formed, water found a path, and the continuous flow of water has led to the formation of the gulley leading to the land of the 1st plaintiff.

85. It was asserted by the plaintiffs, but denied by the 1st defendant, that the constant flow of water into the land of the plaintiffs has a direct connection to the bursting of the dam and/or the continuous flow of water from the 1st defendant's flower farm caused by the water harvested from the greenhouses in the 1st defendant's flower farm. The plaintiffs' position is that if was not that the 1st defendant has activities upstream, which drain water into the channel created by the bursting of the dam and which channel spills water into their land, their land would not have been affected by the water upstream. They contend that before the 1st defendant started its activities upstream, they had no problem whatsoever, and that all that existed was a seasonal stream which never led water into their land. The position of the 1st defendant is that there has been a natural flow of water from upstream from time immemorial and that the plaintiffs are suffering because there has been an increase in rainfall due to the rehabilitation of the Mau Forest.

86. I am afraid to inform the 1st defendant that I am not persuaded by its explanation. It will be recalled that this court and the litigants visited the locality. There is certainly the old water channel from Sigotik dam area which appears to have been draining water from upstream, but one cannot ignore the huge volume of water from the 1st defendant's dam, which joins the old channel, leading to increase in the volume of water in the old channel.

87. It is visible to the eye, and I have no doubt in my mind, that whatever existed there before, as the natural water drainage system, now has no capacity to hold both the water from Sigotik dam area and the water from the 1st defendant's farm. The old channel only led to a certain point, but never continued into the land of the plaintiffs. What the burst dam did was to create a new channel beyond the old channel, this new channel now leading to the plaintiffs' land. This new channel gives water a dedicated path right into the plaintiffs' land. There is a direct cause and effect between the bursting of the 1st defendant's dam, the increased volume of water in the old channel caused by water from the 1st defendant's farm, the continuous flow of water from the land of the 1st defendant, the new channel identified by the deep gulley, and the now flooded land of the plaintiffs.

88. And no, it is not a natural phenomena as presented by the 1st defendant. It is not natural because there is an intervening human activity, that is, the flower farm with its greenhouses, for if these activities were not present, the old channel would still have held its own and I do not think that the land of the plaintiffs would have been affected in any way. I say this, because the 1st defendant and her expert, never pointed out to me any features which would suggest that the channel in the 1st plaintiff's land had been in existence before. What Dr. Taruru did point out were features which show that the old seasonal channel had been there for a long time, which is not disputed, but nothing to demonstrate that the new channel in the 1st plaintiff's land was old or is a creation of nature, and as I have explained above, it is certainly not a creation of nature but a phenomenon that is directly attributed to the unnatural activities of the 1st defendant upstream. In fact, from the evidence presented, it does appear that both NEMA and WRMA were concerned about the capacity of the 1st defendant to hold the water that is harvested by the greenhouses which is mentioned in the improvement orders issued by NEMA. Dr. Taruru also claimed that there is now increased rainfall due to rehabilitation of the Mau Forest, but no evidence of any rainfall data was produced to demonstrate any such claimed increased rainfall. Nothing could have been easier than to present rainfall data if the 1st defendant wanted to cling on this argument.

89. Having said that, I must add that I was not quite persuaded that Dr. Taruru was an expert in the matters that were before court. From his curriculum vitae (CV), Dr. Taruru is an entomologist that is a person who specializes in the study of insects. Indeed, his PhD was in *"rearing methods and mating behavior of the dung beetle."* In as much as he is a NEMA certified lead expert, he certainly is not an expert in issues relating to terrains and water flows. In my view, Mr. Muyembe, who studied Range Management, which would inevitably include the study of terrains, is a person more qualified to discuss issues relating to topography and flows of water on land. I cannot therefore take Dr. Taruru's "expert evidence" as being the gospel truth.

