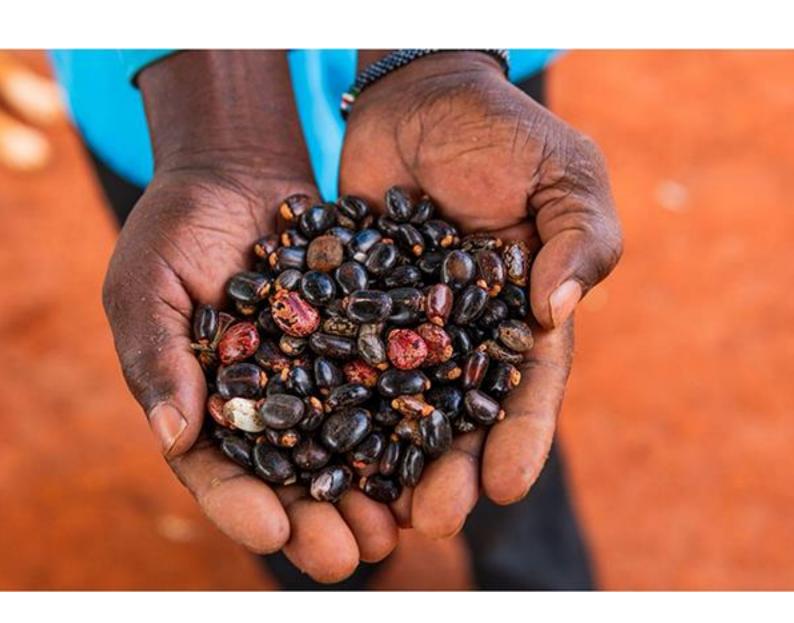
# From Farm to Fuel: inside Eni's African biofuels gamble

T&E investigation

February 2024





## **Transport & Environment**

Published: February 2024

Editeur responsable: William Todts, Executive Director

© 2021 European Federation for Transport and Environment AISBL

#### To cite this report

From Farm to Fuel: inside Eni's African biofuels gamble

#### **Further information**

Agathe Bounfour
Oil Program Lead
Transport & Environment
agathe.bounfour@transportenvironment.org
www.transportenvironment.org | @transenv | fb: Transport & Environment

Cover photo by: Gregory Onyango

An in-depth look behind the scenes of Eni's new green strategy: developing new agricultural production channels from scratch in six African countries to supply its refineries and the emerging 'green' aviation market. All against the backdrop of the Meloni Government's new influence strategy in Africa, the Mattei Plan, which gives pride of place to energy deals.

# Key take-away's

- Eni's new biofuel strategy involves the large-scale deployment of a new crop, castor, which the company promises is 'drought-resistant' and 'does not compete with food production' within African arid rural areas.
- In Kenya, the company is banking on the enrollment of thousands of small-scale farmers recruited by cooperatives, whose harvest is handled by multiple intermediaries. Meanwhile, in the Republic of Congo, the new program is being implemented by agribusiness companies which hold large land concessions.
- In both countries, the company is struggling to meet its industrial development targets: only 24,5% of its 2023 production target has been achieved in Kenya, where two vegetable oil manufacturing plants are already operational.
- Eni has not moved beyond pilot stages in Congo and is yet to release the funds for the project, likely due to disappointing trial yields.
- Promoted as a new source of income for Kenyan small-scale farmers, castor farming has
  in reality been a source of disappointment for many of them, with their harvest particularly
  affected by drought, poor yields, and insufficient operational and technical support.
- Local farmers at two of Eni's proposed sites in Congo allege that land they traditionally farmed was expropriated by the government in favour of the agribusinesses with whom Eni is now partnering.
- In response to our questions, Eni denied that it had under-delivered on one of its flagship green projects and emphasised expected "improvements on agricultural yields" with the introduction of new plant varieties.
- Overall, Eni's apparent failure to meet its ambitious agricultural production targets in Africa so far calls into question the viability of growing crops for biofuels at the scale required to make meaningful emission reductions in the transport and aviation sectors.

#### Introduction

One of the biggest oil companies in the world and significant producer of climate change-causing fossil fuel emissions, Italian state-controlled supermajor Eni, has placed biofuels at the centre of its strategy to achieve net zero carbon emissions by 2050.<sup>1</sup>

The company plans to become a global leader by 2035 in the production of so-called "sustainable fuels". These use seed, nut and vegetable oils as the basis for fuel blends which, according to official estimates, emit between 60-90% less carbon dioxide than conventional fossil fuels, depending on the raw materials used. <sup>2</sup>

The company says it will increase biofuel production fivefold by the middle of next decade, setting one of the most ambitious targets amongst its European peers. <sup>3</sup>

Biofuels received a boost at the COP28 summit held in the United Arab Emirates in December last year, which called on countries to "accelerate" the use of "zero- and low-carbon fuels well before or by around mid-century".<sup>4</sup>

The Italian government is also promoting biofuels as a climate solution at both the EU and G7 levels <sup>5</sup>, of which the country now owns the Presidency<sup>6</sup>. It just released a grand strategic plan for a renewal in the African-Italian collaboration, named after Enrico Mattei, who 's strategy, which began taking shape in 2020<sup>7</sup>, aims to produce a quarter of its biofuel from agricultural

<sup>&</sup>lt;sup>7</sup> Eni. *Long-Term Strategic Plan to 2050 and Action Plan 2020*-2023. p7. "expansion of bio-refining capacity to over 5 million tonnes per year, supplied exclusively with 2nd and 3rd generation "palm-oil free" feedstocks"



<sup>&</sup>lt;sup>1</sup> Eni for 2021 carbon neutrality by 2050. p17.Biorefineries and biofuels referenced at bullet point #3 and #6. (2022). (Link).

<sup>&</sup>lt;sup>2</sup> "According to the conventional criterion of the 'REDII' Directive (EU) 2018/2001, the reduction of CO2eq emissions of HVOlution along the logistics-production chain in 2022 was between 60 and 90 per cent, compared to the fossil reference mix (i.e. 94g CO2eq/MJ), depending on the raw materials used for its production."

Eni. (2023). Ordinary and Extraordinary Shareholders' Meeting of Eni SpA May 10, 2023 Questions and answers prior to the Shareholders' Meeting pursuant to Article 127-ter of Legislative decree 58/1998. p.63-64. (Link).

<sup>&</sup>lt;sup>3</sup> Eni's total biorefining capacity in 2022 was 1.1 mlm ton/y. Eni's website, retrieved from 23.02.2024. (<u>Link</u>). Eni. Press release Eni Strategic Plan 2023-2026. p2 and p3: "In 2030 (...) our biofuel capacity will exceed 5 million tonnes per year". (<u>Link</u>).

For comparison, Repsol 2030 renewable fuels production target is 2 million tonnes, according to Reposol's website, retrieved from 22.02.2024. (Link).

Total Energies 2030 renewable fuels target is also 5 million tonnes. Total Energies. (2021). At a Glance, 2021. p30. (Link).

<sup>&</sup>lt;sup>4</sup> UNFCCC. (December 2023). Conference of the Parties serving as the meeting of the Parties to the Paris Agreement Fifth session United Arab Emirates, 3 Agenda item 4 First global stocktake Proposal by the President Draft decision -/CMA.5, December 2023, p5. (Link).

<sup>&</sup>lt;sup>5</sup> Financial Times (April 2023). *Italy hopes for EU concession on biofuels*. (<u>Link</u>). Euractiv (October 2023). *Italy leads charge to allow more diesel trucks under new CO2 targets*. (<u>Link</u>).

<sup>&</sup>lt;sup>b</sup> G7 Website.(<u>Link</u>).

sources by 2026, the bulk of which will come from Africa where it has signed supply agreements with six countries.<sup>8</sup>

Eni is building a network of agri-hubs across Africa to process vegetable oil from non-edible crops including the three "Cs" – castor, croton and cotton – as well as used cooking oil from restaurants and hotels.

Eni says that these crops, or feedstocks, are resistant to drought and suitable for planting on degraded soils, and will be grown by local farmers who will benefit economically<sup>9</sup>.

Eni has labelled them "renewable raw materials" because, along with reused cooking oil, they are "not competing with the food chain". 10

They are intended to replace traditional biofuel feedstocks, including palm oil, which Eni has relied on previously<sup>11</sup> but which have long been shown to cause deforestation and worsen the climate, biodiversity and food crises.<sup>12</sup>

Eni ships the processed vegetable oil thousands of kilometres back to Italy for conversion at its biorefineries, including into sustainable aviation fuel (SAF), a product the company plans to roll

https://www.eni.com/en-IT/media/press-release/2021/10/eni-anpg-sonangol-enter-mou.html

In 2022, Eni signed an MOU with Mozambique, Benin, and Rwanda. See Eni. (February 2022). Eni and the Republic of Mozambique agree on joint initiatives to produce agro-feedstock for biofuels. (Link); Eni. (March 2022). Eni and the Republic of Benin signs an agreement for jointly initiatives in the agro-industrial sector. (Link); Eni. (April 2022). Eni and the Government of Rwanda sign a MoU on cooperation in the circular economy and decarbonisation value chain. (Link).

