

Food deficit and new prices

Forecast for the Development
of
the Global Dairy Market

XIV Dairy Olympics - Tashkent May 21st, 2023

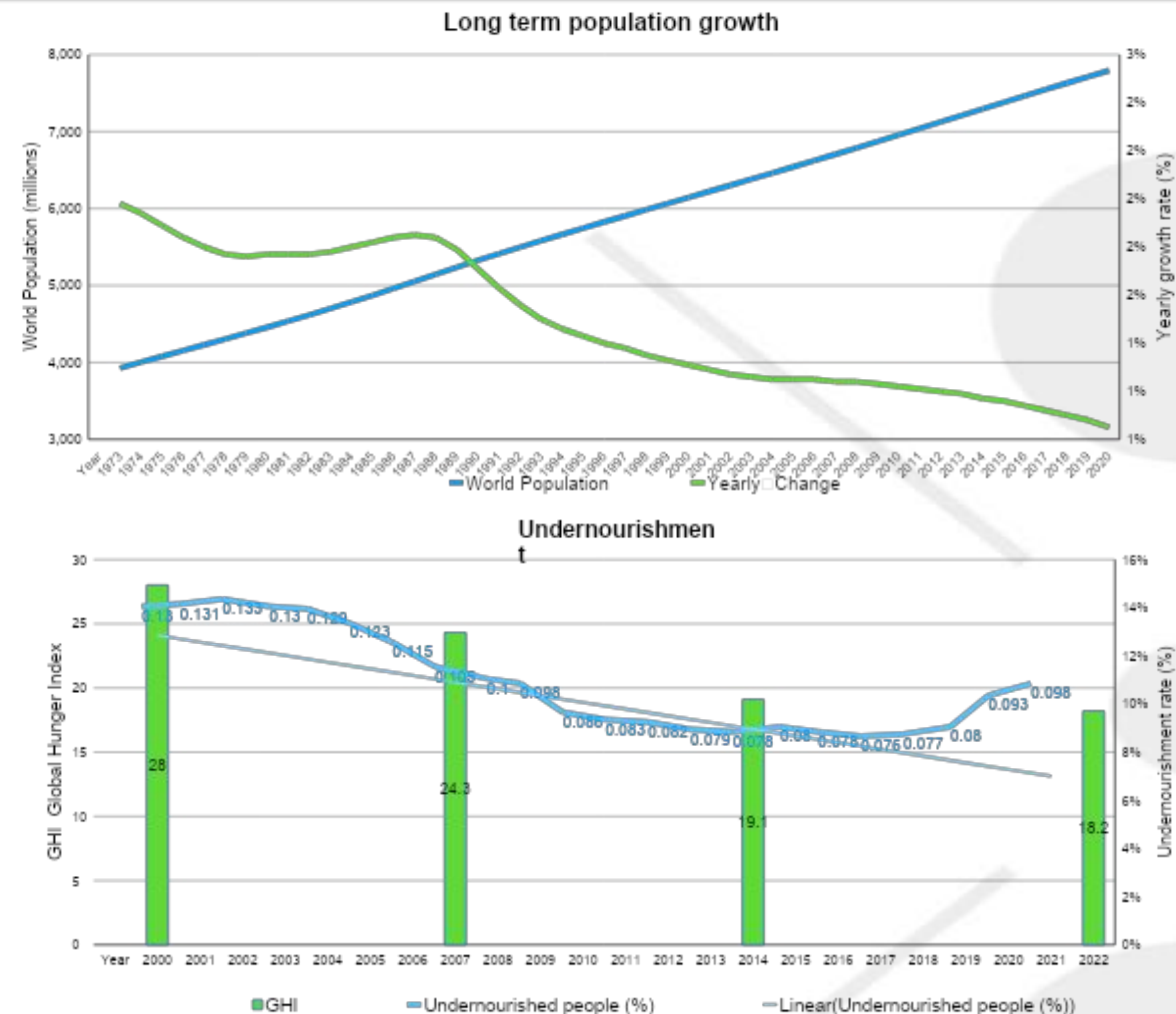
"Food deficit" is where undernourishment is

Over a period of 50 years, global population doubled

However, growth rate is steadily reducing

Along last 20 years, undernourished people continuously reduced down to a minimum of 570 MM in 2014, then incidence over global population almost flattened.

A new spike in 2020-2021 due to pandemic

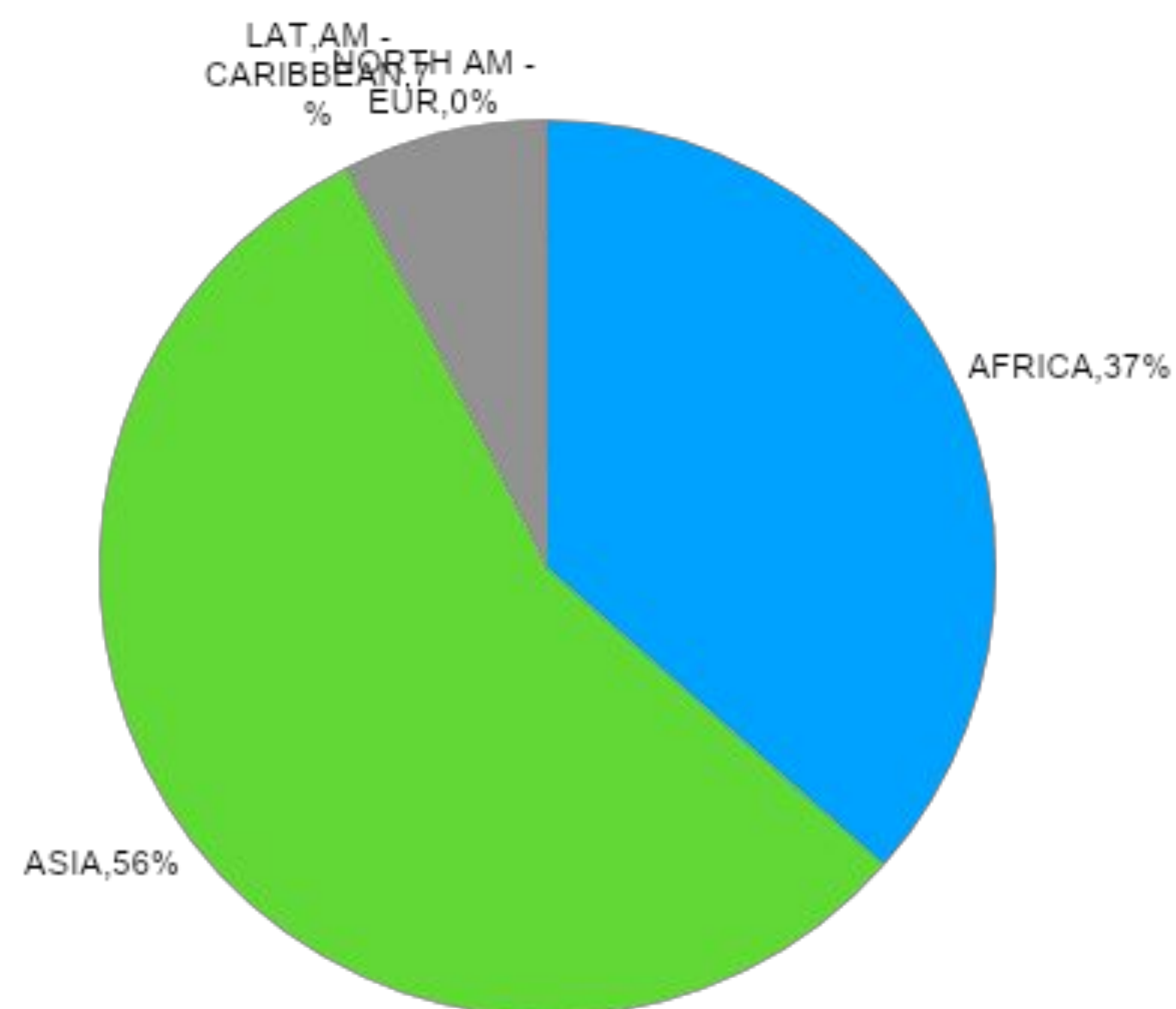


Undernourishment is still representing a huge problem in absolute values:

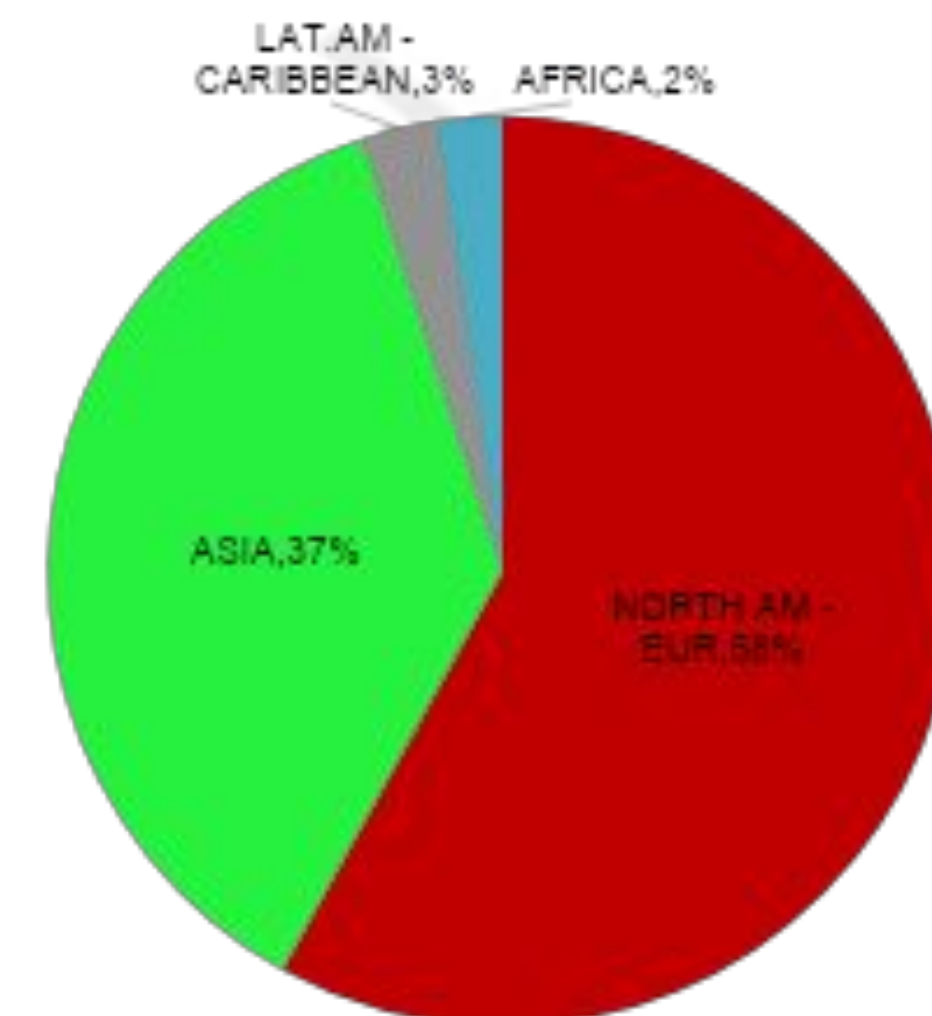
is undernourishment a driver for dairy market developments?

"Affordability" is key to evaluate commodity market potentials

Distribution of Undernourished people (FAO-2021 - 761 MM)



Distribution of GDP (IMF-2021 - 93,9 BN\$)



ASIA: sizable problem decent resources to cope with -> potential for commodities

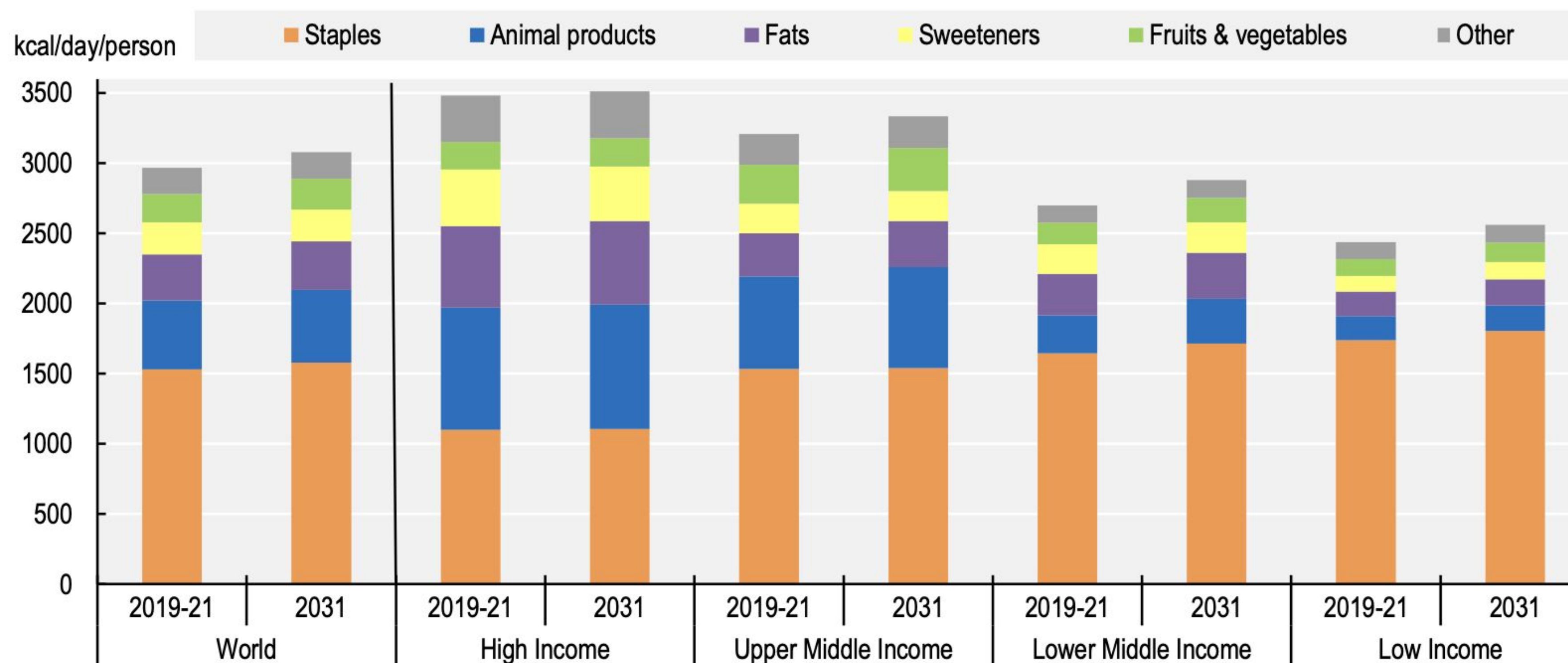
AFRICA: sizable problem but no resources to cope with -> still dependent of food aid programs

LAT. AM: relatively low incidence of undernourished -> potential for commodities

NORTH AM-EUR: -> focus on specialties (limiting obesity issues...)