90. I have already held that the 1st defendant had a dam in its premises which burst and spilled water into the land of the plaintiffs. There is also a continuous and/or intermittent flow of water, depending on the severity of the rain and the holding capacity of the dam, from the 1st defendant's land into the old channel which leads into the land of the plaintiffs. To me, this is a classical case in which the rule in the case of ***Rylands vs Fletcher (1861-73) All ER 1,*** is applicable. The facts of the case in ***Rylands vs Fletcher*** were that the Plaintiff was an occupier of a mine and works in some land. The Defendants owned a mill in his neighbourhood, and they proposed to make a reservoir for the purpose of keeping and storing water to be used about their mill on another parcel of land, with there being some intervening land between the land occupied by the plaintiff and that of the defendant. The reservoir of the Defendants was constructed through the agency and inspection of an engineer and contractor. Personally, the Defendants appear to have taken no part in the works, or to have been aware of any want of security connected with them. When the reservoir was constructed, and filled, or partly filled, with water, the weight of the water bearing broke through some shafts and water passed down into the land of the plaintiff and flooded his mine, causing considerable damage upon which the action was brought. The Court of Exchequer, was of opinion that the Plaintiff had established no cause of action. The Court of Exchequer Chamber, before which an appeal from this judgment was argued, was of a contrary opinion, and the Judges there unanimously arrived at the conclusion that there was a cause of action, and that the Plaintiff was entitled to damages. This decision was upheld by the House of Lords. The House of Lords quoted with approval the reasoning of Blackburn J, delivered in The Court of Exchequer Chamber, where he had stated as follows :-

> *"We think that the true rule of law is, that the person who, for his own purposes, brings on his land and collects and keeps there anything likely to do mischief if it escapes, must keep it in at his peril; and if he does not do so, is primâ facie answerable for all the damage which is the natural consequence of its escape. He can excuse himself by shewing that the escape was owing to the Plaintiff's default; or, perhaps, that the escape was the consequence of vis major, or the act of God; but as nothing of this sort exists here, it is unnecessary to inquire what excuse would be sufficient. The general rule, as above stated, seems on principle just. The person whose grass or corn is eaten down by the escaping cattle of his neighbour, or whose mine is flooded by the water from his neighbour's reservoir, or whose cellar is invaded by the filth of his neighbour's privy, or whose habitation is made unhealthy by the fumes and noisome vapours of his neighbour's alkali works, is damnified without any fault of his own; and it seems but reasonable and just that the neighbour who has brought something on his own property (which was not naturally there), harmless to others so long as it is confined to his own property, but which he knows will be mischievous if it gets on his neighbour's, should be obliged to make good the damage which ensues if he does not succeed in confining it to his own property. But for his act in bringing it there no mischief could have accrued, and it seems but just that he should at his peril keep it there, so that no mischief may accrue, or answer for the natural and anticipated consequence. And upon authority this we think is established to be the law, whether the things so brought be beasts, or water, or filth, or stenches."*

91. In my considered view, it is more or less the same scenario that has played itself out in this case. It cannot be argued that the dam in the 1st defendant's farm and the holding of it is natural because it is clearly not. And neither can it be argued that the breaking of the dam or the continuous flow of excess water from the dam, or the greenhouses in the farm of the 1st defendant, is an act of God. The dam of the 1st defendant broke due to a poor design being employed, in that the 1st defendant may not have considered the impact of underground water in a compacted dam. Even if this was not the true cause of the dam bursting, the fact that it burst, invites the doctrine of *res ipsa loquitor*, for dams would not in the cause of their ordinary existence burst, if they are well designed, built and well maintained. Even if the bursting of the dam of the 1st defendant was an act of God, which I am not persuaded, the continued storage of water within the 1st defendant's land and its continuous discharge into the channel formed by the dam water, is certainly not an act of God, but a deliberate human act aimed at relieving pressure on the dam, or giving an avenue for excess harvested water to leave the land of the 1st defendant. The fact of the matter is, just as in the case of *Rylands vs Fletcher*, that the 1st defendant harvests and stores rain water in its premises, and releases the excess water that it is unable to hold, which water ends up in the land of the plaintiffs, leading to damage to the plaintiffs. That is the inescapable conclusion that I reach in this case. It must be remembered that the rule in *Rylands vs Fletcher* is a rule of strict liability, that is, it is not necessary for there to have been an element of negligence on the part of the 1st defendant. It therefore does not help the 1st defendant to produce EIA reports showing that its dam was approved, or even well maintained, or that it did not act negligently in any way. To press the point, I wish to borrow from the words of Lord Cranworth delivered in the House of Lords in the case of *Rylands vs Fletcher* where he stated as follows :-

> *"The Defendants, in order to effect an object of their own, brought on to their land, or on to land which for this purpose may be treated as being theirs, a large accumulated mass of water, and stored it up in a reservoir. The consequence of this was damage to the Plaintiff, and for that damage, however skilfully and carefully the accumulation was made, the Defendants, according to the principles and authorities to which I have adverted, were certainly responsible."*

92. As I said earlier, this is the scenario that we have in this case, and whichever way one wants to look at it, the 1st defendant cannot escape liability for the damage caused to the land of the plaintiffs for the water released from its land and which has led to damage of the plaintiffs' land.

