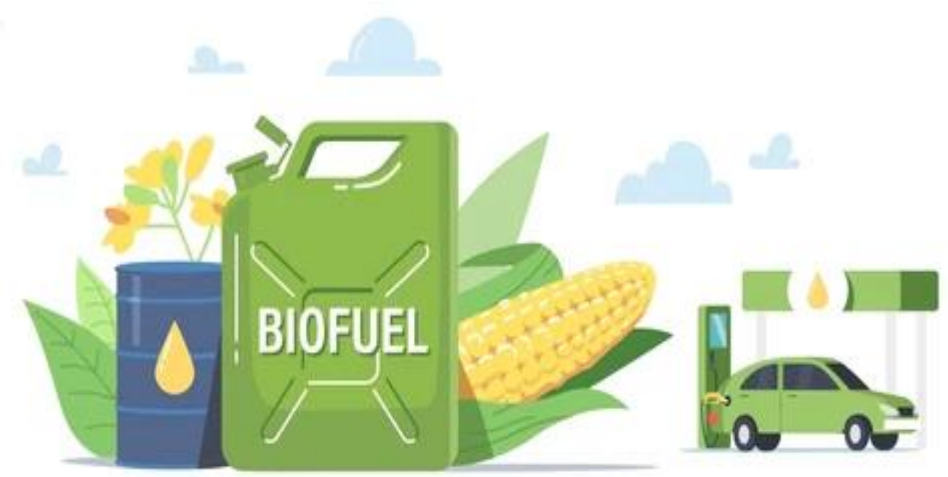


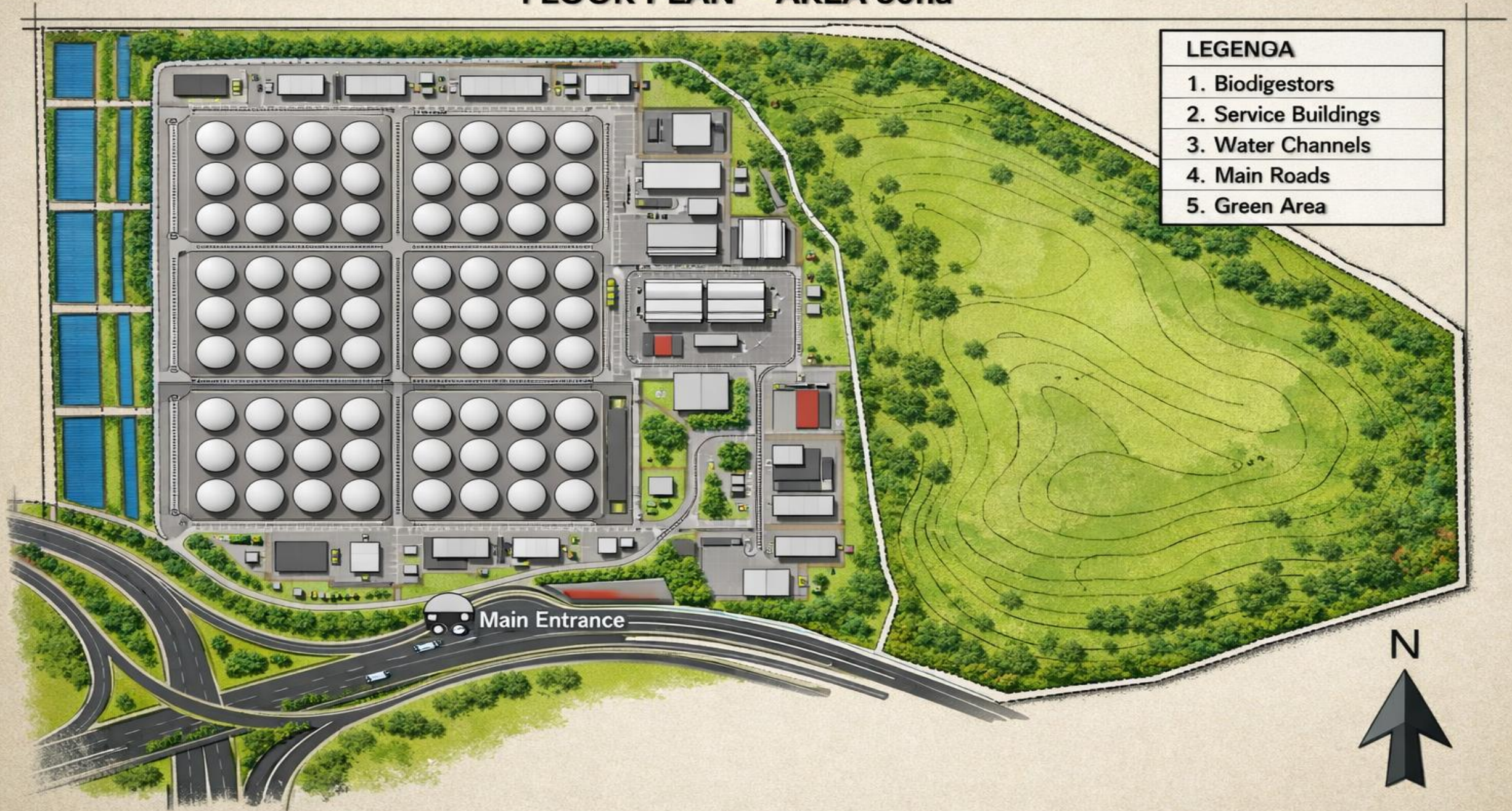
# FDIA

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## © DONATE ENERGY EFFICIENCY TO THE ESSENTIAL FACILITIES - RURAL AREAS



# FLOOR PLAN – AREA 80ha



LEGENGA	
1.	Biodigestors
2.	Service Buildings
3.	Water Channels
4.	Main Roads
5.	Green Area

 Main Entrance



- 80 Biodigestors
- Administration Building
- Grass Napier Storage Area
- Truck Parking
- Production
- Refinery
- Storage Tanks
- Electrical Centre





- ▶ A BIOFUEL PLANT MAYBE WILL PLAY A CRUCIAL ROLE IN HUMANITARIAN SCENARIOS BY PROVIDING SUSTAINABLE ENERGY SOURCES FOR COMMUNITIES IN CRISIS OR DEVELOPING REGIONS.
- ▶ HUMANITARIAN BIOFUEL INITIATIVE
- ▶ ORGANIZATION: FUNDACIÓN DEMOCRÁTICA ITALO AMERICANA, FDIA - REPRESENTAÇÃO PERMANENTE
- ▶ FUNDACIÓN DEMOCRÁTICA ITALO AMERICANA (FDIA) - REPRESENTAÇÃO PERMANENTE IS A NON-PROFIT ASSOCIATION THAT MAY SPIN OFF BIOFUEL PLANTS IN THE FUTURE TO SUPPLY RENEWABLE ENERGY IN HUMANITARIAN CRISES, DISASTER-STRICKEN AREAS, AND OFF-GRID COMMUNITIES.



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## Project Overview



The initiative aims to establish a sustainable energy hub that enhances regional energy security while promoting environmental responsibility. Key components include:

- **Biofuel Production Facility:** Utilizing locally sourced biomass to produce renewable fuels, reducing dependency on fossil energy.
- **Energy Storage & Distribution Hub:** Serving as a strategic center for biofuels and petroleum derivatives, optimizing regional fuel logistics.
- **Eco-friendly Vessel Services:** Implementing bio-remediation techniques in ship cleaning to minimize ocean pollution.