Low income Areas mainly count on staple nutrients and will do so in the future

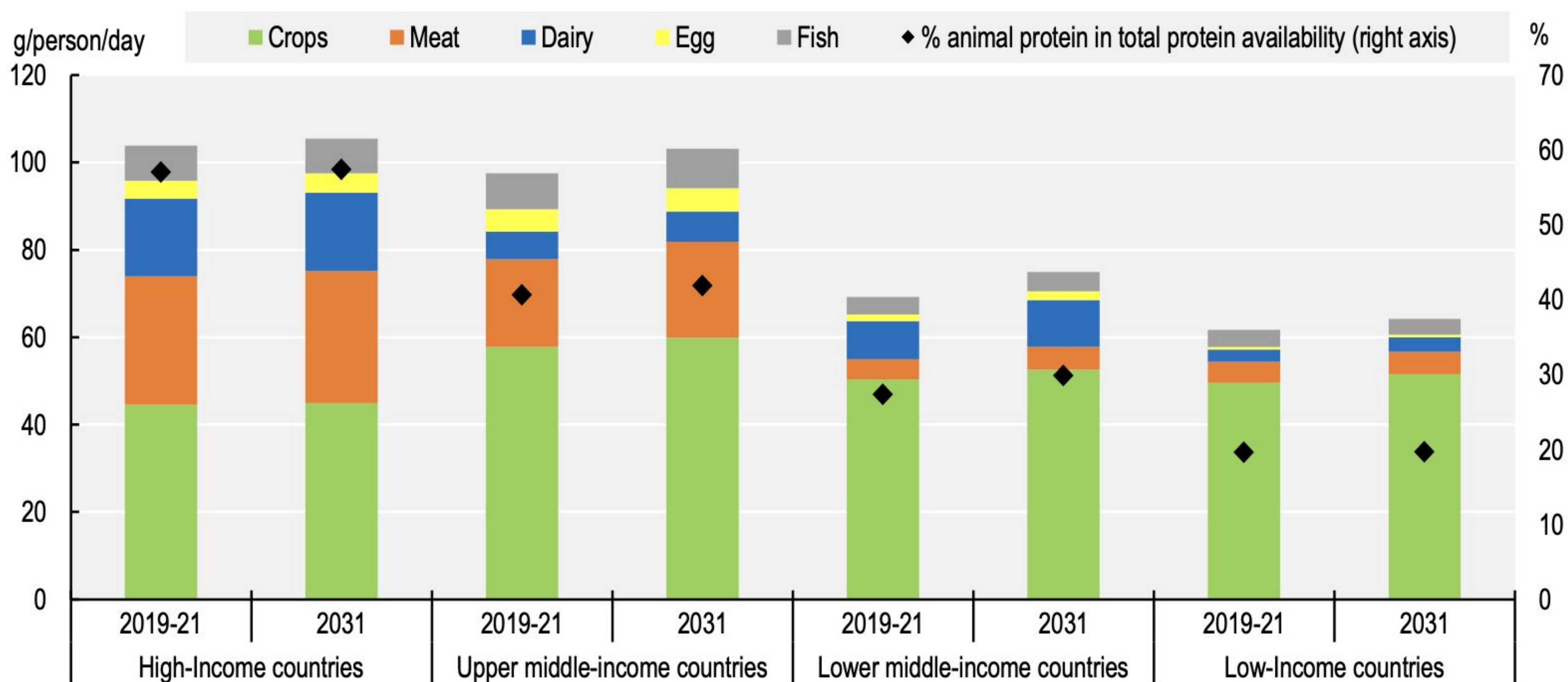
Per capita calories availability of the main food groups, by country income group (OECD - FAO 2023)



Milk is sole food people can exclusively live of...

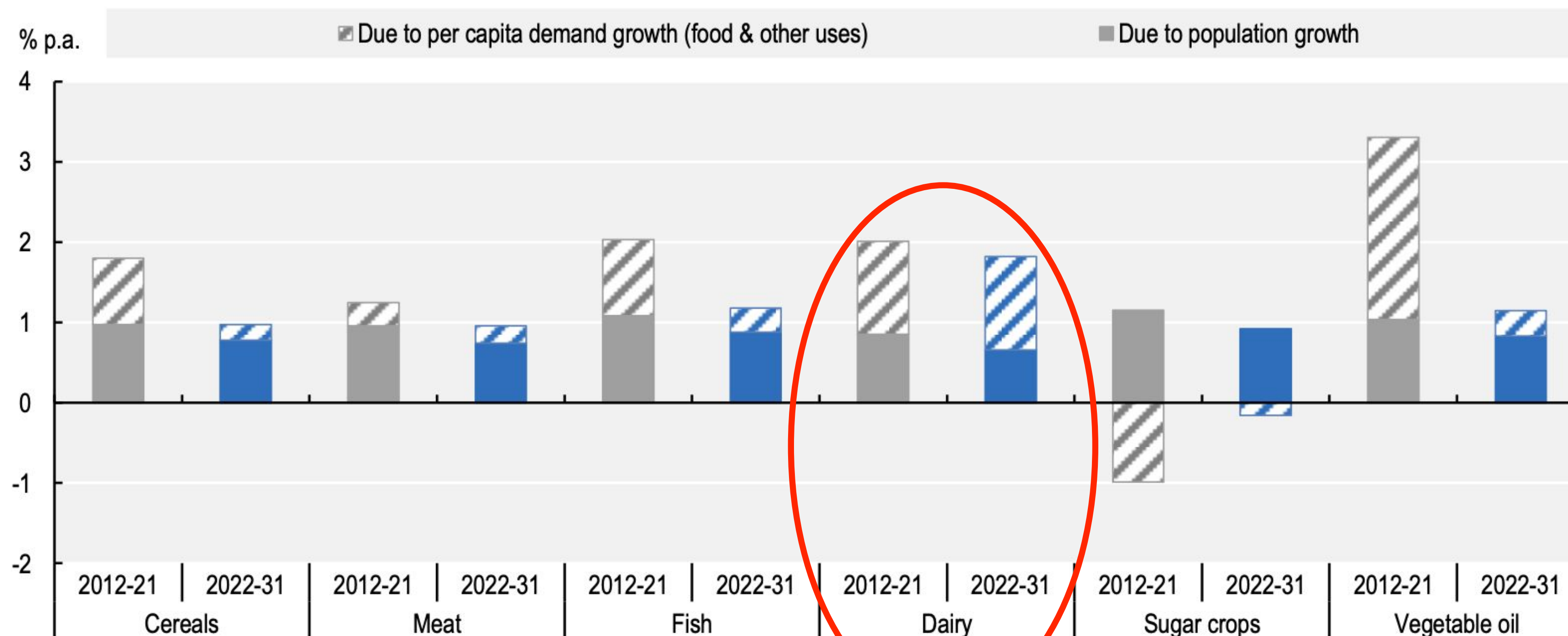
... however dairy products are pretty expensive to hugely contribute to undernourishment solution

Per capita protein availability, by country income group (OECD - FAO 2023)



Global Dairy Demand is expected still buoyant over next decade!