93. For this the 1st defendant must be held liable in damages. I will shortly revisit the issue of damages once I deal with the issue of effluent discharge.

The question of effluent and contamination

94. It is the position of the plaintiffs that the 1st defendant discharges effluent water, that is water which is contaminated, into the ecosystem, and the same finds its way into the plaintiffs' farms. The 1st plaintiff has specifically complained that the contaminated water has caused her animals to die and that the said water has a layer of chemicals and is smelly. To prove her point, apart from the evidence of PW-5, she also produced a report from the veterinary department where a post-mortem for her dead cows was done. The diagnosis is that the cows died due to nitrate poisoning and the 1st plaintiff was informed to avoid grazing her animals where there is *amaranthus* species. On his part, PW-5 gave evidence on two variants, that is, the pH level of the water, and the electric conductivity of the same.

95. I am not persuaded from the evidence tendered that the plaintiffs have proved to the required standard that the water discharged from the farm of the 1st defendant is contaminated as claimed. First, I do agree with the submissions of Ms. Momanyi that PW-5, the plaintiffs' expert, used a gadget whose authenticity is not known. I would have given his evidence some weight if he had carried out tests with a gadget that can be proved reliable but I am afraid that he did not. Alternatively, he could have carried out his tests in a re-known laboratory which is not what happened. Further, even assuming that his evidence is correct, and that there is evidence of high pH levels and high levels of electricity conductivity in the water from the 1st defendant's farm, his evidence does not tell me exactly what chemical is contained in this water. It would have been a different case if the expert had isolated the chemicals, if any, in the water and subjected them to a test which would bring one to no other conclusion but that the water is contaminated by chemicals in the nature used by the 1st defendant. That way, there would have been a nexus between the findings of the tests and the type of chemicals used by the 1st defendant. Even the post mortem of the 1st plaintiff's dead cows does not shed light on exactly what chemicals may have killed her cows and if it is nitrates, I have not been given the connection between these and what is used in the land of the 1st defendant. There is also the possibility that if indeed the 1st plaintiff's cows died as a result of chemical poisoning, this could have been caused by activities that take place between her land and that of the 1st plaintiffs.

96. Ms. Momanyi's reliance on the case of *Haroun O. Nyamboki vs Catholic University of Eastern Africa (supra)* is therefore on point. In the said case, the appellant complained of contamination of his land by the respondent who had constructed a hostel on its land. The respondent's land was at higher ground to the appellant's. The court however held the view that there was no adequate evidence to prove that the contaminated water came from the respondent's land. It is more or less the scenario that I face, at least in so far as the issue of effluent is

concerned, for I am not able to clearly point the same to the land of the 1st defendant. I am thus not entirely convinced that the plaintiffs have discharged to the required standard that there is proof of contamination of the water from the 1st defendant's land. There could be suspicion that the water is contaminated, and it is indeed possible that the water from the land of the 1st defendant is contaminated, but without sufficient proof, I hesitate to make a conclusive finding and this is a matter that can be subjected to further investigations by the authorities. I am aware that PW-5 was also of the view that soak pits are not suitable for the type of operation that is undertaken by the 1st defendant. For this, I am also unable to make an affirmative conclusion.

97. I do however think that there is necessity for continuous tests to be conducted of the water that discharges from the land of the 1st defendant by NEMA in conjunction with other relevant institutions and/or agencies, so as to ensure that the persons downstream, and indeed the general population, is not exposed to dangerous chemicals that may adversely affect health and/or endanger life. I therefore do direct NEMA in consultation with any other relevant agency and/or institution, to conduct tests to the water within the land of the 1st defendant, and that leaving the land of the 1st defendant, so as to ensure that it is not contaminated in any way. These tests should be done randomly and at different points so as to capture as much real data as is possible. This court cannot also wish away the questions that have been raised with regard to the capacity of the soak pits in use, or indeed, their appropriateness for the sort of operations carried out by the 1st defendant. I therefore find it necessary to further direct NEMA to liaise with WRA or other necessary institutions to assess and test the appropriateness of the use of soak pits by the 1st defendant, and further assess whether these soak pits are adequate given the nature of operations of the 1st defendant's farm. I am aware that the 1st defendant has an effluent discharge licence but it has emerged in these proceedings that there are queries over how this discharge licence was acquired and how it has been renewed and whether the 1st defendant has been abiding by the terms of that licence. NEMA also needs to ensure that the terms of the discharge licence are strictly adhered to and in default it ought to act decisively.