According to Eni's seed for Energy report (p3) the company is also exploring other partnerships in Ivory Coast and Algeria In response to T&E's request for comment, Eni stated that it "had launched agri feedstocks initiatives in Kenya, Congo, Ivory Coast, Mozambique, Angola and Rwanda between 2022 and 2023"

<sup>&</sup>lt;sup>12</sup> Transport & Environment's website. (Link).



<sup>&</sup>lt;sup>8</sup> "The search for new opportunities in the agri-industrial supply chain has also begun ...with the aim of covering 35% of the supply of our biorefineries by 2025" Eni. (<u>Link</u>).

<sup>(</sup>May 2022). Eni, Seeds for Energy - Congo - Kenya Italy. p3.(Link).

<sup>&</sup>quot;The agricultural business will be scaled up in the planning period to reach a level of supplies of 700 Ktonnes by 2026, covering approximately 25% of our requirements for the biorefineries." - ENI. 2022 annual report, filed with US SEC. p163. (Link).

<sup>&</sup>quot;Our goal is to cover 20% of (our) biofuel production with feedstock coming from our agri-business by 2025." Eni exec in June 2023 according to Reuters. (June 2023). *Eni bets on agri-business in Africa to expand biofuel production.* (Link).

The first memorandum of understanding was signed with Kenya in July 2021. Two other agreements were signed with the Republic of Congo and Angola in October 2021.

https://www.eni.com/en-IT/media/stories/biofuels-vegetable-oils.html

<sup>&</sup>lt;sup>9</sup>Eni website, *New strategies to decarbonize transport* 

<sup>&</sup>quot;It is an oil-rich, drought-resistant plant that grows fast on degraded soils and does not compete with food production." "They are women and men living in rural, marginalised areas with low productivity and few economic opportunities. The projects aim to create jobs and provide farmers with access to the market". (Link).

<sup>&</sup>lt;sup>10</sup> "Eni has thus started the production of the first sustainable aviation fuel by processing waste raw materials and not competing with the food chain[...] In 2024, SAF production is expected to start at the Gela and Venice bio-refineries. Both plants are awaiting authorisations for two projects that will allow us to produce over 200 tonnes/year of Eni Biojet from renewable raw materials." (<u>Link</u>).

<sup>&</sup>lt;sup>11</sup> "In October 2022, Eni completed the phase-out of palm oil as feedstock supply in both biorefineries, with it fully replaced by sustainable raw materials." (Link). p87.

out in 2024<sup>13</sup> as global demand skyrockets.<sup>14</sup> The company recently signed a deal with Ryanair for the supply of 100 000 tons of SAF between 2025 and 2030<sup>15</sup>.

In a 70-page photo book Eni published in May 2022, titled "Seeds for Energy" <sup>16</sup>, the company highlighted Kenya and the Republic of Congo as two African countries where it is making the most headway with its biofuels strategy. They remain "the most advanced projects" in Eni's bid to convert vegetable oil into biofuels, according to its website as at the publication date of this report. <sup>17</sup>

In Kenya it has targeted tens of thousands of small-scale farmers as oil seed suppliers; whereas in Congo it plans to grow feedstock at scale on several huge tracts of land owned by multinational agribusinesses.

Transport & Environment (T&E) conducted field trips in both countries in the latter half of 2023 to assess the impact and viability of a project that not only forms a key part of Eni's overall decarbonisation strategy, but which could act as a blueprint for the biofuels industry.

T&E interviewed farmers and other key political and business figures involved in the project to check whether Eni's promises to communities and the environment were being met.

The investigation also gathered supply contracts and production data from project participants, and combed through Eni's extensive public relations and investor disclosures, to assess whether the company is on track to meet its production targets.

We conclude that Eni is performing below – in some cases, well below – its lofty and ambitious goals.

<sup>&</sup>lt;sup>17</sup> Eni's website, Bionergy, energy from biogenic raw materials. (Link).



<sup>&</sup>lt;sup>13</sup> "In 2024, SAF production is expected to start at the Gela and Venice bio-refineries." See Eni. (Link).

<sup>&</sup>lt;sup>14</sup> "In 2024 SAF production is expected to triple ... Demand is not the issue: Every drop of SAF produced has been bought and used." IATA. (December 2023). SAF Volumes Growing but Still Missing Opportunities (Link).

<sup>&</sup>lt;sup>15</sup> Ryanair and Enilive: a common goal to fuel a more sustainable aviation. According to Eni, this volume is equiv. to the current fuel consumption of 20,000 flights from the Milano Malpensa Airport to Dublin. Eni. (January 2024). (Link).

<sup>&</sup>lt;sup>16</sup> Eni, Seeds for Energy - Congo - Kenya Italy.(Link). with an English translated version downloaded. (Link).



Eni has set ambitious targets for its Kenya programme, which began in earnest in mid-2022 with the completion of an agri-hub in Makueni county, <sup>18</sup> in the semi-arid south east part of the country<sup>19</sup>.

Eni expected to recruit 25,000 small-scale farmers to produce 30,000 annual tonnes of vegetable oil by 2023, according to the photo book it published in mid-2022, titled "Seeds for Energy", in which it outlined its strategy.<sup>20</sup> Production would rise to 200,000 tonnes per year by 2026, it said.<sup>21</sup>

The book explains that Eni will work within the Kenyan "vast arid" rural areas where "small farmers, with about 1 hectare of land each, predominate. The project involves farmers growing "drought-resistant crops, suitable for soils that are not in competition with food production". Eni will "provide support services for production and mechanization", and the initiative is expected to create "new jobs and income for farming families". <sup>22</sup>

The main vegetable oils Eni is targeting come from castor bean, croton and cotton seeds which grow in semi-arid areas in the central Rift Valley, eastern and coastal regions. Eni has signed agreements with ten devolved county governments, including Makueni,<sup>23</sup> which also leased public land to Eni for the first "agri-hub".<sup>24</sup>

According to the company, the top five Kenyan counties for castor production are Makueni, Taita Taveta, Kitui, Nakuru and Machakos, while "croton trees are mostly concentrated in Makueni, Nakuru and Laikipia".<sup>25</sup>

<sup>&</sup>lt;sup>18</sup> ENI. *2022 annual report*. p48. Completed the construction of an oilseed collection and pressing plant (agri-hub) in Makueni, Kenva.

<sup>&</sup>lt;sup>19</sup> See Google maps. Eni Kenya B.V. Makueni Agri-hub.

<sup>&</sup>lt;sup>20</sup> Eni,Seeds for Energy - Congo - Kenya Italy. p29.(Link).

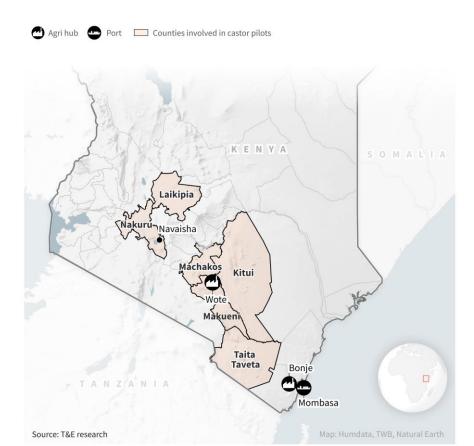
<sup>&</sup>lt;sup>21</sup> Ibid p29.(Link). Also from Eni's website (Link).

<sup>&</sup>lt;sup>22</sup> Seeds for Energy - Congo - Kenya Italy. p29.(Link).

<sup>&</sup>lt;sup>23</sup> Eni. (2023). Ordinary and Extraordinary Shareholders' Meeting of Eni SpA May 10, 2023 Questions and answers prior to the Shareholders' Meeting pursuant to Article 127-ter of Legislative decree 58/1998. p.104. (Link).

<sup>&</sup>lt;sup>24</sup>Environmental and social impact assessment for proposed construction of Biofuel oil mechanical extraction plant in Wote, Makueni County, Kenya, final report, Sept 2021, p 54 "The total area that the Agricultural Hub will occupy is 3.362 acres. This land is owned by Makueni County Government and will be acquired by Eni Kenya B.V. through lease."

<sup>&</sup>lt;sup>25</sup> Eni's answers to T&E request for comment



The central resort town of Naivasha – whose freshwater lake supports a thriving horticultural industry which supplies European supermarkets with fresh flowers, fruit and vegetables – hosts a pilot castor plantation where seed varieties are tested for their suitability before being distributed to smallholders around the country on Eni's behalf.