“Per capita demand” gaining importance vs. “population growth”

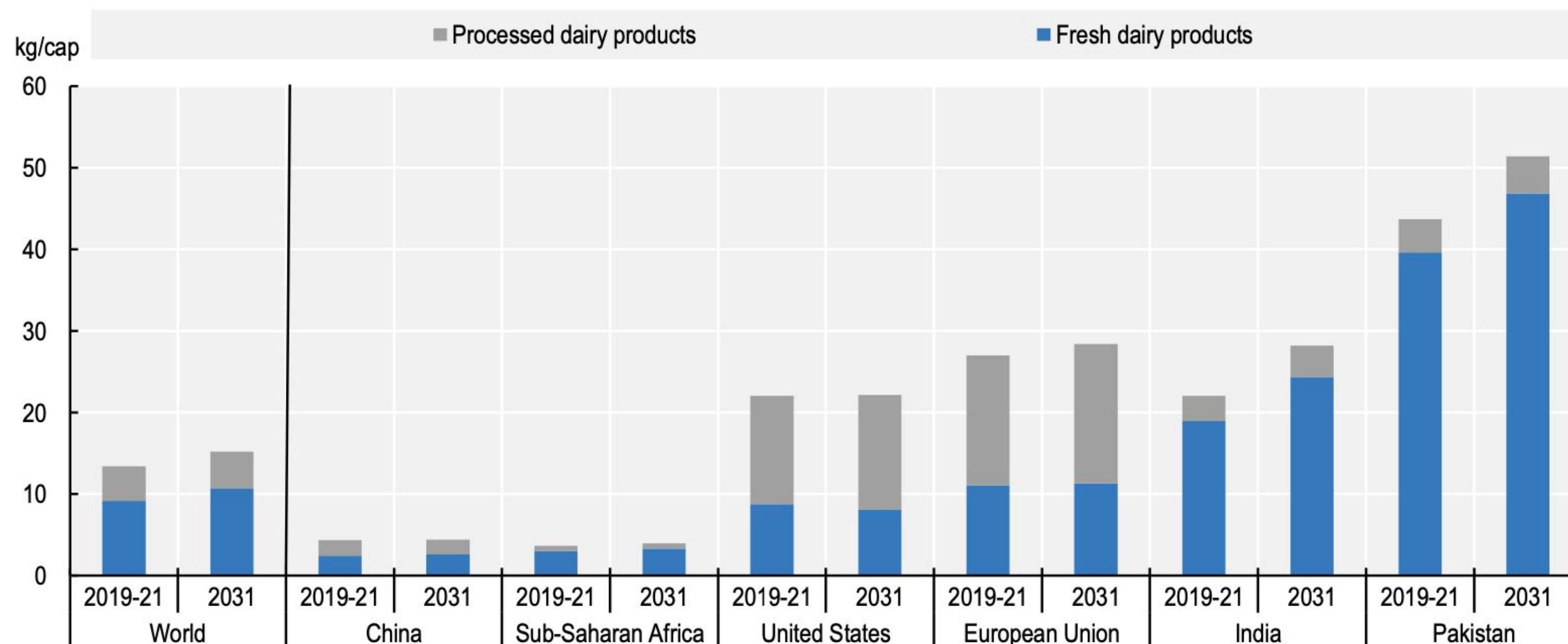


OECD/FAO (2022)

Two main questions arise: **“where is demand growing more”** and **“which products/categories are more promising”**?

India and Pakistan are the Countries where Demand growth materialized most

Worldwide overall demand is expected to grow mainly, if not only, due to growth of “Fresh” category vs “Processed” dairy products



OECD/FAO (2022)

DEFINITIONS (to keep in mind):

- “Fresh dairy products”: all what is not included in processed products (un-treated / pasteurized / fermented)
- “Processed dairy products”: butter, cheese, smp, wmp, wp and casein

India and Pakistan also expected to be the fastest growing world milk production Countries