The EIA licences of the 1st defendant

98. The plaintiffs in their plaint, attacked the EIA licences issued by the 2nd defendant to the 1st defendant, claiming that they were issued without any public participation. The 1st defendant in its evidence displayed three EIA project reports. The first was for the construction of two dams, the second for the drilling of boreholes, and the third EIA project report is for another dam, which was proposed after the 1st dam burst. I do not think that the EIA project report for the borehole is in issue in this matter but the EIA for the construction of the dam that burst, the EIA for the construction of the additional greenhouses (if any) and the EIA for the second dam certainly are. There could also be an issue over the manner in which the 1st defendant's farm was licenced, for I am not too sure whether prior to NEMA issuing a licence for the operation of the flower farm, an EIA was done, and if so, whether that EIA identified the disposal of greenhouse harvested storm water as being a challenge given the location of the farm. For the record, I have not seen the EIA report that was prepared prior to the 1st defendant's flower farm project being given the green light and I do not know if, while assessing the risks, the issue of water discharge was ever isolated and addressed. There are nevertheless some important points that I want to flag on the EIAs.

99. Starting with the EIA that was prepared in respect of the dam that burst, and even before I address whether there was public participation, it is not clear who prepared it or who conducted the environmental assessment. I say this because Dr. Taruru, whose name appears on the EIA project report as the person who was the lead expert, stated that he did not sign that report. It is thus apparent that somebody forged the signature of Dr. Taruru and purported it to be a report that he had authenticated, when in fact this was not the case. That being the position, the EIA project report that was prepared in respect of the dam that burst is as good as no report, for it is not clear who prepared it, and whether the person who prepared it had the licence to so prepare the report. If Dr. Taruru never signed it, yet it is his name which appears on the report as being the lead expert, then this is as good as no report at all.

100. Apart from the above, and assuming that the EIA project report dated 7 January 2013 was properly signed, it was wrong for NEMA to issue an EIA licence for the construction of the dam on the basis of the said project report. Let me elaborate the point : There are two types of environmental assessments and two types of reports which are the EIA project report and the EIA study report. These are two different types of reports and they are addressed at Section 58 of EMCA. Sections 58 (1) and (2) are operative in this instance and they provide as follows :-

> *58. Application for an Environmental Impact Assessment Licence*
>
> *(1) Notwithstanding any approval, permit or license granted under this Act or any other law in force in Kenya, any person, being a proponent of a project, shall before for an financing, commencing, proceeding with, carrying out, executing or conducting or causing to be financed, commenced, proceeded with, carried out, executed or conducted by another person any undertaking specified in the Second Schedule to this Act, submit a project report to the Authority, in the prescribed form, giving the prescribed information and which shall be accompanied by the prescribed fee.*
>
> *(2) The proponent of any project specified in the Second Schedule shall undertake a full environmental impact assessment study and submit an environmental impact assessment study report to the Authority prior to being issued with any licence by the Authority:*
>
> *Provided that the Authority may direct that the proponent forego the submission of the environmental impact assessment study report in certain cases.*

101. Generally, EIA project reports are conducted for projects that do not have serious impacts on the environment. Those projects which are

identified to have potential for serious impacts need an EIA study report, which is expected to be much more comprehensive than an EIA project report and requires wider participation.

102. The Second Schedule to EMCA contains the types of projects for which an EIA study report is required. The schedule that was operative at the material time is that of 2015 (which has now been amended in 2019). There are several projects listed in the said schedule and it is not necessary for me to list down all of them but I do note that dams are among the projects listed in Section 4 of the said schedule which states as follows :-

PROJECTS REQUIRING SUBMISSION OF AN ENVIRONMENTAL IMPACT ASSESSMENT STUDY REPORT

1…

2…

3…

4.