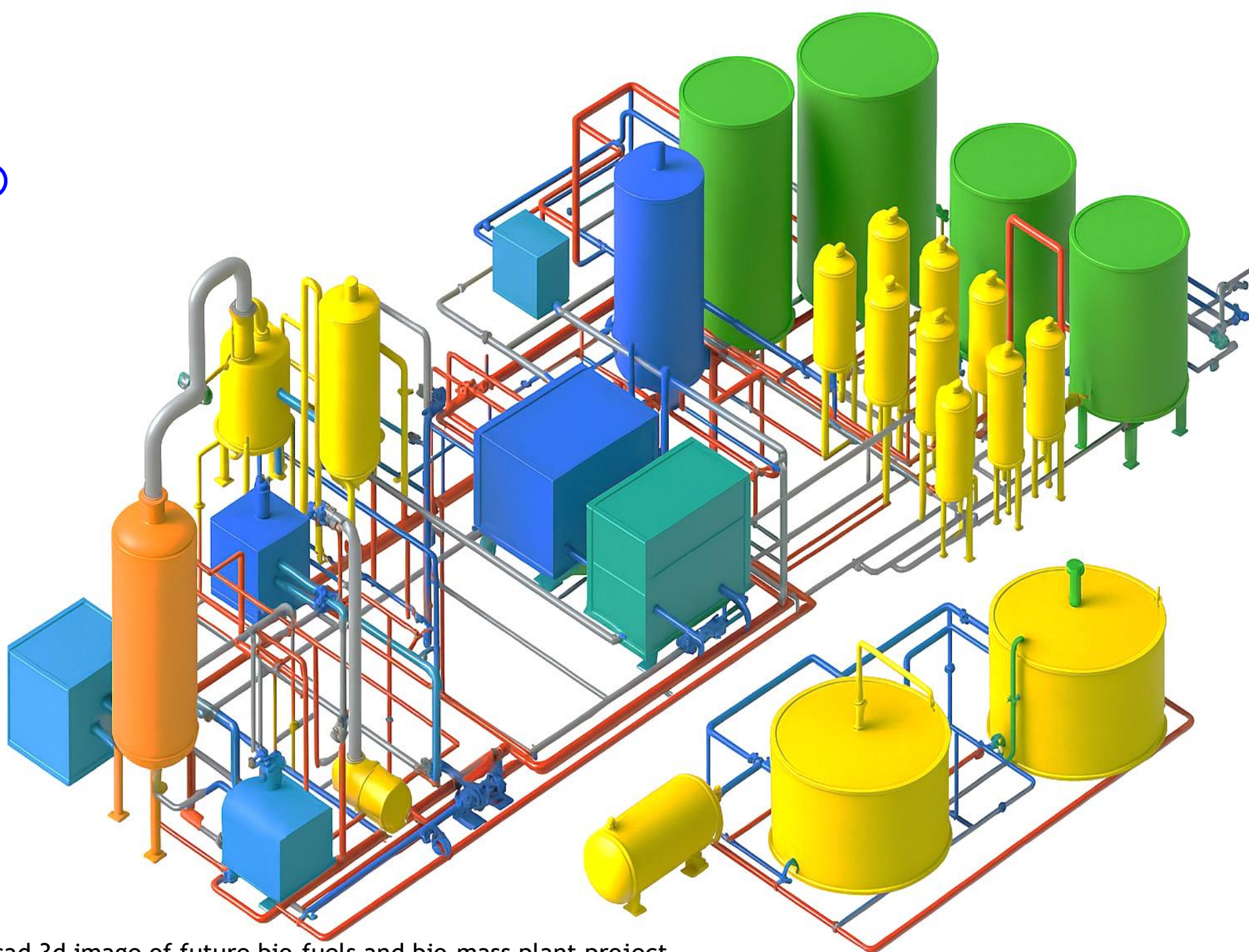
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- ▶ Sustainability & Social Impact ©
- ▶ This project supports a circular economy by leveraging renewable resources and implementing innovative waste management practices. Additionally, it creates new employment opportunities, particularly benefiting local communities previously reliant on traditional industries. By improving regional energy access and reducing carbon emissions, this initiative aligns with global sustainability goals, fostering economic resilience and ecological balance. Through FDIA's commitment to innovation and sustainable development, this project serves as a model for responsible industrial expansion, emphasizing environmental care, energy efficiency, and community engagement.