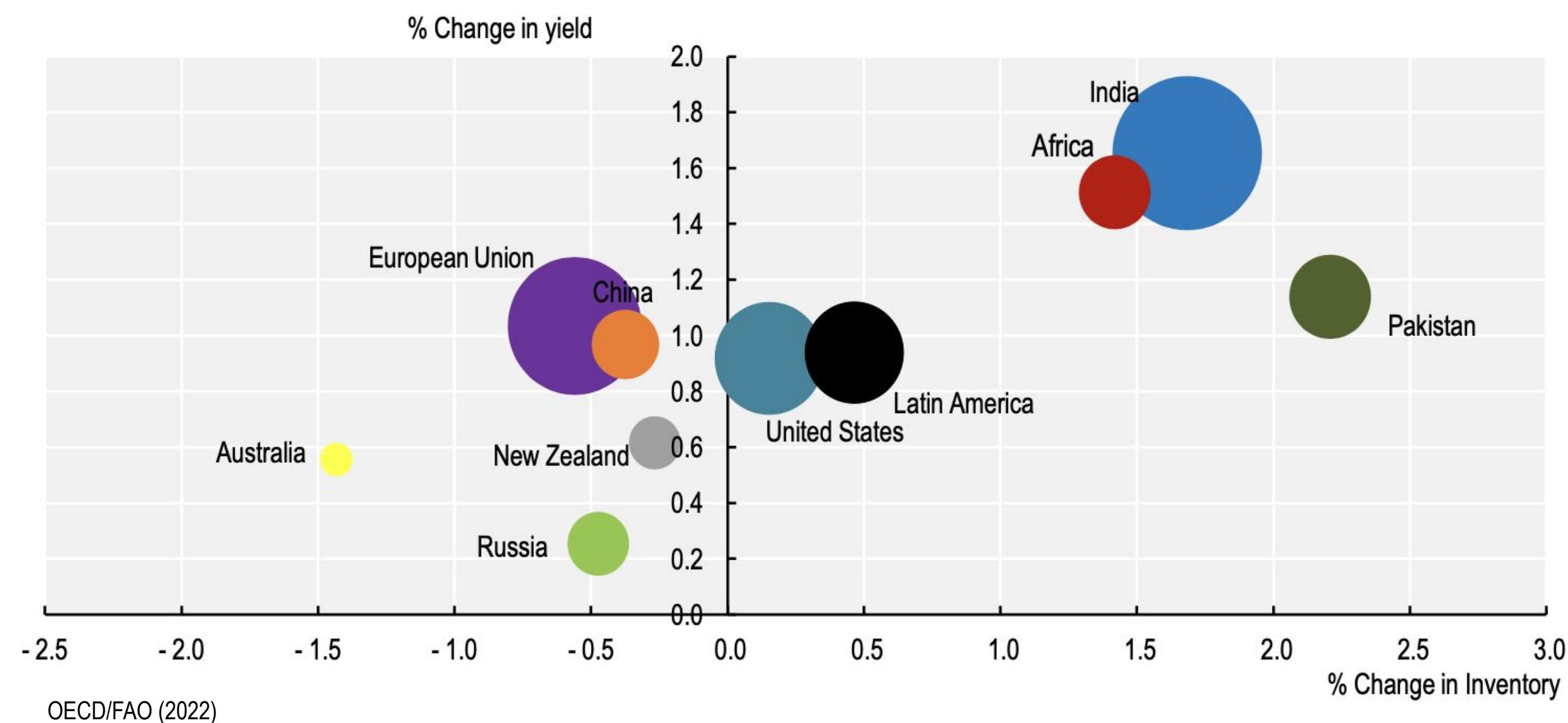
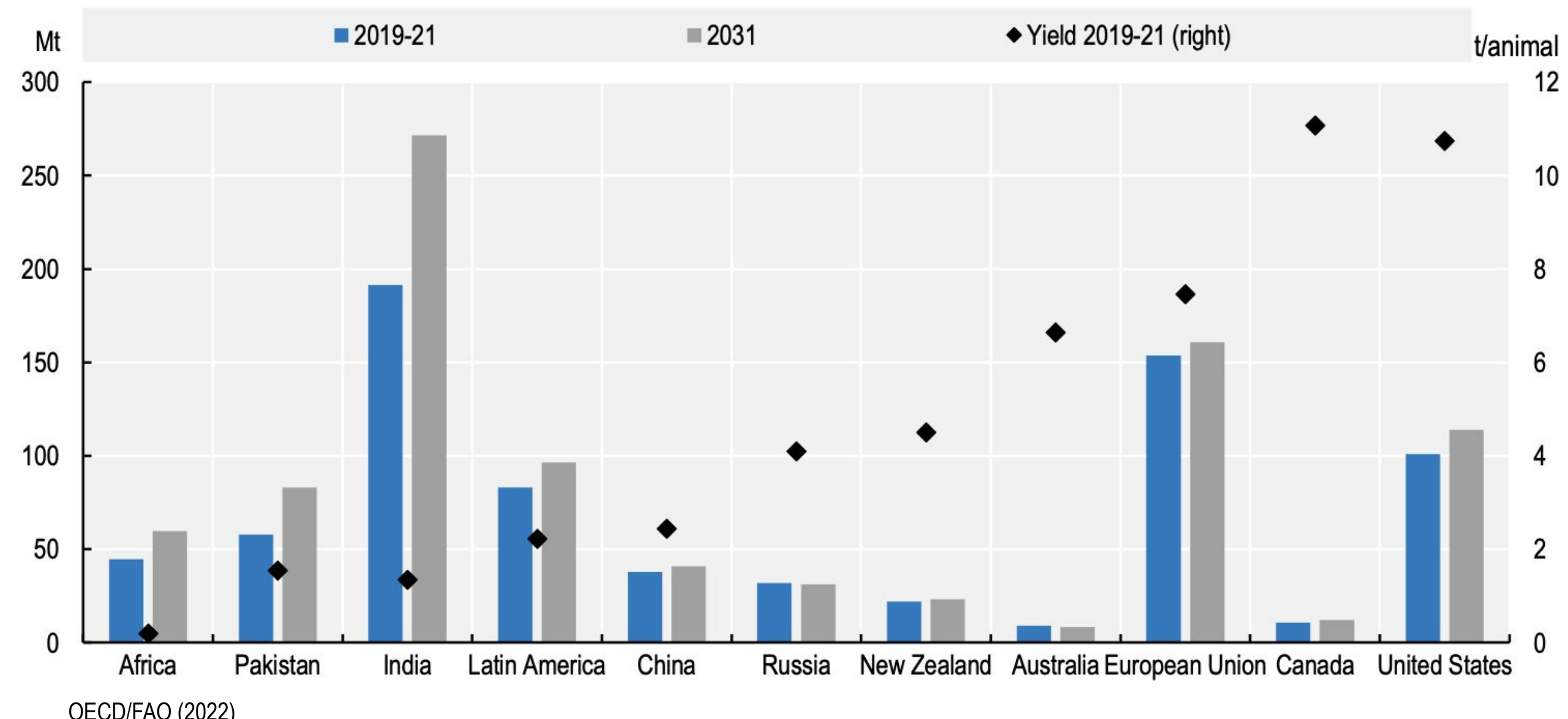
World milk production is projected to grow at 1.8% p.a. (to 1.060 Mt by 2031) over the next decade

India and Pakistan are rapidly moving from “informal”/“household farm” into more professional dairy herd management

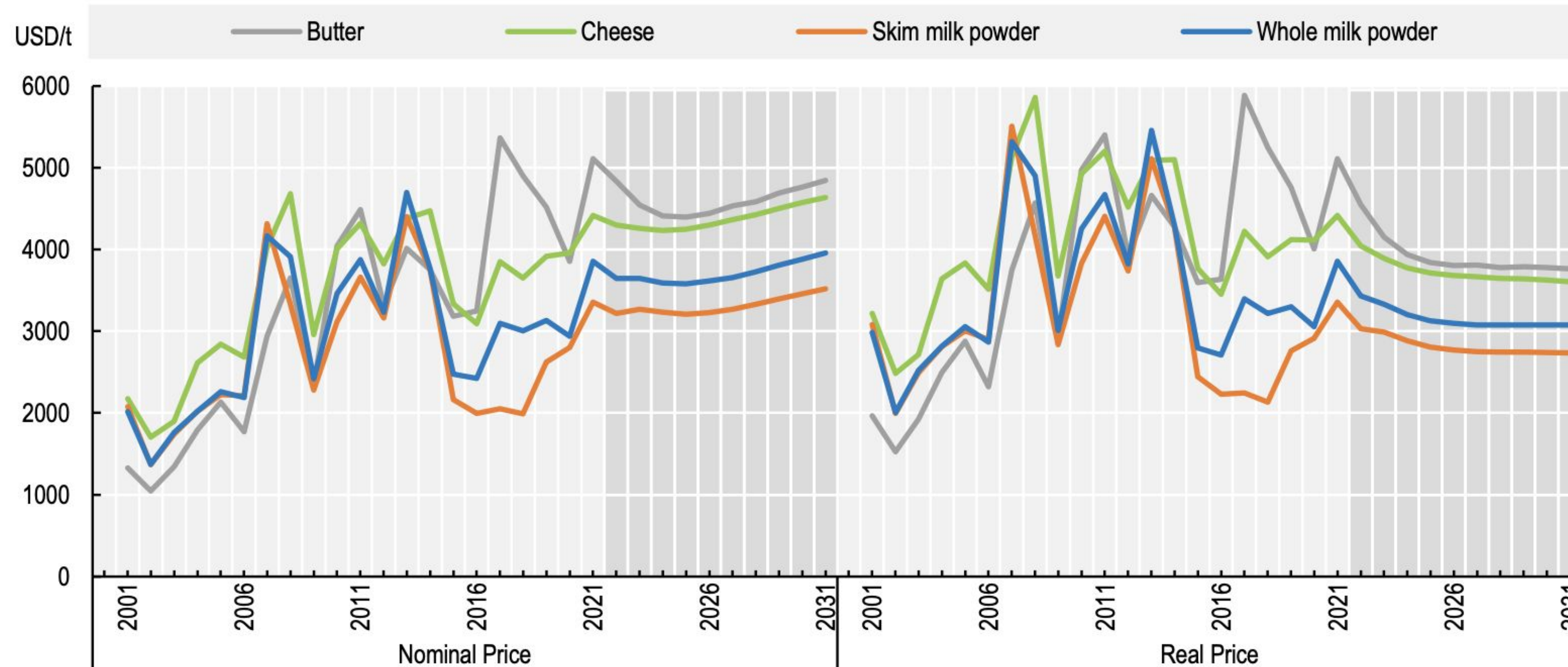
Africa (SSA and NA) also growing steadily but starting from a lower absolute volume