Dams, rivers and water resources including —

(a) Any project located within a distance prescribed by a written law from a wetland, ocean, sea, lake, river, dam, stream, spring or any other water body.

(b) Storage dams, barrages and piers.

(c) River diversions and water transfer between catchments.

(d) Large scale flood control schemes.

(e) Drilling for the purpose of utilizing ground water resources including geothermal energy.

103. It will be noted from the above that storage dams are covered in Section 4 (b) above. The dam within the land of the 1st defendant that burst was a storage dam. It is not pretended that an EIA study report was ever conducted for what was conducted was merely an EIA project report. It was wrong for NEMA to issue an EIA licence for the dam without there being an EIA study report as required by the law. Since no EIA study report was ever undertaken, the provisions relating to publication of the project and public participation as outlined by Section 59 of EMCA and in the Environment (Impact Assessment and Audit) Regulations, (2003) (EIA Regulations (2003) could not have been followed. Section 59 of EMCA inter alia requires publication of the project in the Gazette, and gives at least 60 days for submissions of oral and written comments from the public. The same is drawn as follows :-

59. *Publication of Environmental Impact Assessment*

(1) Upon receipt of an environmental impact assessment study report from any proponent under section 58(2), the Authority shall cause to be published in the Gazette, in at least two newspapers circulating in the area or proposed area of the project and over the radio a notice which shall state —

(a) a summary description of the project;

(b) the place where the project is to be carried out;

(c) the place where the environmental impact assessment study, evaluation or review report may be inspected; and

(d) a time limit of not exceeding sixty days for the submission of oral or written comments environmental impact assessment study, evaluation or review report.

(2) The Authority may, on application by any person extend the period stipulated in sub-paragraph

(d) so as to afford reasonable opportunity for such person to submit oral or written comments on the environmental impact assessment report.

(3) The Authority shall ensure that its website contains a summary of the report referred to in subsection (1).

[Act No. 5 of 2015, s. 44.]

104. On the other hand, the EIA Regulations, 2003, provide for public participation at Section 17 which is drawn as follows :-

17. Public participation

(1) During the process of conducting an environmental impact assessment study under these Regulations, the proponent shall in consultation with the Authority, seek the views of persons who may be affected by the project.

(2) In seeking the views of the public, after the approval of the project report by the Authority, the proponent shall—

(a) publicize the project and its anticipated effects and benefits by—

(i) posting posters in strategic public places in the vicinity of the site of the proposed project informing the affected parties and communities of the proposed project;

(ii) publishing a notice on the proposed project for two successive weeks in a newspaper that has a nationwide circulation; and

(iii) making an announcement of the notice in both official and local languages in a radio with a nationwide coverage for at least once a week for two consecutive weeks;

(b) hold at least three public meetings with the affected parties and communities to explain the project and its effects, and to receive their oral or written comments;

(c) ensure that appropriate notices are sent out at least one week prior to the meetings and that the venue and times of the meetings are convenient for the affected communities and the other concerned parties; and

(d) ensure, in consultation with the Authority that a suitably qualified co-ordinator is appointed to receive and record both oral and written comments and any translations thereof received during all public meetings for onward transmission to the Authority.

105. It cannot of course be that the above provisions of the law were ever followed for no EIA study report was ever conducted despite this being required by the Second Schedule to EMCA as I have demonstrated above. Indeed, 60 days for comments by the public was never provided for, as I do note that the EIA project report was delivered on 8 January 2013 and the EIA licence was issued on 8 February 2013. This buttresses the position that no EIA study report was ever conducted but only an EIA project report which was contrary to the law. It was therefore wrong for NEMA to issue the EIA licence based on the project report.

106. Even assuming that the EIA project report were an EIA study report, it would still fail the test of public participation. Public participation should not be taken as a routine activity, for any member of the public to submit comments. There needs to be some quality in public participation, the qualitative aspect being taken care of by ensuring that it is the persons who stand to be most affected by the project whose views are taken into account. Since the dam was elevated, and in case of any issues with it, the persons downstream stood to be affected, it was imperative for the 1st defendant to ensure that the residents downstream, and that included the plaintiffs needed to be consulted and their views taken into account over the dam project. It is probable that they may have had reservations which if taken into account would have prevented the disaster that happened, or may have mitigated the loss. As it stands, they were never consulted.