# FDIA

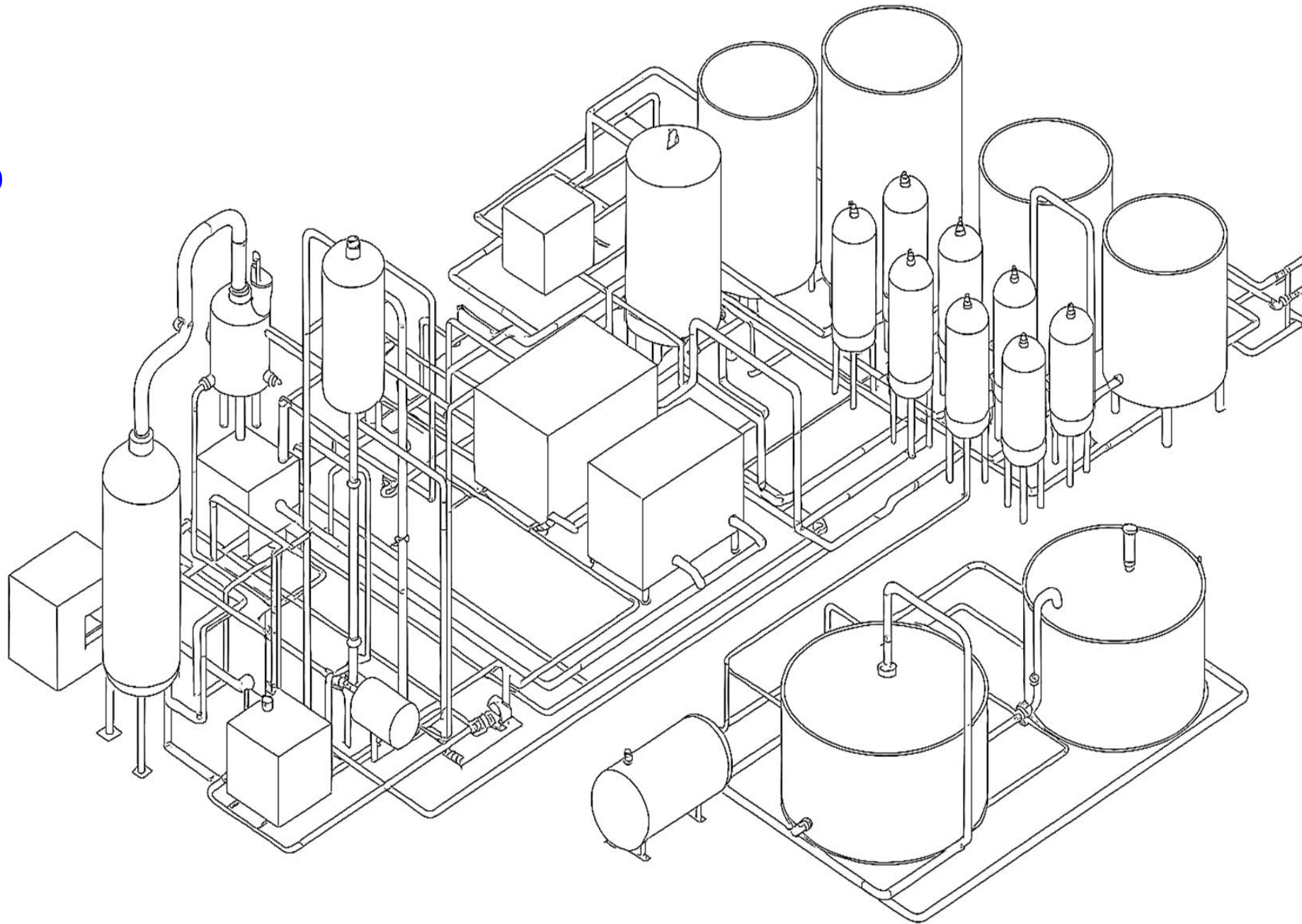
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cad 3d image of future bio-fuels and bio-mass plant project