Developed Countries will focus on optimizing farming efficiency increasing yields while lowering inventories

Production growths where demand growths



Why, then, dairy Prices expected to soften over the next decade?



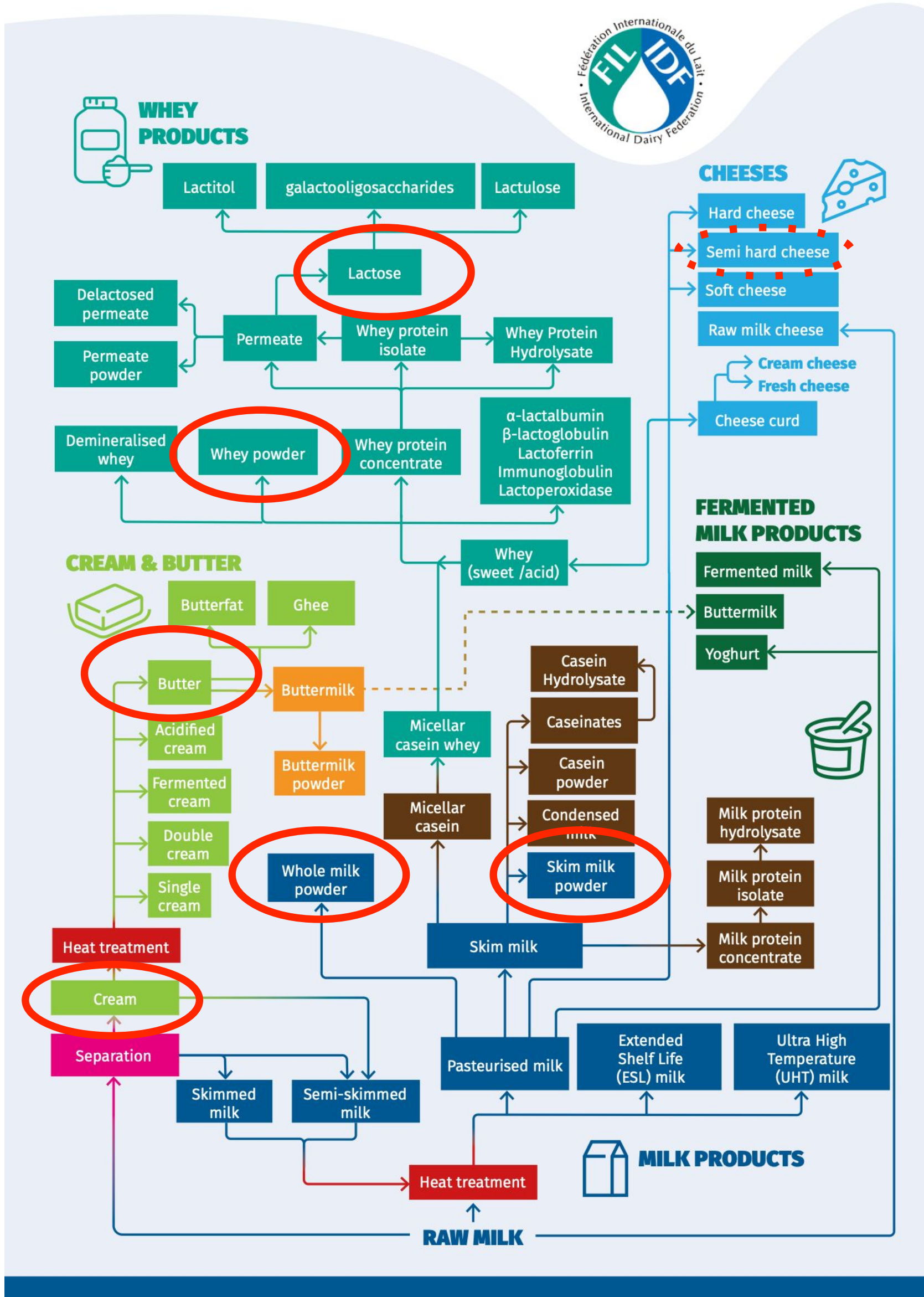
Note: Butter, FOB export price, 82% butterfat, Oceania; Skim Milk Powder, FOB export price, non-fat dry milk, 1.25% butterfat, Oceania; Whole Milk Powder, FOB export price, 26% butterfat, Oceania; Cheese, FOB export price, cheddar cheese, 39% moisture, Oceania. Real prices are nominal world prices deflated by the US GDP deflator (2021=1).

All available Outlooks focus on “Commodity” products only as sufficiently representative of overall dairy markets

is this commodity approach still valid?

which products can be still considered true commodities? (“butter” case)

Dairy Products Tree has gotten much more complex over last decades!