The crop yields are then collected, consolidated and delivered by a network of cooperatives, agents and aggregators to the Eni agri-hub in Makueni. A second processing facility recently became operational at Bonje, in Kwale county near Mombasa, <sup>26</sup> with two more planned. <sup>27</sup>

Finally, Eni ships the vegetable oil thousands of kilometres from the Mombasa port to its biorefineries in Sicily and Venice, where it is converted into biofuel.<sup>28</sup>

<sup>&</sup>lt;sup>28</sup> Eni website, Bionergy, energy from biogenic raw materials, available at: https://www.eni.com/en-IT/actions/energy-sources/bioenergie.html



<sup>&</sup>lt;sup>26</sup> Environmental and social impact assessment for proposed construction of Biofuel oil mechanical extraction plant in Bonje, Kwale County, Kenya, final report, See "Project location", p15 & p41-.

<sup>&</sup>lt;sup>27</sup>Eni 's answers to T&E request for comment: "Bonje agri-hub is operational." "The locations of future Agri hubs are under evaluation and the timelines will follow the development of the agricultural supply chain." More details on the project from: https://disclosures.ifc.org/project-detail/ESRS/47491/eni-biofuel-ken.

The Kenyan government has thrown its weight behind the project, attracted by the promise of jobs and investment in the drier, poorer parts of the country, as well as the reflected glory of the project's climate credentials<sup>29</sup>.

It signed a memorandum of understanding with Eni in 2021 to jointly conduct feasibility studies into the project, <sup>30</sup> leading to the inclusion of state-owned agricultural institutes and universities in research. <sup>31</sup>

Finally, the state is eyeing the consolidation and control of oil crop production, with the introduction of a bill in the Senate, or upper house, late last year.<sup>32</sup>

The Kenyan government's excitement is shared by the World Bank, whose International Finance Corporation (IFC) investment arm is considering a \$210m direct loan to Eni's Kenyan subsidiary. It also proposes underwriting a further \$60m loan portfolio in partnership with a Kenyan commercial bank.<sup>33</sup>

The direct loan is to finance the development of up to four agri-hubs in Kenya as well as to provide working capital for feedstock sourcing. The subsidiary loan is earmarked for farmers and aggregator companies supplying the agri-hubs.<sup>34</sup>

At the time of publication, the IFC told T&E that a decision had not been made yet about the project, but did not provide more details on the specific timeline for the investment decision.<sup>35</sup>

However, having experienced the project first-hand, many farmers tell a different story: one of exaggerated promises, a lack of support and a crop that has not proved to be commercially viable for them. Many have given up after just one or two cropping seasons.



<sup>&</sup>lt;sup>29</sup> For instance, the Daily Reporter reported that Kenya's Principal Secretary State Department for Investment Promotion Abubakar Hassan Abubakar.recently stated that ""castor farming is an alternative crop for farmers in semi-arid areas to earn a decent living. [...] We have facilitated castor growing, extraction, and processing investment worth over \$ 100 M from ENI, Italy, the second largest oil producer in Europe to stimulate the socio-economic development of ASAL areas"

From: <a href="https://www.nairobileo.co.ke/news/article/14709/rutos-ps-strikes-ksh16-billion-deal-with-italian-firm-for-kenya-to-produce-biofuel-for-jets">https://www.nairobileo.co.ke/news/article/14709/rutos-ps-strikes-ksh16-billion-deal-with-italian-firm-for-kenya-to-produce-biofuel-for-jets</a> and <a href="https://www.president.go.ke/kenya-is-committed-to-clean-energy/">https://www.president.go.ke/kenya-is-committed-to-clean-energy/</a>

Also see: https://citizen.digital/news/govt-to-provide-300000-acres-land-to-italian-investment-company-n315434 
<sup>30</sup>"Eni and the Government of Kenya to promote decarbonization by strengthening cooperation in the sustainable bio-fuel value chain" available at: <a href="https://www.eni.com/assets/documents/press-release/migrated/2021-en/07/PR-Eni-Kenya-MoU.pdf">https://www.eni.com/assets/documents/press-release/migrated/2021-en/07/PR-Eni-Kenya-MoU.pdf</a>

<sup>&</sup>lt;sup>31</sup> Eni's website <a href="https://www.eni.com/en-IT/media/news/2022/12/kick-off-the-programme-semakenya-ii.html">https://www.eni.com/en-IT/media/news/2022/12/kick-off-the-programme-semakenya-ii.html</a> <a href="https://www.jkuat.ac.ke/kenyas-arid-lands-identified-for-sustainable-biofuel-production/">https://www.jkuat.ac.ke/kenyas-arid-lands-identified-for-sustainable-biofuel-production/</a>. (KALRO & JKUAT are a state-owned agricultural institute and a university respectively)

<sup>&</sup>lt;sup>32</sup> The Nuts and Oil Crops Development Bill, No.47 of 2023.pdf

<sup>&</sup>lt;sup>33</sup> https://disclosures.ifc.org/project-detail/ESRS/47491/eni-biofuel-ken - see last par of "Project description"

<sup>34</sup> Ihid

<sup>&</sup>lt;sup>35</sup> Ibid see "Projected Board Date"

# Faltering start

Wote town is the bustling capital of Makueni county, a mainly rural, agricultural part of Kenya, and one of the central nodes for Eni's biofuels project.

Situated in a valley two hours drive south-east of the national capital, Nairobi, Wote town centre has a lively feel. People come to sell their agricultural produce here, or to pick up goods and supplies for their smallholdings which begin on the outskirts of town, and where they grow fruit, grains and pulses.

Down a dusty track that leads to the Wote public park stand a pair of single-storey buildings that house links in a supply chain stretching from the sun-parched rural areas of Makueni to the metallic pipework of an Eni biorefinery in Sicily.

The first building, on your left, is the Makueni Fruit Processor Cooperative, which supports farmers accustomed to producing mangoes and beans, but which has enrolled 80 of its members to also grow oil seeds for Eni. But co-op director Joseph Nzaku, himself a farmer, is downbeat. "There are so many challenges. Farmers are



Castor and croton beans bags piled at Tosheka Textiles' warehouse in Wote, Kenya. Photo: Gregory Onyango

turning negative on the project", he says.<sup>36</sup> We will encounter such negativity often in interviews over the coming days.

A second building, located just a few metres away, turns out to be a warehouse belonging to a family-owned company, called Tosheka Textiles, another intermediary between local farmers and Eni.

Piled up in multicoloured gunny bags are the remains of slim pickings from the 2023 growing season: 20 bags of castor beans and 15 of croton seeds. The castor is about three tonnes-worth, a Tosheka staff member tells us. It is part of a five-tonne harvest gathered in dribs and drabs from farmers in surrounding areas over several months, consolidated at the warehouse, and is

<sup>&</sup>lt;sup>36</sup> Interview with Joseph Kyatata Nzaku -Makueni Food Processors Cooperative Director

awaiting delivery to Eni's processing plant<sup>37</sup> about 20 minutes' drive out of town in Kwa Kathoka village.<sup>38</sup> "Castor is very rare", she says, alluding to the disappointing yields.<sup>39</sup>

We then fan out into the scrub-dotted country around Wote to speak to farmers. Most are smallholders, with a few hectares under cultivation. They grow food for their household needs, as well as for sale on the market. Some say they have tried intercropping castor and croton trees alongside traditional crops such as beans, cowpeas, maize and mangoes.<sup>40</sup> Others say that the trees get in the way of taller crops, such as maize, so they have set aside land solely for the biofuel feedstock.<sup>41</sup>

In Nthangu ward, we encounter Benjamin Muendo, who runs another cooperative which has enrolled 1,000 local farmers to the project. "Everyone is under producing" he says, before reeling off multiple reasons including drought, damage by insects and wild animals, unsuitable crop varieties as well as low prices offered by Eni.<sup>42</sup>

This is backed up by multiple interviews<sup>43</sup> T&E conducted with both individual farmers and the two main cooperatives representing 30 000 and 600 farmers in Makueni respectively<sup>44</sup>. Other interviews were conducted in Nakuru county, situated in the more fertile soils of the central Great Rift Valley.

All reported disappointments and concerns about the project.