107. I am aware that there is an EIA report (which I am not sure whether it is a project report or a study report) dated 27 February 2017, the project being the construction of another dam. So far, no licence has been issued by NEMA in respect of that project and my holding is that NEMA should not issue the EIA licence unless and until the full requirements of an EIA study report are undertaken and there is full public participation in accordance with the rules.

108. Another significant issue that I have noted when going through the EIAs presented by the 1st defendant is that the 1st defendant did not avail any EIA for the expansion of the farm to include the 13 additional greenhouses. DW-3 in her evidence, stated that WRMA had declared the site for the additional greenhouses not to be an ideal site. She was also not certain whether an EIA licence was issued for these additional greenhouses. If ever an EIA for these additional greenhouses was issued, I have no idea whether the licence for this was in the manner of a variation of the original EIA licence for operation of the farm, or whether a separate EIA licence was issued. If none was issued then it follows that the operation of the 13 additional greenhouses may very well be illegal.

109. It is clear to me that NEMA was not vigilant when issuing the EIA licences to the 1st defendant. It is also apparent to me that NEMA has also not been vigilant in monitoring the activities of the 1st defendant. NEMA has a mandate to continuously monitor projects for which it has issued licences but I have no evidence of monitoring until the 1st plaintiff made a complaint. True, the 1st defendant seems to conduct its annual audits but I have not seen any serious follow up by NEMA on the same. I acknowledge the evidence of DW-3, NEMA's environmental officer, that NEMA has issued an Environmental Restoration Order. I appreciate these efforts but given the scale of the project that is in issue, I would have expected NEMA to do much more immediately they got the report about the bursting of the dam. Be that as it may, I have no problem with the recommendations of NEMA which I direct the 1st defendant to fully comply with and report to NEMA.

The General damage to the locality and environment

110. An important matter that has come to light in these proceedings, apart from the damage to the farms of the plaintiffs, and for which this court cannot close its eyes and ears, is the deleterious impact to the environment that the activities of the 1st defendant have caused. It is obvious that the 1st defendant is unable to contain the large amount of water harvested in its farm. This huge volume of water has flooded the roads, washed away bridges, and generally led to hardship to the general population of the area. The effect is that people find it difficult to access their homes, and for some residences and places of business, no vehicle can reach. Children are finding it difficult to go to school; they are forced to take risks crossing flooded roads and the flowing water gulley. Some lands including portion of those of the plaintiffs have been rendered unusable.

111. I am alive to the fact that we need to develop as a country and that the 1st defendant's project brings employment to the population and probably benefits the economy but development must be sustainable, in that it must also be alive to environmental needs. In my opinion, the project of the 1st defendant has failed to take into account the environment and the impact that it has to the population in the area. In the words of PW-5, the project of the 1st defendant is now punishing the population that lives in that locality. This is a matter that needs to be seriously addressed by NEMA, the County Government of Nakuru, and probably WRA. These institutions need to have a sitting to address these negative impacts. At a minimum, roads will need to be rehabilitated and bridges will need to be repaired. It is not fair to the population of the area for them to suffer because the 1st defendant needs to operate a flower farm. A balance must be arrived at, which benefits both parties, but most importantly, a holistic assessment of the 1st defendant's farm needs to be made. If it must operate, the 1st defendant must come up with a master plan of how it will manage its waste water from the greenhouses and its other operations and also the storm water harvested by its greenhouses alongside the water in its dam.

112. In the above, the 3rd defendant has a role to play, and requires to assess the need to undertake measures to have back the roads, bridges and other infrastructure that have been destroyed.

The integrity of the 1st defendant's dam

113. I have already poked holes at the EIA vide which the dam was licenced, but I think, the integrity of the dam needs to be looked at afresh. PW-5 in his evidence stated that he saw cracks at the dam. We wouldn't want another disaster to happen and it is important that NEMA and WRA do have a critical look at this dam and make a decision whether it is one which ought to be allowed to remain in operation.

Remedies

114. There are various prayers that the plaintiffs have sought and which I outlined at the beginning of this judgment. Firstly, the plaintiffs have asked for costs of rehabilitation and reinstatement of their parcels of land. This is not an unreasonable prayer. I have already held that the damage caused to the farms of the plaintiffs has its root in the activities of the 1st defendant, mainly the flow of a large quantity of water harvested in its premises. Technically, the plaintiffs are thus entitled to have their land rehabilitated at the cost of the 1st defendant following the polluter pays principle and also the principle in *Rylands vs Fletcher*. Liability is thus squarely with the 1st defendant in respect of rehabilitation.