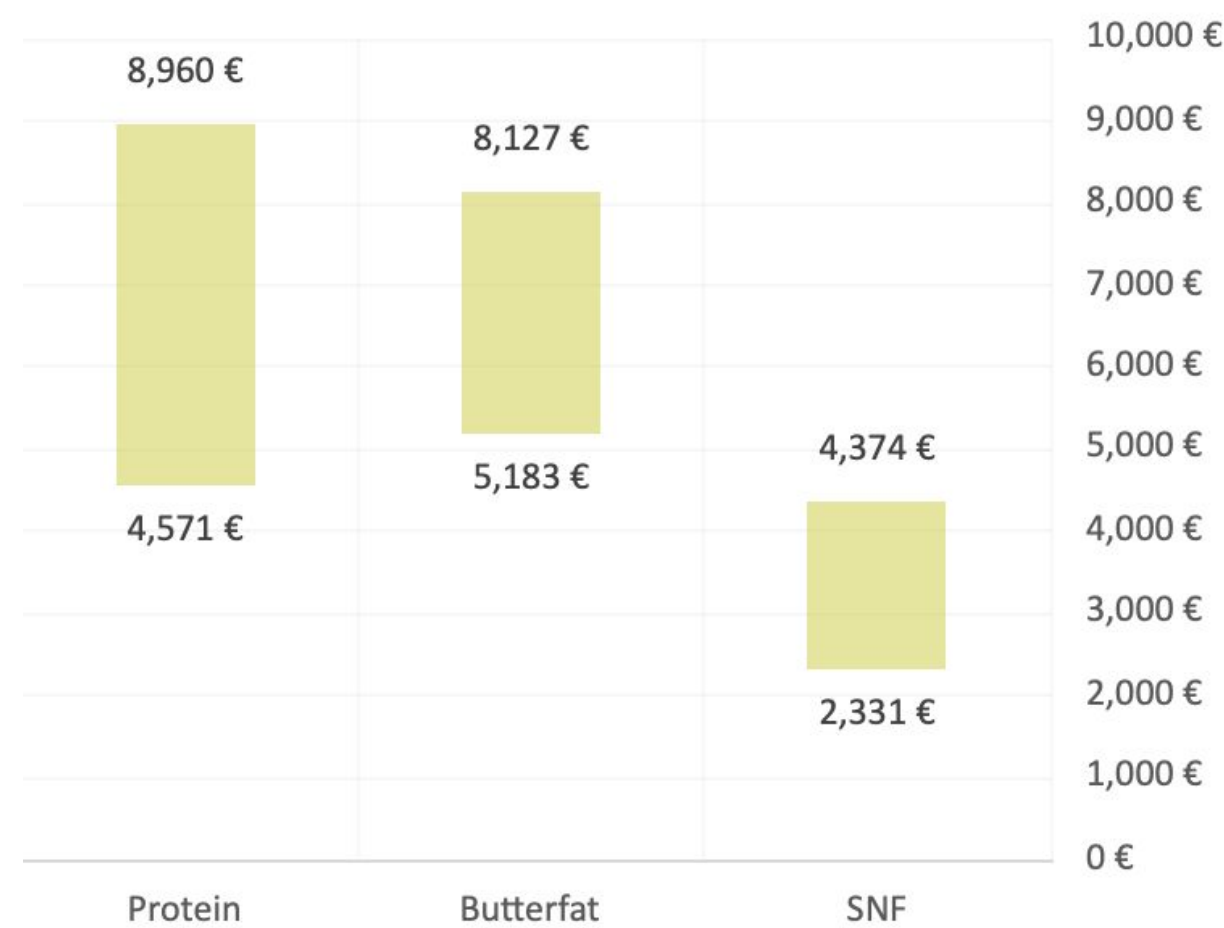


Industry has developed many more dairy based products to gain more margins being positioned as “specialties” for

- food
- infant
- health
- beauty

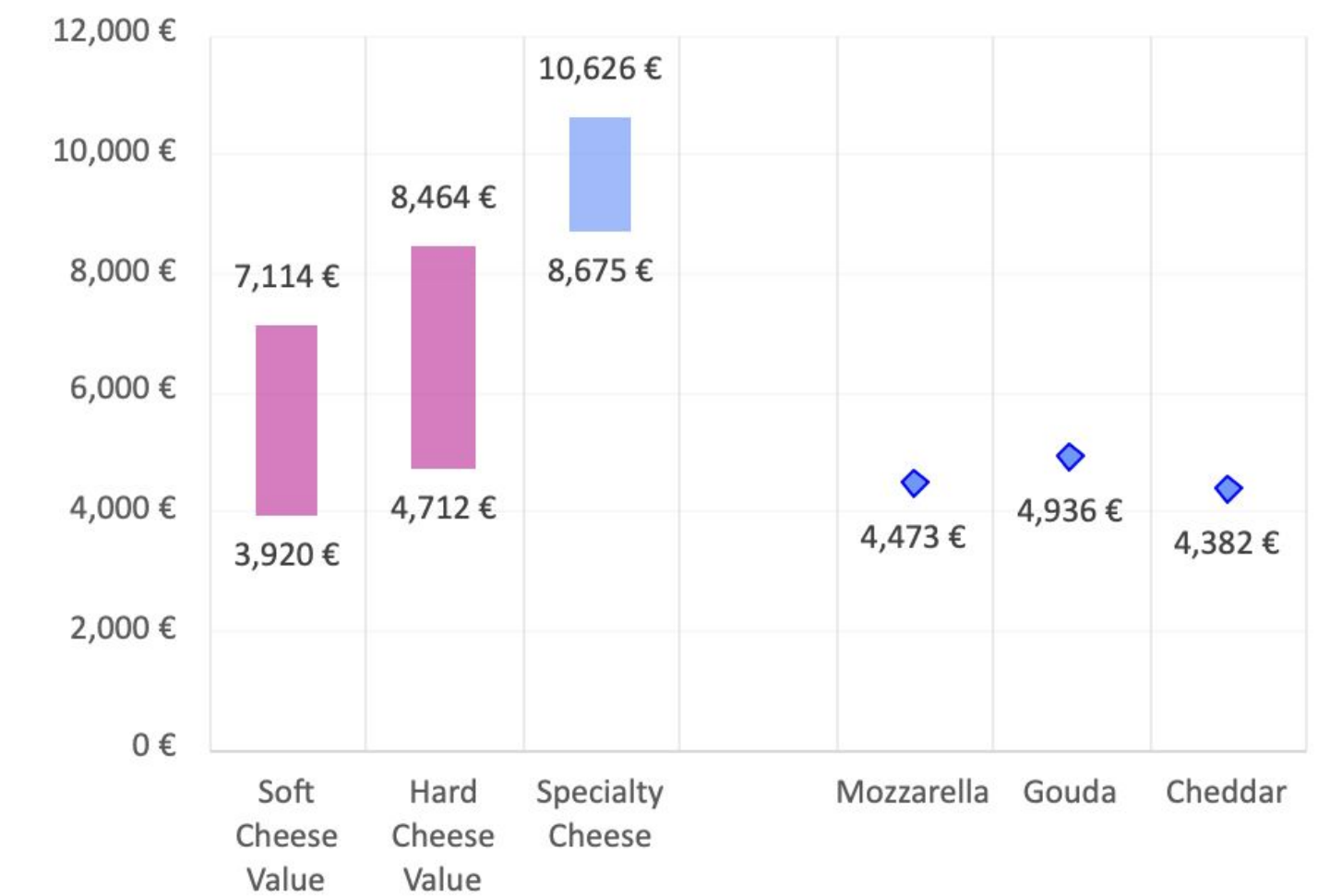
Also dairy markets have become much more complex to play / analyze!