## Drought

Mary Nduku grows castor for the project on one of the bigger farms T&E encountered in Makueni county, a 2.5 hectare plot<sup>45</sup> situated 45 mins drive away from Wote town. Planting



<sup>&</sup>lt;sup>37</sup> Interview with Tosheka Textiles representative

<sup>38</sup> See Google Maps journey

<sup>&</sup>lt;sup>39</sup> Interview with Tosheka Textiles representative

<sup>&</sup>lt;sup>40</sup>Interviews with Esther Wanjiru , Josephine Muli and Mary Nduku

<sup>&</sup>lt;sup>41</sup> Interviews with Ann & Boniface Kithaka , Benjamin Mbelenzi

<sup>&</sup>lt;sup>42</sup> Interview with Benjamin Muendo - Kitise cooperative

<sup>&</sup>lt;sup>43</sup> Interviews with Josephine Muli, Benjamin Mbelenzi, Ann&Boniface Kithaka, Mary Nduku, Marietta Kanini, Joseph Kyatata Nzaku, Esther Wanjiru, another farmer in Nakuru and the Makueni Fruit Processing Cooperatives and Kitise Cooperative representatives

<sup>&</sup>lt;sup>44</sup> Kitise farmers website, available at: https://www.kitisefarmers.com/about.html

<sup>&</sup>lt;sup>45</sup> Her 6 acre plot = 2.43 hectares

castor seemed promising to her, as she was hoping to get more production throughout the year than with her other crops. But the drought has now killed her castor trees, she says, and she will need to start again.<sup>46</sup>



Mary Nduku at her farm in Makueni county, Kenya. Photo:Gregory Onyango

Josephine Muli, part of a self-help group mobilised by the county government of Makueni to grow castor for the project, testified that most of the trees on her farm dried out before she got a crop off them. She was left with a small section which produced just 11 kilograms of seed, and which she intends to uproot soon.<sup>47</sup> Marietta Kanini, who lives nearby, said that she only planted castor for one season "before they dried".<sup>48</sup>

Kenya has endured five consecutive failed rainy seasons and higher-than-average temperatures between 2020 and 2023 resulting in the worst drought in 40 years, according to a major international scientific study published last April. It concluded that human-induced climate change had made such droughts much stronger and 100 times more likely.<sup>49</sup>

<sup>&</sup>lt;sup>46</sup> Interview with Mary Nduku

<sup>&</sup>lt;sup>47</sup> Interview with Josephine Muli

<sup>&</sup>lt;sup>48</sup> Interview with Marietta Kanini

<sup>&</sup>lt;sup>49</sup> World Weather attribution, 27 April 2023: "Climate change has made events like the current drought much stronger and more likely; a conservative estimate is that such droughts have become about 100 times more likely." available at:

Ironically, the drought has hampered efforts by Eni to mitigate its environmental impact by growing crops for biofuels.

In response to our questions, Eni maintains that castor is "well adapted to arid and semi-arid areas of Kenya" and considers that "improved seed varieties and good agricultural practices will allow to improve the ability of the crop to respond to extreme drought events" in the future<sup>50</sup>.

Benjamin Muendo, who runs the Kitise cooperative which is one of the key farmers' organisations involved in the project in Makueni, disagrees with Eni's assessment after several growing seasons. He has called on Eni to provide farmers in the area with irrigation systems because "we cannot rely on rainfall alone". <sup>51</sup> However, Eni has ruled this out <sup>52</sup>.

The drought was followed, in late 2023 and early 2024, by weeks of torrential rain which caused floods in parts of the country, including in the eastern and coastal regions where the bulk of Eni's biofuel feedstock is grown.<sup>53</sup>

The flooding caused extensive damage to road and bridge infrastructure, further disrupting the circulation of agricultural commodities,<sup>54</sup> as well as the provision of field support which farmers involved in the project have been promised.

Servizi Agricoli Forestali Africa (SAFA), one of Eni's main agricultural partners in Kenya, acknowledged that "the years 2022 and part of 2023 were classified as the driest of the last 40 years", but emphasised that "nonetheless, in these conditions, castor has proven to survive and produce better than all other crops that have failed".<sup>55</sup>

Similarly to Eni, SAFA is also confident<sup>56</sup> that the introduction of new crop varieties will help alleviate issues associated with drought in Kenya's most arid areas, even as the entire region is increasingly put under stress by the growing effects of climate change.

 $\underline{https://www.worldweatherattribution.org/human-induced-climate-change-increased-drought-severity-in-southern-horn-of-africa/$ 



<sup>&</sup>lt;sup>50</sup> Eni's answers to T&E request for comment

<sup>&</sup>lt;sup>51</sup> Interview with Benjamin Muendo - Kitise cooperative

<sup>&</sup>lt;sup>52</sup> In response to T&E's question:" Is your company or its business partners considering providing dedicated irrigation systems for farmers to grow castor in Makueni or in Kenya more generally?"

Eni responded "No, agri feedstock production is performed without irrigation."

<sup>&</sup>lt;sup>53</sup> The East African, 21 Dec 2023, available at: <a href="https://www.theeastafrican.co.ke/tea/sponsored/from-killer-droughts-to-devastating-floods-4471192">https://www.theeastafrican.co.ke/tea/sponsored/from-killer-droughts-to-devastating-floods-4471192</a>

<sup>&</sup>lt;sup>54</sup>Allafrica, 5 January 2024 https://allafrica.com/stories/202401060087.html.

<sup>&</sup>lt;sup>55</sup> SAFA answers to T&E's request for comment

<sup>&</sup>lt;sup>56</sup> Ibid

# Lack of support

Eni now claims to have enrolled 80,000 farmers over 50,000 hectares of land in Kenya since the inception of the project. According to the company, four nation-wide recruitment campaigns were conducted in 2022 and 2023, having initially involved 11,000 farmers, then an additional 15,000, 22,000 and 34,000 farmers per campaign<sup>57</sup>.

These numbers have proved difficult to verify as county governments and cooperatives interviewed as part of this investigation either do not keep proper records or were unwilling to disclose proof of farmers' enrollments in the project.

However, in Nakuru county, one of the less marginal and more agriculturally productive counties in Kenya, government records seen by T&E indicate that only about 700 farmers were contracted in 2022. In Makueni county, the two main cooperatives enrolled by Eni reported working with 80<sup>58</sup> and 1,000 farmers respectively<sup>59</sup>.

In any case, Eni has subcontracted the "technical and operational support" it pledged to provide farmers to a number of local companies. These work with farmers directly, via a network of cooperatives and brokers, and with the support of the various county governments.

Servizi Agricoli Forestali Africa (SAFA) is an agricultural services company co-founded in 2021 and majority-owned by an Italian, Diego Barili, alongside his minority Kenyan partner, Allan Bett.<sup>61</sup> From their base at Marula Estate in Naivasha, SAFA grows castor seeds provided to them by Eni and then distributes them to farmers for free.

In return, farmers agree to deliver any crops they produce exclusively to SAFA at designated collection points around the country. SAFA then delivers the crops to Eni, and pays the farmers.

Other companies are also getting in on the act. Independent brokers such as Tosheka Textiles, which T&E encountered in Wote, distribute seeds and transport crops on behalf of Eni. Like SAFA, Tosheka claims to provide training and technical support to farmers, such as land preparation and tilling. Tosheka also takes a cut of the farmers' pay by selling the seeds at a

Bett's LinkedIN profile describes SAFA as "a leading service provider in the agricultural supply chain".

<sup>&</sup>lt;sup>57</sup> Eni 's response to T&E request for comment

<sup>&</sup>lt;sup>58</sup> Interview with Makueni Food Processors Cooperative

<sup>&</sup>lt;sup>59</sup> Interview with Kitise cooperative

<sup>&</sup>lt;sup>60</sup> Andrea Saccarello, Development Project Manager of Eni Kenya, 'The agri-hubs will also work as training and technical support hub' quoted here: <a href="https://www.eni.com/en-IT/media/stories/biofuels-vegetable-oils.html">https://www.eni.com/en-IT/media/stories/biofuels-vegetable-oils.html</a> (see under "The social impact" section).

<sup>&</sup>lt;sup>61</sup> SAFA Ltd CR12 record (Kenya)

higher price to Eni's agri-hub<sup>62</sup>. Other cooperatives, such as Kitise, also take a "convenience fee"<sup>63</sup> and are in charge of recruiting farmers and keeping production record<sup>64</sup>.

Farmers say they are promised support when they sign up to the project but that this rarely materialises. Marietta Kanini, whose castor trees dried out early, says that her contractors promised to bring a tractor to till her rocky land but never delivered, leaving the seeds she planted to die.<sup>65</sup> Her neighbour, Josephine Muli, despite having received two days of training, said that she planted her seeds after the rainy season, which then struggled due to a lack of water.<sup>66</sup> Mary Nduku complained that SAFA promised to provide her with pesticide after termites attacked her trees, but never did.<sup>67</sup>

SAFA denied not having provided sufficient support to farmers, emphasising that "it is in (their) interest that the farmers achieve stable production levels" and that "technicians are continuing their technical assistance work". The company added: "In some areas, almost all farmers who reported poor results in the 2022 campaign have rejoined the new campaign"<sup>68</sup>

T&E also heard complaints that the seeds farmers received grew too slowly, or grew too tall for them to harvest the topmost parts, or failed to produce the volumes they were promised. For instance, Benjamin Mbelenzi, a farmer in Nthangu ward near Wote town, says he mobilised 100 farmers to grow castor: "We were given seeds and told when they fruit they will come and collect them then pay us. However, those seeds did not do well at all. Some of us produced just one or two kilos." <sup>69</sup>

These and other testimonies gathered from farmers – including from Nakuru county, where Eni's partner SAFA is headquartered – suggest that Eni and its business partners are currently unable to provide technical and operational support for a project of this magnitude and complexity.