115. However, I foresee serious challenges. To start with, from the evidence of the plaintiffs' valuer, the land of the 2nd and 3rd plaintiffs may not be rehabilitated as the same is already a swamp. I am also not too sure whether the land of the 1st plaintiff can be rehabilitated and brought back to the state that it was in prior to the formation of the gulley and flooding in her land. It should be borne in mind that owing to the burst dam, there is now a dedicated channel that passes through the land of the 1st plaintiff and spills water into the land of the 2nd and 3rd plaintiffs. The burst dam has brought a change to the topography and hydrology of the area which may be irreversible. In essence, there is now a new river channel passing through the land of the 1st plaintiff. However, if rehabilitation is possible, without the land being affected at all by the new river channel, well and good. I will thus give an order for rehabilitation and the rehabilitation needs to be done within the next 3 months and thereafter continuous monitoring for at least 12 months to see if the rehabilitation is not affected by the annual cycles. I will

add a proviso that if rehabilitation is not possible, the plaintiffs deserve to be compensated in lieu thereof with the full value of the land that they have lost use of.

116. The plaintiffs' valuer gave value of the portions affected. For the 1st plaintiff, he gave a value of Kshs. 16,300,000/= add a disturbance allowance of 15% being Kshs. 2,515,500/=. For the 2nd plaintiff, the valuer gave the sum of Kshs. 3,400,000/= and a disturbance allowance being 15% thereof as Kshs. 510,000/=. For the 3rd plaintiff, the value of the affected area is given as 6,800,000/= add a disturbance allowance of Kshs. 1,020,000/= being 15% thereof. The basis for this 15% disturbance allowance was for inconvenience caused to the land owner due to contamination. I have however held that I am not persuaded that the contamination is wholly attributable to the 1st defendant and I cannot therefore burden the 1st defendant with this disturbance allowance. Thus if rehabilitation fails, the plaintiffs will be entitled to the value of the parcels of land affected as noted in the valuation without the disturbance allowance. For the record, none of the defendants contested these values by bringing forth a valuation of their own and I have nothing before me to challenge these values. My orders therefore are that the 1st defendant, who is the cause of the damage to the land of the plaintiffs, do embark on the rehabilitation programme as directed above, and if rehabilitation fails, the 1st defendant to pay the plaintiffs the value of their affected parcels of land as noted above.

117. The second prayer sought is a permanent injunction restraining the 1st defendant from releasing, dumping, or in any way allowing the flow of effluent downhill into the plaintiffs' land. On this prayer, I have held that I am not persuaded from the evidence that there is effluent from the 1st defendant's farm. There is however water from the land of the 1st defendant. I see no purpose in issuing an order of permanent injunction because I have already issued orders of rehabilitation. If there is successful rehabilitation, then it matters not that there is a permanent injunction or no permanent injunction. Alternatively, if the plaintiffs get compensated then they will already have received full value for their wasted land and it matters not that there will be water flowing in the channel that is affecting their land.

118. It will however be recalled that in respect of the complaint of effluent, I have directed NEMA to continuously monitor the operations of the farm of the 1st defendant and continuously test for any discharge of contaminated water. If NEMA finds any discharge of contaminants, they are at liberty to take action as empowered by EMCA.

119. The third prayer is for general damages. I do not know what category of general damages the plaintiffs want, for if it is for the land, then this is already covered in my first award. The only damage that I award is for loss of use which was quantified by the valuer. For the 1st plaintiff, the quantification of Kshs. 2,100,000/= was given; for the 2nd plaintiff, Kshs. 944,000/= and for the 3rd plaintiff, Kshs. 995,000/. These are payable by the 1st defendant. I mentioned earlier that I have no contrary evidence from the defendants challenging these valuations. I will therefore award the plaintiffs these sums of money as compensation for loss of earnings as against the 1st defendant.

120. The plaintiffs sought exemplary damages in their fourth prayer. I am aware that exemplary damages are awarded where the conduct of the defendant would lead the court to award such damages. The 1st defendant did not obtain its EIA licences properly but I would attribute this partly to the lapse by NEMA in being vigilant in its duties. It may have been negligent but not deliberate and not aimed specifically at stealing a march or causing deliberate damage to the plaintiffs. I therefore hesitate to award exemplary damages.

