

Co-Founders:
 Prof Dr Ibrahim Akduman
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Year Founded: 2010
Financing Sought:
 \$1m Government funding
Use of Funds: Prototypes and the product, demographic analysis of dung-burners, sales & manufacturing



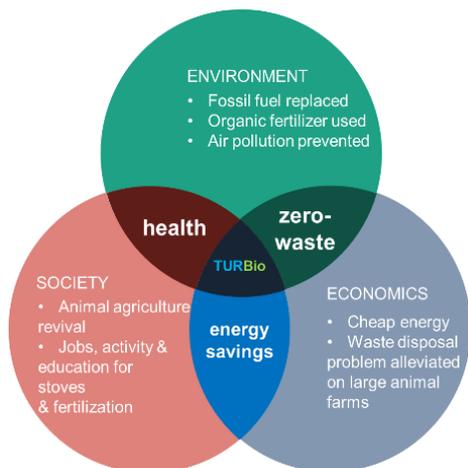
2 billion people of the World burn dung-fuel made of animal dung -a biofuel, as primary fuel. Yet, millions die each year due to indoor air pollution from biomass burning or the quality of life is reduced. Biomass should be burnt sustainably for the Climate and in order to protect humans and the environment. If burnt clean and healthy without smoke, increasing the heat efficiency that further reduces emissions, dung-fuel offers great potential as a Biofuel with many advantages, even returning biofertilizer.

TurBio is a biomass stove providing an authentic waste to energy solution in valuing organic waste as Biofuel. We have designed, are developing, and will test & sell this technology burning dung-fuel (tezek) clean with multiplied heat efficiency and nutrients recycling. Besides providing four times the energy it prevents CO formation, and treats the fume for PM, hazardous gases and smell by washing off the exhausted oxides with steam thereby producing the acid needed in the dissolution of the ashes to end up with phosphorus (P) fertilizer. That is, health and environment friendly, efficient heat recovery with carbon neutral, reduced emissions will be achieved along with P-recovery.

Turkey has been using this oldest biofuel of the history throughout industrial revolutions. At the brink of the 4.0, we shall now make this use sustainable, firstly for those animal agriculture practicing villagers in the rural areas of Anatolia. Future potential subsegments constitute people living in those giant Emerging economies and the Environmentalists living in the 1st World. The potential market in Anatolia is above 1M stoves and in the world above 1B \$ as a global business for an Ecostove. Turbio is the only solution caring for health, efficiency and recycling, all in 1, and so it can surpass competitors providing 5B \$ savings per year alone for Anatolia in energy, health and fertilizer expenses.

Our business model in Turkey is a B2G2P type of model, where we shall sell to the Government and it shall distribute to the Public. Thus, our potential customers are the Ministry of Environment & Urbanization, as well as the Ministry of Energy & Natural Resources. We partner with stove producers in Anatolia for R&D and manufacturing, hoping to pass it onto local producers in the future.

We meet most of the 17 UN sustainable development goals. The Product Life Cycle shows ALL POSITIVE impacts in the **Use Phase** besides the climate impact of biofuel use, such as efficiency increase, nutrients recycling, indoor air quality, woodcuts prevented and social& economic wellbeing, etc. **Production** uses off-the-shelf steel and firebrick, both of which are recyclable, and so the **Disposal phase** involves a take-back guarantee of the end-of-life stove after 5 years, offering a discount on the next purchase or a refund for the scrap steel. Benefits compliant with the three-pillars of Sustainability are summarized below.



Financial Projections

\$, in thousands	2017	2018	2019	2020	2021
Revenue	-		1250	3375	8750
EBIT			350	225	775
Funding Needs		350	200	450	1000