Experienced commercial farmers who have run projects involving outgrowers in the East African region believe Eni's oil executives have underestimated the size of the challenge in Kenya. Said one: "It's an enormous skillset and requires extremely competent people. You need

<sup>&</sup>lt;sup>62</sup> Interview with Tosheka Textiles representative

SAFA responses to T&E request for comment, 06/02/2023

<sup>&</sup>lt;sup>63</sup>Interview with Benjamin Muendo - Kitise cooperative

<sup>&</sup>lt;sup>64</sup> ihid

<sup>&</sup>lt;sup>65</sup>Interview with Marietta Kanini

<sup>&</sup>lt;sup>66</sup> Interview with Josephine Muli

<sup>&</sup>lt;sup>67</sup> Interview with Mary Nduku

<sup>&</sup>lt;sup>68</sup> SAFA's answers to T&E's request for comments

<sup>&</sup>lt;sup>69</sup> Interview with Benjamin Mbelenzi

people to run it who've been born here, who understand the outgrower community 100%, who know how to communicate with them properly, and to manage them. Eni doesn't have that. They've just come in and said to people, 'You've got land. Here are some seeds, here's some training.' It takes a lifetime to learn how to run community outgrower programmes properly".<sup>70</sup>

 $^{70}$  Interview with an experienced East African commercial farmer  $\,$ 

## Commercially unviable

Many farmers said that the labour required to grow, pick, shell and dry the castor beans was simply not worth the price Eni and their agent SAFA<sup>71</sup> are offering for them.

T&E obtained contracts between Makueni farmers and SAFA which show prices of KSh25 being offered for a kilogram of deshelled castor beans and KSh7 per kilo of croton nuts in 2022. At these rates, a 10 kilogram crop of shelled castor beans would have earned a farmer just about €1.42. Few farmers T&E encountered managed to produce even this amount of castor beans in 2023<sup>72</sup>.



Marietta Kanini at her farm near Wote, Ketnya. Photo: Gregory Onyango

Marietta Kanini said: "I was given a contract for several years but I'm thinking of leaving because there is no profit. When you plant castor it stays for too long [without producing] and harvesting it is tedious." Her neighbour Josephine Muli says she won't grow castor anymore: "The beans are lightweight, the prices are low. I would rather just plant beans and maize."

<sup>&</sup>lt;sup>71</sup> In response to our request for comment, SAFA stated that "The purchasing price is agreed annually with ENI and communicated to farmers before the sowing campaign"

<sup>&</sup>lt;sup>72</sup> Marietta Kanini reported harvesting and selling 2kgs, the Nakuru farmer's 8kgs, Benjamin Mbelenzi 1/2kg, Josephine Muli 11kg, with 2kg being stored at her house at the time of interview

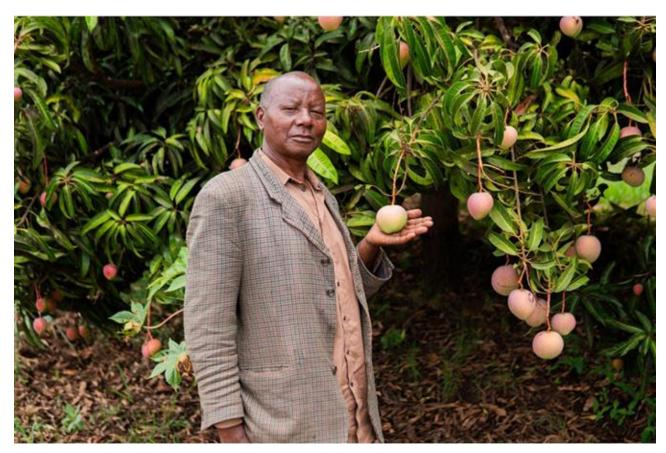
<sup>&</sup>lt;sup>73</sup>Interview with Marietta Kanini

<sup>&</sup>lt;sup>74</sup> Interview with Josephine Muli

A farmer in Nakuru county also explained to T&E that harvesting the beans is "stressful" because bean and shell don't separate easily. When they do, the bean itself "lacks weight" making the prices offered per kilo even harder to obtain.

Even though other farmers referred T&E to her because of her green-fingered reputation, she said her castor-growing efforts earned her just KShs300 (about €1.70). By comparison, she was able to produce two harvests of common beans worth KShs72,000 (about €420) before her castor trees produced a single seed. She says she threw her remaining castor seeds away, and doesn't plan to grow them again.<sup>75</sup>

Benjamin Mbelenzi, the Makueni farmer who was initially so enthused by the project that he signed up many of his friends and neighbours, said the costs he incurred far outstripped what he earned: "I decided it wasn't worth footing the cost of travelling to the hub to deliver my crop. I would have paid KShs400 (€2.50) in transport to earn KShs56 (€0.35) for the beans. In fact, it cost me KShs5,000 (€30) to uproot the [castor] stumps from my farm." <sup>76</sup>



Benjamin Mbelenzi and his mangoes production, Makueni county, Kenya. Photo:Gregory Onyango

<sup>&</sup>lt;sup>75</sup>Interview with a farmer in Nakuru county

<sup>&</sup>lt;sup>76</sup>Interview with Benjamin Mbelenzi

In response to our questions, SAFA justified the purchase price offered because it factors in the value of activities such as land preparation, seed planting and extension services that SAFA provides to farmers.

"The actual value for the farmer is therefore significantly higher than the simple purchasing price," SAFA said; and that overall "the program can have a positive impact on farmers in marginal areas of Kenya". Eni's response followed similar lines.

SAFA added that the price it offered farmers for their croton seeds was "better (...) than other players in order to revitalise the supply chain".

Eni increased its offer from KSh25 to KSh35 per kilo for shelled castor beans in 2023<sup>77</sup>, but Kitise cooperative chief Muendo says that this would need to more than double to make economic sense for his members.<sup>78</sup>

SAFA said that "the purchasing price is agreed annually with Eni and communicated to farmers before the sowing campaign".

<sup>&</sup>lt;sup>78</sup> Interview with Benjamin Muendo - Kitise cooperative. Muendo says his members would be content with Sh80/kilo. This is more than double Sh35/kilo they currently get.



<sup>&</sup>lt;sup>77</sup> Interview with Makueni County's Agriculture Department

#### Scalable

In stark contrast to the dissatisfaction expressed by Kenyan farmers, Eni told its investors in May 2023 that "the cultivations carried out so far in Kenya, in historically water-poor areas, have already provided satisfactory results from a production point of view". 79

Overall production volumes are difficult to verify as the company declined to provide figures in response to our questions. However, even a partial picture obtained by T&E from fieldwork in one of the main producing local counties suggests the initial output has been very low. In Makueni, Kitise cooperative said it only got 10 tonnes from over 1,000 farmers it enrolled in the 2022 season.<sup>80</sup>

Eni also declined to provide figures for the volumes it shipped from Kenya to Italy in 2023.

However, on the same May 2023 call with investors Eni stated it had shipped 300 tonnes of croton and cotton oil from Kenya in October 2022, and that "due to subsequent production we are in the process of sending the first cargo of vegetable oils of about 4,000 tonnes in bulk" [mainly castor oil it had been stockpiling].<sup>81</sup>

Customs data analysed by T&E covering the period January to November 2023 indicates that 7,348 tonnes of castor oil were shipped from Kenya to Italy. This comprised two shipments, in July and August 2023. 82 No further shipments of castor oil were made between September and November 2023, according to commodities analyst Argus, 83 which suggests that Eni exported just 24.5% of its initial 30,000-tonne target for 2023, as set out in its "Seeds for Energy" book. 85

In response to our questions, Eni stated that its 2023 Kenyan production target of 30 000 tonnes "refers to the installed capacity [of its biohubs] and not the production" and that "as such, the target has been reached" 86.

However, its Seeds for Energy report clearly refers to 30 000 tonnes by 2023 as "an early agriculture production" target; even though its 2022 annual report revised this downwards, stating that the company's Kenya program is "expected to scale up to 20,000 tons in 2023".<sup>87</sup>

<sup>&</sup>lt;sup>79</sup> Eni, Questions and answers prior to the Shareholders'Meeting, 10 May 2023, p62, available on: https://www.eni.com/

<sup>&</sup>lt;sup>80</sup> Benjamin Muendo - Kitise cooperative

<sup>&</sup>lt;sup>81</sup>Eni, Questions and answers prior to the Shareholders' Meeting, 10 May 2023, p62, available on: https://www.eni.com/

<sup>&</sup>lt;sup>82</sup> Based on UN Cometrade data https://comtradeplus.un.org/

This is consistent with a statement made by Eni's Managing Director in Kenya, Enrico Tavolini, on Linkedin announcing a shipment of 3675 tonnes of castor oil from Mombasa to Gela onboard the Swan Pride in July 2023 (<u>Link</u>).