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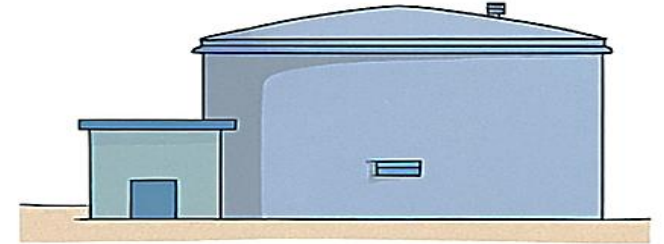
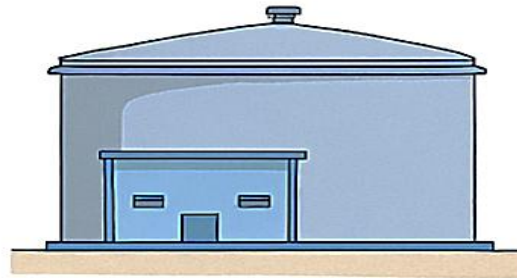
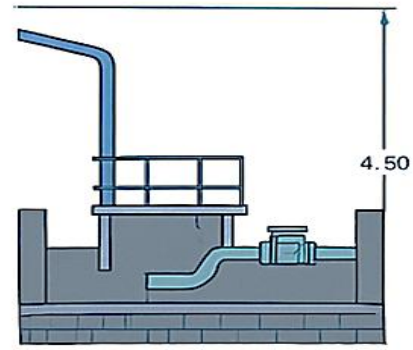
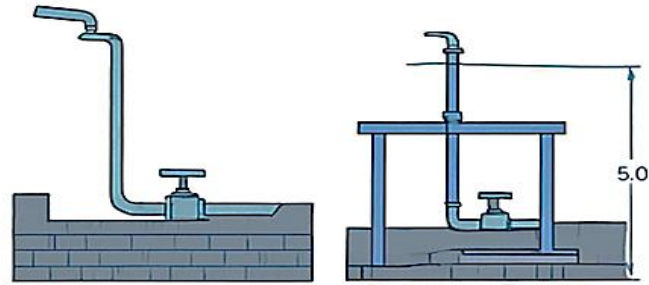
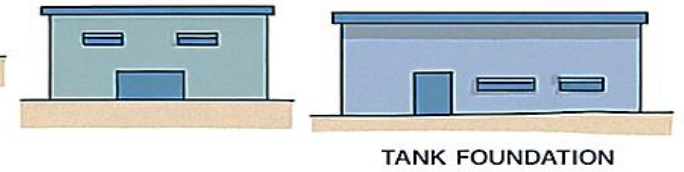
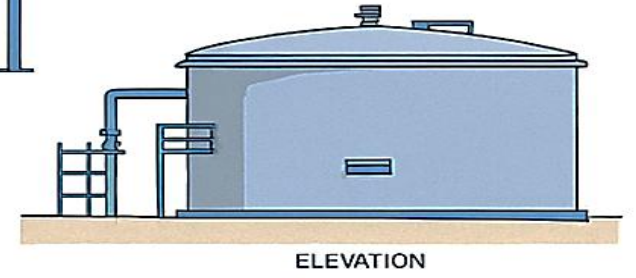