121. The final prayer is for costs of the suit. In my view most of the damage was caused by the activities of the 1st defendant, with NEMA not being vigilant enough. I have not seen any conduct by the 3rd defendant which would have led to the loss to the plaintiffs. In as much as the plaintiff complained of approvals by the 3rd defendant, no evidence was eventually led against the 3rd defendant, save that this court has noted that the 3rd defendant is an important institution on the rehabilitation of the area in question. I will thus award costs to the plaintiffs but only against the 1st and 2nd defendants, jointly and/or severally. I make no award on costs for or against the 3rd defendant for I do not think that it was superfluous for the plaintiffs to enjoin the 3rd defendant.

122. In the end I make the following specific orders :-

1. That NEMA is hereby directed to liaise with the relevant agencies/institutions to ensure that the water quality discharged within and without the 1st defendant's farm is not contaminated and is safe to be discharged to the environment.

2. That NEMA is hereby directed to liaise with the relevant agencies/institutions to assess the quality, capacity, and effectiveness of the soak pits used by the 1st defendant, and if need be, provide requisite guidance and/or changes in the manner of discharge and treatment of chemicals from the 1st defendant's property.

3. That it is hereby declared that it was improper and contrary to the provisions of Sections 58 of the Environment Management and Coordination Act, Act No. 8 of 1999, and the second schedule thereof, for NEMA to issue an EIA licence to the 1st defendant for construction of a dam based only on a project report when the law required a full environmental impact assessment study report.

4. That the EIA licence issued for the construction of the dam was issued contrary to law and is hereby revoked. The 1st defendant is directed to undertake a fresh EIA as required by law within 60 days from today if it intends to continue with the operations of the dam within its premises or else it decommissions the dam.

5. That NEMA is hereby barred from issuing an EIA licence for the construction of a second dam before a full environmental impact assessment study is conducted in accordance with the law.

6. That NEMA in consultation with other relevant agencies/institutions is hereby directed to undertake a dam integrity test and provide the requisite guidance depending on the results of such assessment.

7. That NEMA is hereby directed to investigate whether the 1st defendant applied for an EIA licence to expand its operations by a further 13 greenhouses, and if it is found that no EIA was ever conducted, direct that one be conducted forthwith and no later than 60 days from today, and if none is conducted, prepare to decommission the 13 additional greenhouses.

8. The subject to the above orders, the 1st defendant is hereby ordered to ensure full compliance with the restoration orders issued by NEMA and any further orders that NEMA may issue.

9. That NEMA in consultation with all relevant agencies/ institutions, is hereby directed to undertake a study on the changed topography and hydrology of the Mwihoti area, and direct mitigation measures and a master plan on how to manage the same to avoid loss to the population of the locality.

10. That the 3rd defendant is hereby directed to undertake an assessment of the damage to the infrastructure of the area and consider taking measures to rehabilitate the said infrastructure.

11. That the 1st defendant is hereby directed to undertake a rehabilitation programme of the land of the plaintiffs within the next 3 months, and if it is unable to do so, or if rehabilitation is not possible, to pay the plaintiffs the full value of the land that has been wasted, as noted and directed in this judgment.

12. That the 1st defendant is hereby ordered to pay the plaintiffs the loss of user in the sums noted in this judgment.

13. That the plaintiffs shall have the costs of this suit as against the 1st and 2nd defendants.

14. That no orders as to costs are made in favour of or against the 3rd defendant.

123. Judgment accordingly.

Dated, signed and delivered in open court at Nakuru this 19th day of June 2019.

JUSTICE MUNYAO SILA

ENVIRONMENT & LAND COURT AT NAKURU

In presence of : -

Mr. Chege instructed by M/s Khamati, Githinji, Ashiruma & Chege Advocates for the plaintiffs.

Mr. Ngara for National Environment Management Authority (2nd defendant) and holding brief for Ms. J.B Momanyi Advocate for the 1st defendant.

Mr. Akang'o holding brief for Mr. Kahiga instructed by M/s Mirugi Kariuki & Co. Company Advocates for the 3rd defendant.

Court Assistants: Nelima Janepher/Patrick Kemboi.

JUSTICE MUNYAO SILA

ENVIRONMENT & LAND COURT AT NAKURU