Argus Media, Italian biodiesel feedstock imports lacklustre, Jan 23 2024, available at: <a href="https://www.argusmedia.com/en/news-and-insights/latest-market-news/2530390-italian-biodiesel-feedstock-imports-lacklustre">https://www.argusmedia.com/en/news-and-insights/latest-market-news/2530390-italian-biodiesel-feedstock-imports-lacklustre</a>

<sup>&</sup>lt;sup>84</sup> 7,3488,000 tonnes \* 100 / 30,000 tonnes = 24.4936.6%

<sup>&</sup>lt;sup>85</sup> Eni, Seeds for Energy - Congo - Kenya Italy. p29.(Link).

<sup>&</sup>lt;sup>86</sup> Eni's response to T&E's request for comments

<sup>&</sup>lt;sup>87</sup> Eni 2022 annual report. p46. (Link).

In the end, as T&E's analysis of 2023 customs data indicates, Eni only shipped around a third of this already much-reduced target last year. Meanwhile, its target of 200,000 tonnes by 2026 would require a 27-fold increase in the volumes Eni shipped last year. 88

Eni is targeting improved yields, based on the lessons it has learned so far. Much will depend on whether its pilot trials have indeed established the suitability and adaptability of various castor varieties for Kenyan conditions. "The results have been positive and support commercial expansion," it says.

The company is also aiming for "the extensive application of good agricultural practices" within its supply chain, which includes "diversifying (...) to include large farmers"<sup>89</sup>.

However, as an experienced Kenyan executive in the agri processing industry observed: "The difficulty is that Eni is a petroleum company dabbling in agriculture. The two are very different things. They may have built a smart factory, hired clever engineers and installed expensive machinery, but that's the relatively easy bit. Ensuring you can get the raw material in sufficient quantity and quality is another matter altogether". <sup>90</sup>

<sup>&</sup>lt;sup>90</sup> Interview with a Kenyan executive in the agri processing industry



<sup>&</sup>lt;sup>88</sup> "By 2026, we expect to reach a production target of 200,000 tonnes of vegetable oil." - Eni Kenya CEO Enrico Tavolini. (Link).

<sup>&</sup>lt;sup>89</sup> Eni's answers to T&E's request for comment



Eni is betting that a different model will succeed in the Republic of Congo-Brazzaville), where its strategy is to outsource production to multinational agribusinesses that hold vast land concessions in the south of the country.

Eni's production targets in Congo are only slightly less ambitious than in Kenya: 170,000 tonnes a year by 2026 rising to 200,000 tonnes per year by 2030, according to the company website. An agri-hub is under construction in Loudima town that will process 30,000 tonnes of vegetable oil per year, and more capacity is planned.<sup>91</sup>

T&E conducted a field trip to castor plantations in the Niari and Bouenza departments mid-wav through 2023, with a follow-up visit last December to assess Eni's third progress. Α plantation, situated in the restive Pool region to the east, was considered too unsafe to visit.

While construction of the agri-hub at Loudima has progressed, and is expected to be operational in early 2024, according to Eni, sources said that poor results from the growing trials that began in 2022 have stalled



<sup>&</sup>lt;sup>91</sup> Eni website "We are starting to build the first agri-hub in Loudima, in the department of Bouenza, with a yield of 30,000 tonnes of vegetable oil per year ... We will continue building more agri-hubs and we expect to reach a production of 170,000 tonnes/year in 2026 and 200,000 tonnes/year by 2030," ENI Congo's MD says. Available at: <a href="https://www.eni.com/en-IT/media/stories/biofuels-vegetable-oils.html">https://www.eni.com/en-IT/media/stories/biofuels-vegetable-oils.html</a>

investment by Eni in the farms. The situation is exacerbated by the dwindling financial fortunes<sup>92</sup> of one of its agribusiness partners.

Despite being "the most advanced" of Eni's African biofuel ventures, alongside Kenya, the flow of vegetable oil from Congo to Italy has yet to begin.

#### A series of false starts

Few people in Louvakou think that the huge foreign-owned plantation on their doorstep is doing well.

Not Martine Moussahou, whose family leases part of its extensive lands to Agri Resources, a Congolese subsidiary of multinational conglomerate Monaco Resources, in return for a quarterly rental fee. This has not been paid for some time due to an unexplained "financial crisis" 54, she complains.

Nor Alphonse Badianga, a local resident puzzled by the lack of activity at the 22,000-hectare (220km2) plantation. "We don't really understand what it's doing any more. They tried to plant rice in the first 18 months, then nothing. We don't know whether they are leaving or not, because things seem to have come to a standstill". 95

Press reports<sup>96</sup> suggest that Monaco Resources is in financial trouble, and is desperately seeking new investment, while its local subsidiary Agri Resources was sued in 2019 by a minority shareholder for forgery and fraud. A former employee of the company also alleges that funds have been diverted from its farming operations, a claim which T&E put to the company but did not receive a response.



Sign at Eni's agri-hub construction site in Loudima, Republic of Congo. Photo: Marien Nzikou-Massala

However, speaking to T&E at the plantation in June last year, technical manager Manuel Saunieme was upbeat: "We have just completed a very successful

<sup>&</sup>lt;sup>92</sup> Agri Resources Group, Annual Report, 2022. P 42. The Group reported significant consecutive losses in 2022 and 2021

<sup>&</sup>lt;sup>93</sup> Eni website "Kenya and Congo: the key figures of the most advanced projects" available at: <a href="https://www.eni.com/en-IT/actions/energy-sources/bioenergy.html">https://www.eni.com/en-IT/actions/energy-sources/bioenergy.html</a>

<sup>&</sup>lt;sup>94</sup> Interview with Martine Moussahou

<sup>95</sup> Interview with Alphonse Badianga

<sup>&</sup>lt;sup>96</sup> Africa Intelligence, March 2023; 'Facing courts and shareholders, Monaco Resources Group living on borrowed time-and money", available at: <a href="https://www.africaintelligence.com/the-continent/2023/03/27/facing-courts-and-shareholders-monaco-resources-group-living-on-borrowed-time---and-money,109927880-ge0">https://www.africaintelligence.com/the-continent/2023/03/27/facing-courts-and-shareholders-monaco-resources-group-living-on-borrowed-time---and-money,109927880-ge0</a>

first trial of castor oil crops and we await the release of funds from Eni to begin planting in October [2023]."97

But when T&E returned to Louvakou in December 2023 a different account of the initial trial emerged, courtesy of Agri Resources's chief accountant. Planted on 300 hectares, the trial did not produce good yields, Bon Samaritain Biene Biene told us. "The expected yield was not conclusive in view of the projections that we had made. We must reach a certain target to qualify for conclusive tests", he said<sup>98</sup>.

Eni declined to comment on the yields obtained from the pilot conducted at Agri Resources' farm, and stated that it was not aware of the company's financial distress. Agri Resources did not respond to our request for comment.

As a result of the disappointing trial, the November rainy season that was supposed to be used for large scale planting was "missed" while an "adaptation plan" is finalised with Eni, Biene Biene told us<sup>99</sup>. Eni confirmed that it had undertaken a business collaboration with Agri Resources in 2021 for the development of castor farming pilots, but that "no funding was granted to Agri Resources in the frame of this project other than cost reimbursement"<sup>100</sup>.



Tolona farm, near Loudima, Republic of Congo, Photo: Marien Nzikou-Massala

One way to increase yields would be to use pesticides, Biene Biene said, while a soil analysis has

<sup>&</sup>lt;sup>97</sup>Interview with Manuel Saunieme

<sup>&</sup>lt;sup>98</sup> Interview with Bon Samaritain Biene Bien

<sup>&</sup>lt;sup>99</sup> Ibid

<sup>&</sup>lt;sup>100</sup> Eni's response to T&E request for comment

already been conducted at the farm by a Congolese fertiliser producer called CA Agri, he said<sup>101</sup>. This is at odds with Eni's public statements about the project, which promise to shift away from the use of environmentally damaging agricultural inputs towards "biofertilizers" produced as a byproduct at its agri-hubs.<sup>102</sup>

In response to our questions regarding the use of pesticides at the farm, Eni stated that "farmers can consider the application of agro-chemicals, when necessary, as long as this is in accordance with the  $ISCC^{103} - EU$  regulation".

Similar struggles were reported at Tolona farm, another of Eni's intended project partners, which is situated 60 kilometres east of Louvakou near Loudima in the neighbouring department of Bouenza.

Tolona's concession is only slightly less<sup>104</sup> than Agri Resources' at 20,000 hectares (200km2), and is dedicated to mangoes, maize, poultry.