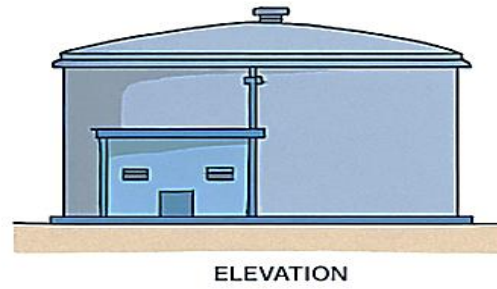
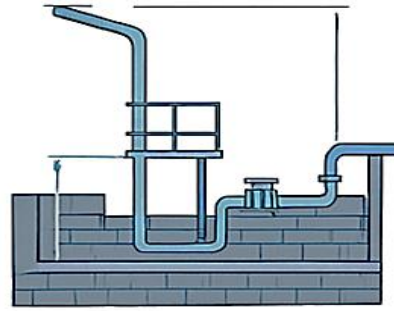
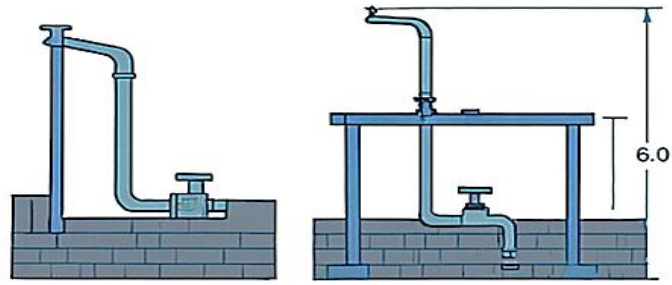
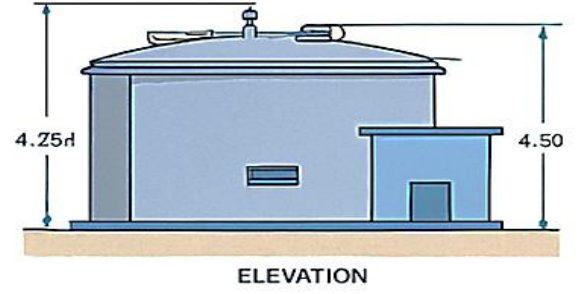
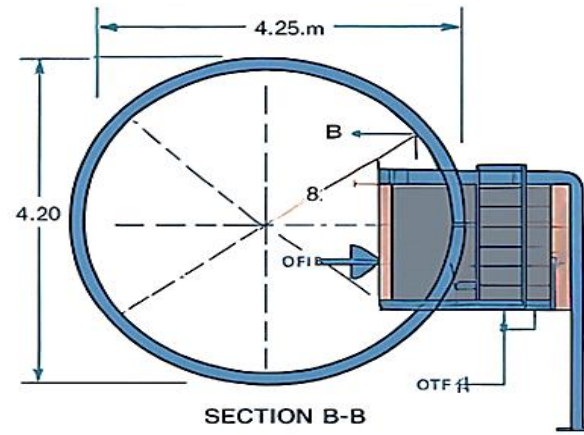
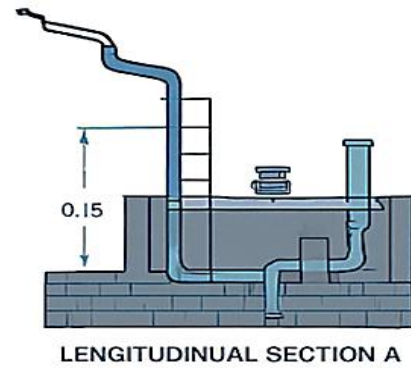
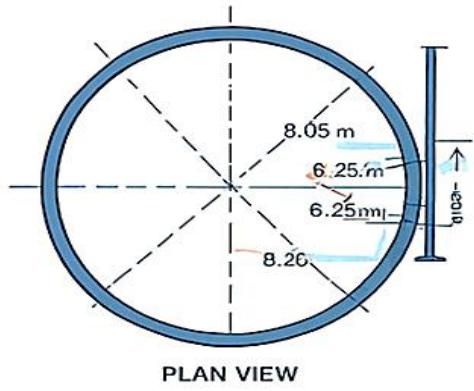