According to Eni, Tolona conducted a castor bean trial on 800 hectares of land. One of Tolona's staff members interviewed by T&E said that the trial was "a success", except that "we didn't get any machines from Eni-Congo to harvest the beans, so everything dried up in the grass". 105

Speaking to T&E on condition of anonymity in July 2023, the worker said that his employers were "waiting for the rainy season [which begins in November] and funding from Eni to launch large-scale cultivation". <sup>106</sup>

However, when T&E returned to the farm a second time, in early December, no further planting had taken place. In response to our questions, Eni confirmed that the pilot had resulted in "limited performances". Tolona's manager Oscar Gonzáles Martínez<sup>107</sup> also responded, saying that the crop "has to be (...) adapted to tropical areas" and that future collaboration with Eni will "depend on that and other aspects related to finance and profitability".

During the initial trial, the harvest was hampered by diseases leading to the use of harmful pesticides, according to Boubathe Bambi, another farm worker. "When I went to spray the



<sup>&</sup>lt;sup>101</sup> Interview with Bon Samaritain Biene Bien

<sup>&</sup>lt;sup>102</sup> Eni Seeds for Energy report, p 7 Available from: https://www.eni.com/en-IT/media/editorial-publications/books.html with an English translated version downloaded. (Link).

<sup>103</sup> https://www.iscc-system.org/

<sup>&</sup>lt;sup>104</sup> Journal Officiel de la République du Congo, 16 February 2017, Arrêté n° 8783 portant attribution en jouissance par voie de bail emphytéotique, d'une réserve foncière de l'Etat située au lieu-dit « Kinguembo», p 199, District de Loudima, département de la Bouenza 'd'une superficie de dix-neuf mille neuf cent vingt-huit hectares soixante-trois ares soixante dix-huit centiares (19 928 ha 63 a 78 ca)'

<sup>&</sup>lt;sup>105</sup> Interview with Tolona's staff member

<sup>106</sup> Ihid

<sup>&</sup>lt;sup>107</sup> Per LinkedIN. (Link).

seeds, my face got swollen due to the fumes and dust I inhaled. That's when I realised those are not products to play with, they are toxic," he said. 108

Gonzàles Martínez said no such incident was reported to him by farmers. "All the phytosanitary products used are authorised by the EU," he said, adding that "the people were trained (...) and equipped with professional equipment". However, he acknowledged that "Tolona has its own strategic vision, and as real farmers with real experience in Congo we know that there is no possibility of doing any profitable crop without fertigation". 109

Having failed to make progress towards commercial production in Congo in 2023, Eni told us that "activities are under preparation for the 2024 agricultural season". It will conduct pilot trials on 1,200 hectares of land, and says it has "identified" 20,000 hectares of land where it will cultivate castor from September. These activities will be conducted in the same regions where the first unsuccessful trials have taken place, notably in the Niari and Bouenza regions where Agri Resources and Tolona operate, as well as in the Pool region. Only the "best performing varieties" will be adopted in 2024, Eni said.

# The myth of Congo's "virgin land"

The land which the Congolese government granted to Agri Resources and Tolona to farm in the south of the country is larger than the European cities of Basel and Liverpool combined. 110

Unsurprisingly for an area this size, both concessions have led to allegations of land expropriation without compensation by local communities. This raises awkward questions for Eni's strategy of large-scale biofuel production in some African countries, even if the oil major was not the original beneficiary of the concessions in question.

Near Louvakou in Niari, cases of land and crop dispossession were reported by farmers following the Minister of Land Affairs' decision to grant a large land concession to AgriResources as part of a legal disposition which allows the State to expropriate individuals or companies in order to pursue "public utility" goals. 111

"As soon as the area was declared to be in the public interest, the population who farmed there was trapped, the exploitation of it by Agri Resources began, and the people could not

<sup>&</sup>lt;sup>111</sup>République du Congo, Loi n 11-2004 du 26 mars 2004 portant procédure d' expropriation pour utilité publique



<sup>&</sup>lt;sup>108</sup> Interview with Boubathe Bambi

<sup>&</sup>lt;sup>109</sup> Gonzàles Martínez's response to T&E request for comments. Defined by him as "pivot for cereals and drip irrigation for tropical fruits"

<sup>&</sup>lt;sup>110</sup> See <a href="http://demographia.com/db-worldua.pdf">http://demographia.com/db-worldua.pdf</a> (2023 data). Agri Resources (Louvakou) = 22,000ha (220km2); Tolona Farm (Loudima) = 20,000ha (200km2); Basel = 199km2 (p40), Liverpool = 199km2 (p33)

oppose it," said Alphonse Badianga, a resident of Mbouma, where many of the dispossessed farmers come from. 112

Audrey Madingou, another local, recalls: "They [Agri Resources] moved in and started destroying the fields. When they ransacked the plantations, they didn't even ask the plantation owners to come and take their cassava crops." 113

"Following this destruction, the population rose up and forced the company to call in an agricultural officer to survey the fields [which included fruit trees, banana and cassava plantations] and assess them with a view to receiving compensation. This should have happened prior to the evictions," Badianga recounted.<sup>114</sup>

A long stand-off between the company and the community ensued, ending in a legal settlement in 2022 in which Agri Resources agreed to compensate 57 farmers an amount of 15 million CFA francs in total – about €20,000 – according to documents seen by T&E.<sup>115</sup>

Some families who held legal title over parts of the land were able to secure a 50-year lease agreement with Agri Resources, such as Martine Moussahou, who says she has nonetheless struggled to get the company to honour its quarterly rental payments. 116

Families without title deeds lost out altogether, like Ngoma Koukebene, one of the village chiefs who says his community has been "marginalised" by the rezoning of the land. 117

Since then, farmers such as Madingou say they have noticed their own production has decreased. "Our cassava just rots in the soil, we think this is because of soil pollution due to pesticide use [by Agri Resources]," he said. 118

Following an invitation from the community to conduct a field visit to the area in 2021, a Congolese human rights non-governmental organisation compiled a report, which states: "Residents also deplore pollution of the land and rivers, and are exposed to bacterial infections and even blindness, as the village chief pointed out. With the relocation from their fields they are forced to travel long distances on foot to go to work." 119

In response to our questions about Eni's knowledge of the disputes between its business partner, Agri Resources, and local farmers, the oil company would only say: "To our

<sup>&</sup>lt;sup>112</sup>Interview with Alphonse Badianga

<sup>&</sup>lt;sup>113</sup> Interview with Audrey Madingou

<sup>114</sup> Interview with Alphonse Badianga

<sup>&</sup>lt;sup>115</sup> Protocole d'accord portant sur l'indemnisation des cultures dans le village Mbouma entre Agri Resources Congo SA et le collectif des ressortissants de Loudima, 05/05/2022

<sup>&</sup>lt;sup>116</sup> Interview with Martine Moussahou

<sup>117</sup> Interview with Ngoma Koukebene

<sup>118</sup> Ihio

<sup>&</sup>lt;sup>119</sup> Rencontre Pour La Paix Et Les Droits De L'Homme (RPDH), Compte rendu de la mission de consultation des parties prenantes sur la gouvernance forestière et climatique et de suivi des activités CAJAC dans le département du Niari

knowledge, Agri Resources has been granted authorizations by the government and operates on land rented under contract with landowners." Agri Resources did not respond to questions at all.

Similar cases of land expropriation were reported at Tolona farm, which signed a lease directly with the Congolese government in 2016 for a 20,000 hectare (200km2) slice of stateowned land on the banks of Niari river at Kinguembo, a few kilometres north-east of Loudima. 120

Several sources complained of "land dispossession", such as Mr Walas, who belongs to one of six families who farmed at Kinguembo before the government leased it to Tolona. Walas said that communities did not receive any compensation because "the Minister of Land Affairs demanded that we present our land titles, but we didn't have any". He expressed regret that his family "haven't benefited anything" from the agricultural project he was forced to make way for. <sup>121</sup>

Henri Mboungou, who chairs an association of landowners in Loudima district, mentioned that they had attempted to address the issue of "uncontrolled sale of plots of land" with the ministry, but with limited success.

According to Tolona manager Oscar Gonzàles Martínez, six families indeed claimed property of the Tolona farm when the Congolese Ministry decided to grant the land concession to his company. He emphasised that those families had not developed any farming activity on the land by the time Tolona arrived and that legal proceedings led by one of the family leaders proved unsuccessful.

Such cases are not an outlier in Congo, where land-hungry foreign-owned agribusinesses are able to swat aside poorly-resourced and uninformed communities at the stroke of a government official's pen.

Said a former senior manager of Agri Resources present at the time the firm established itself in Louvakou: "We came to Congo to develop agriculture because there was a lot of virgin land available." <sup>122</sup>

But sparsely populated land does not necessarily mean virgin land, as community members' testimony shows.

<sup>&</sup>lt;sup>120</sup>Journal officiel de la République du Congo, Arrêté n° 8783 du 23 septembre 2016 portant attribution en jouissance par voie de bail emphytéotique, d'une réserve foncière de l'Etat située au lieu-dit « Kinguembo », district de Loudima, département de la Bouenza

Also see See <a href="https://congo-zone.com/product/tolona-s-a-u/">https://congo-zone.com/product/tolona-s-a-u/</a>

<sup>121</sup> Interview with Mr Walas

<sup>&</sup>lt;sup>122</sup> Interview with a former Senior Manager of Agri Resources

Justifying Agri Resources' willingness to settle in Congo Brazzaville, he said that there was a need to develop agriculture to provide food for the local population, like rice." <sup>123</sup>

But how this squares with Eni's intention to convert some of this land into non-edible crops for biofuel production betrays yet another inconsistency at the heart of its public narrative.

In response to our questions on whether the new biofuel projects risks competing with the cultivation of edible crops, both Eni and Tolona emphasised that pilots were conducted on previously uncultivated areas within the farm. Asked to clarify whether this meant that virgin bushland had been cleared for the project, Eni said that EU certification prohibits it from "conversion of areas characterised by a high carbon content, such as wetlands and forests".

### Conclusion

Launched with fanfare as part of Eni's strategy to become carbon neutral by 2050, Eni's "Seeds for Energy" biofuels project is based on lofty promises and optimistic targets.

#### These include:

- That one of the world's biggest and most profitable oil and gas companies can, in the space of a half-decade, create and secure an entirely new supply chain of "sustainable oils" from agriculture.
- That these oils can come from drought-resistant crops, grown in marginal and semi-arid areas by farmers in Africa, one of the world's poorest and most climatestressed continents.



A study by TRANSPORT & ENVIRONMENT 29

- That farmers would receive training and support, and benefit economically from their labour.
- That the non-edible crops they produce will not compete with others in the food chain or result in land clearing or deforestation, as first generation biofuel feedstocks such as palm oil have done in the past.
- That Eni would be shipping exponentially increasing tonnages of vegetable oil from Africa, hitting 700,000 tonnes by 2026, or around a quarter of its expanding biorefining capacity. 124
- And that Eni will produce up to 1 million tonnes of sustainable aviation fuel (SAF) out of a total 5 million tonnes of biorefining capacity by 2030, contributing to the decarbonisation of road and air travel.<sup>125</sup>

However, investigations on the ground in the two African countries where Eni says it has advanced the furthest – Kenya and the Republic of Congo – have uncovered a string of broken promises and unmet targets.

The reality is that, after several years of effort, Eni's biofuel project has gained very little traction and that it is nowhere near its production targets.

Eni's strategies in both countries have revealed divergent flaws. In Kenya, the company subcontracts a complex network of brokers and cooperatives, leading to inefficiencies and disappointment for thousands of small-scale farmers who do not receive adequate support or revenue.

On the flipside, Eni's collaboration with 'Big Agri' companies in the Republic of Congo risks associating this project with allegations of land dispossession and environmental degradation.

But in either case, small-scale farmers and mega-farms alike have tried and so far failed to grow drought-resistant biofuel crops at scale. The reasons behind this failure expose contradictions at the heart of Eni's plans.

Firstly, rising global temperatures caused mainly by fossil fuel emissions, the beating heart of Eni's business model for decades, are making it increasingly difficult for farmers to grow crops due to unpredictable weather patterns and unstable climatic conditions. Kenyan

https://www.eni.com/en-IT/actions/energy-sources/bioenergie.html . See also "highlights" sidebar, next to 'Biofuels and biomethane production' heading for total 5 million tonne annual target by 2030.

Eni seems to have upped its 2030 SAF target to 1mT. Its 2021 decarbonisation strategy targets 500,000 tonnes. See p26.



<sup>&</sup>quot;The agricultural business will be scaled up in the planning period to reach a level of supplies of 700 Ktonnes by 2026, covering approximately 25% of our requirements for the biorefineries." ENI 2022 annual report, filed with US SEC.:(Link). p163. At the same time, Eni is also planning to expand its biorefining capacity, from 1.1 million tonnes per year in 2022 (see annual report, p87) to 5 mT/yr by 2030 (see <a href="https://www.eni.com/en-IT/actions/energy-sources/bioenergie.html">https://www.eni.com/en-IT/actions/energy-sources/bioenergie.html</a>). See also: "Eni has a total processing capacity of 1.1 million tonnes/ year and has set a target of nearly doubling total capacity by 2025 to 6 million tonnes/year over the next decade." (Eni's 2050 decarbonisation strategy, published 2021, p27)

farmers have said they would need to irrigate their crops with scarce water to obtain the yields Eni has envisaged. 126

Secondly, it is difficult for a company as hard-wired for hydrocarbon production as Eni to diversify into agricultural production at the pace and scale they have set. While Diego Barili of SAFA, a Kenyan agricultural services company which has partnered with Eni, believes that "a company like Eni has to set challenging goals", another experienced Kenyan executive in the agri processing industry observed: "Eni is a petroleum company dabbling in agriculture. The two are very different things. You can pay guys high salaries and install them in fancy offices, but trying to put together an entirely new supply chain based on introducing entirely new crops is much harder than it looks. It's a steep learning curve that takes several years."

Eni has been trying since 2021. While it may be too soon to write the project off entirely, some fundamental concerns arise.

For Eni: does it really have the skill, the commitment and the patience to make this project work long-term? Or is it merely a fig leaf for continuing to pursue a business-as-usual strategy?

In both Kenya and the Republic of Congo, the company holds licences to exploit offshore oil and gas reserves at the same time as sourcing biofuel feedstocks. <sup>127</sup> Eni's budgeting priorities for 2023-26 are also telling, with €25bn earmarked to explore for, and develop, new oil and gas projects as well as maintaining production at existing fields. Whereas a fraction of €3.4bn will be spent to develop its biofuel manufacturing capacity. <sup>128</sup> While indicating it would not be conducting further hydrocarbon exploration or production activities in Kenya, Eni said that the production of vegetable oil for biorefining "has no direct relation" with its oil and gas operations. "Eni's strategy foresees reaching hydrocarbon production plateau in 2030; after that, production will decrease, with gas prevailing over oil in the production mix," the company said.

For governments, such as Kenya and Congo, which have rolled out the red carpet for Eni by making public resources such as land available to it, and introduced other favourable legislation; as well as multilateral institutions, such as the International Finance Corporation, which intends to loan<sup>129</sup> hundreds of millions of dollars to Eni to expand its biofuels project: with so much climate change adaptation and mitigation spending required, why allocate scarce public resources to support the activities of a commercial company that posted record profits last year, and could comfortably fund this project off its own balance sheet?

<sup>&</sup>lt;sup>126</sup> Interview with Benjamin Muendo - Kitise cooperative

ENI. 2022 annual report, filed with US SEC, See "Oil and gas properties, operations and acreage" p55-56. (Link)

<sup>&</sup>lt;sup>128</sup> Ibid p166

<sup>&</sup>lt;sup>129</sup>IFC Project Information & Data Portal <a href="https://disclosures.ifc.org/project-detail/SII/47491/eni-biofuel-ken">https://disclosures.ifc.org/project-detail/SII/47491/eni-biofuel-ken</a>

Finally, for citizens and consumers, especially the flyers of planes to whom biofuels are presented as a magical solution for guilt-free travel, this investigation raises concerns that this promise is not realistic and might prevent more urgent climate actions such as flying less.

Eni aims to produce up to 1 million tonnes of sustainable aviation fuel (SAF) by 2030.<sup>130</sup> The company hence ambitions to provide a significant share of the European and global market by that time<sup>131</sup>. Given the challenges Eni has so far faced in meeting its own biofuel feedstock targets despite an ambitious and innovative strategy, the prospect that sustainable biofuels can contribute significantly to the EU aviation emissions reductions appears to be remote indeed.

<sup>12</sup> 

<sup>&</sup>lt;sup>130</sup> Eni's website: "We will produce over 300,000 tonnes per year by 2025 and over 1 million by 2030." https://www.eni.com/en-IT/actions/energy-sources/bioenergie.html . See also "highlights" sidebar, next to 'Biofuels and biomethane production' heading for total 5 million tonne annual target by 2030.

Eni seems to have upped its 2030 SAF target to 1mT. Its 2021 decarbonisation strategy targets 500,000 tonnes. p26.(Link) <sup>131</sup> The EU has just adopted a new mandate for the ramp-up of sustainable aviation fuels (SAF) by 2030, which requires fuel suppliers to incorporate a 6% blend into airlines fuel mix, amongst which advanced biofuels might represent a key share (a 1.2% sub-target has been set up for synthetic fuels) (Link). According to our estimates, If all SAF produced by Eni at that time were to be allocated to the European market and would meet sustainability criteria set by EU laws, the company would be then able to fulfil 46% of the biofuels required by European aviation under a business as usual traffic growth scenario. These volumes would also fulfil about 7% of the International Air Transport Association (IATA) global 2030 SAF target (Link)