cad 3d image of future bio-fuels and bio-mass plant project

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- ▶ Scenario: Post-Disaster Energy Supply
- ▶ After a natural disaster such as a hurricane, earthquake, or flood, affected communities face fuel shortages for cooking, transportation, and power generation. Traditional fuel sources are expensive and logistically complex to transport. FUNDACIÓN DEMOCRÁTICA ITALO AMERICANA, FDIA - REPRESENTAÇÃO PERMANENTE if the project could be do,we will collaborate with a biofuel plant that produces the future barrels, a concept referring to next-generation sustainable fuel storage units.
- ▶ Barrels if maybe project could be carry out,they will be send to refugee camps, hospitals, and relief centers, ensuring a clean and stable energy supply.





- ▶ FDIA, in partnership with a biofuel plant, maybe will deliver the barrels to rural areas.
- ▶ Relief agencies use biofuel for emergency purposes, including medical operations.
- ▶ A local cooperative is trained to produce biofuels, reducing long-term reliance on external aid.
- ▶ This model ensures a sustainable, scalable, and environmentally friendly humanitarian response using biofuel technology.





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OIL EXTRACTION: WITH CORN, YOU OFTEN NEED AN ADDITIONAL EXTRACTION STEP. CORN OIL IS TYPICALLY EXTRACTED FROM CORN KERNELS USING PROCESSES LIKE PRESSING OR SOLVENT EXTRACTION, UNLIKE SOME VEGETABLE OILS THAT MIGHT BE MORE READILY AVAILABLE AS WASTE OR BYPRODUCTS. TRANSESTERIFICATION PROCESS: ONCE YOU HAVE THE CORN OIL, THE PROCESS FOLLOWS THE SAME TRANSESTERIFICATION ROUTE: CATALYST MIXTURE PREPARATION: CORN OIL IS REACTED WITH METHANOL AND A CATALYST (LIKE SODIUM HYDROXIDE) TO START THE TRANSESTERIFICATION REACTION. REACTION AND PHASE SEPARATION: THE REACTION CONVERTS THE TRIGLYCERIDES IN CORN OIL INTO METHYL ESTERS (BIODIESEL) AND GLYCERIN. PURIFICATION STEPS: AS WITH OTHER OILS, YOU WOULD SEPARATE, WASH, AND DRY THE BIODIESEL, WHILE GLYCERIN IS COLLECTED AS A BYPRODUCT.

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The FUNDACIÓN DEMOCRÁTICA ITALO AMERICANA (FDIA) is committed to fostering sustainable industrial development, focusing on innovative environmental solutions that balance economic growth with ecological responsibility.

Our mission is to implement projects that contribute to energy transition, local employment, and environmental stewardship.



## © Preamble

The global energy landscape is evolving rapidly, with a growing emphasis on reducing the environmental footprint of fuel production and consumption. The increasing integration of biofuels, such as Hydrotreated Vegetable Oil (HVO) and Fatty Acid Methyl Ester (FAME), alongside conventional fuels, marks a significant step toward sustainability. This shift is particularly relevant in regions experiencing economic and population growth, where energy demand is rising steadily.



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BIOFUEL

## BIO FUEL PLANT PRELIMINARY PROJECT FEASIBILITY STUDY



**THIS FEASIBILITY STUDY MATERIAL & HUMANITARIAN PROJECT IT IS FOR THE PERSONAL USE OF THE PROJECT DEVELOPER DENOMINATED FUNDACIÓN DEMOCRÁTICA ITALO AMERICANA, FDIA - REPRESENTAÇÃO PERMANENTE REPRESENTED BY PRESIDENT LAWYER VINCENZO CORTEGIANI, GENERAL DIRECTOR DR. FABIO ROSATI AND SECRETARY PROJECT MANAGER DR. LUCA ROSATI AND IS COVERED BY COPYRIGHT. REPRODUCTION OR REUSE, EVEN PARTIAL, IS STRICTLY PROHIBITED, PURSUANT TO AND FOR THE PURPOSES OF THE COPYRIGHT LAW (L. 22.04.1941/N. 633). ANY REPRODUCTION, MODIFICATION, DISTRIBUTION, PUBLICATION OR USE, IN WHOLE OR IN PART, IN ANY FORM AND BY ANY MEANS, IS PROHIBITED WITHOUT THE WRITTEN CONSENT OF THE AUTHORS PRESENT IN THIS DOCUMENT.**

**SUPPLIER/STARTUP INCUBATOR**  
IT IS REPRESENTED BY PHARMA1HUMANITAS

**PROJECT OWNER/PROJECT DEVELOPER**  
FUNDACIÓN DEMOCRÁTICA ITALO AMERICANA, FDIA -  
REPRESENTAÇÃO PERMANENTE REPRESENTED BY:  
PRESIDENT: LAWYER VINCENZO CORTEGIANI  
GENERAL DIRECTOR: DR. FABIO ROSATI,  
WEB-SITE DESIGNER/PROJECT DESIGNER: DR. LUCA ROSATI



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