Milk Components (EUR/MT) - EU

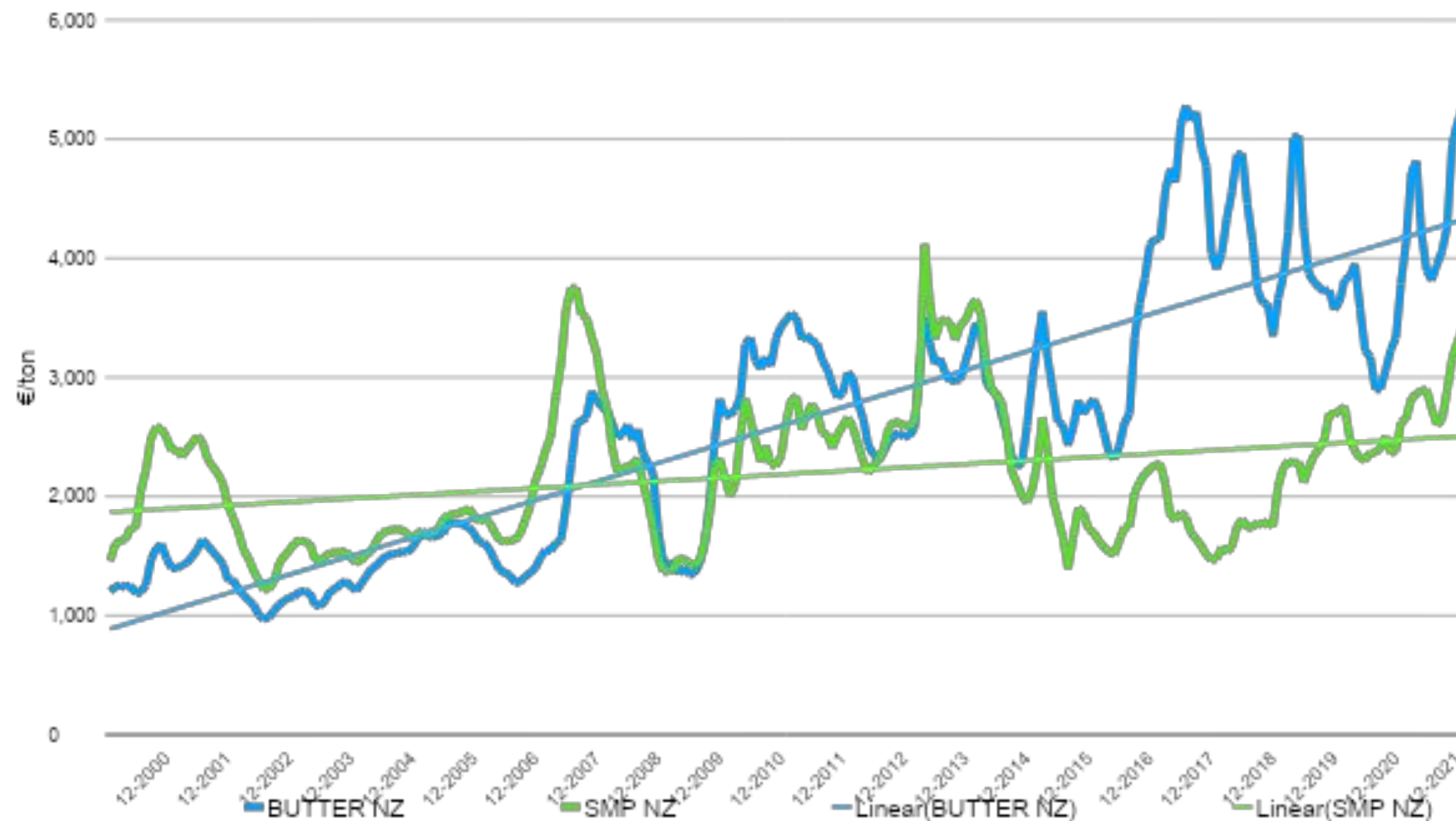


Price ranges have widened considerably for each milk component and product groups

Value for Ingredients (EUR/MT) - EU



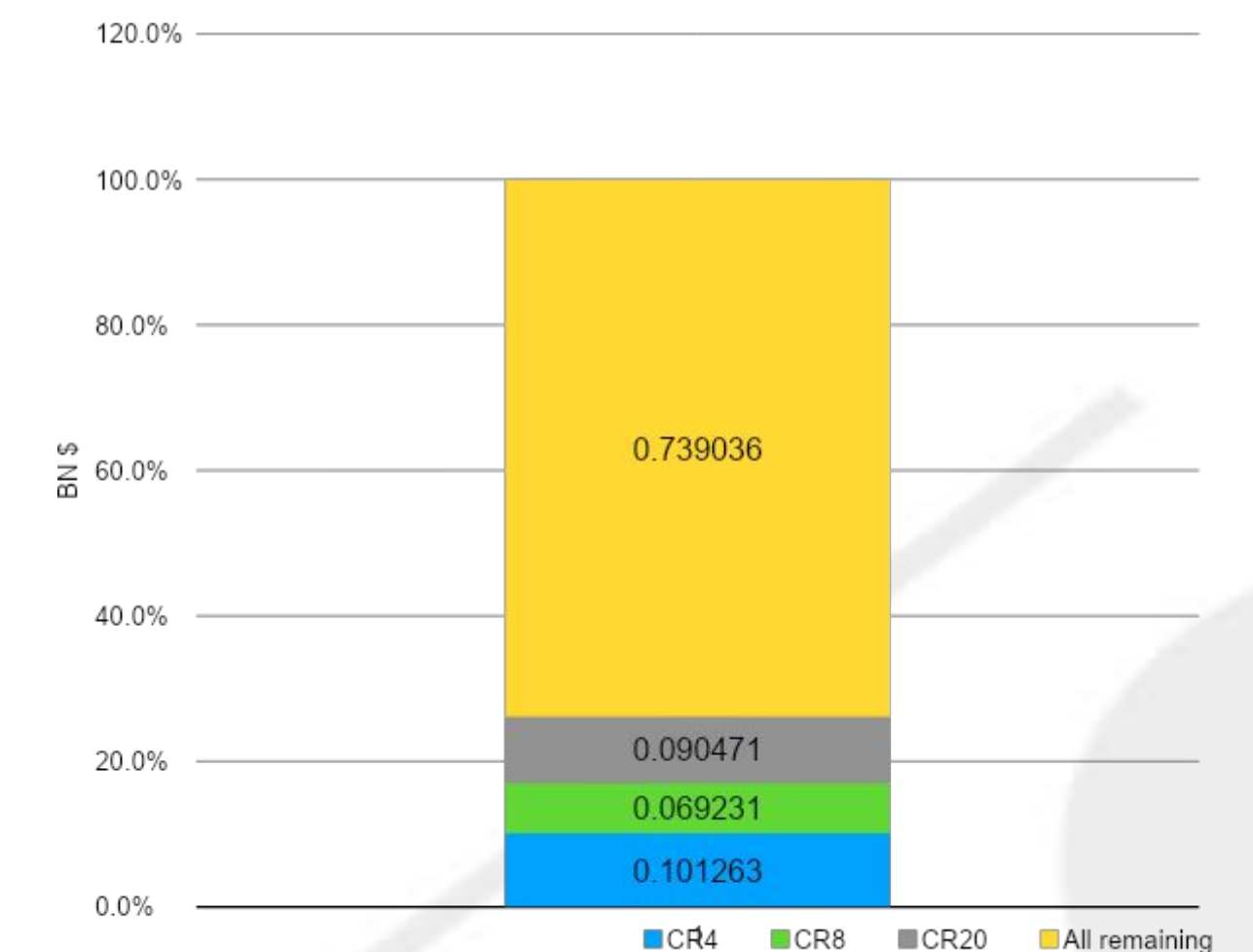
Price development 2000-2021



Volatility has increased overtime and no sign of an ease

Industry is highly concentrated and will concentrate in future

CR-Concentration Rate (over total 871 BN\$ t.o. - 2021)





Dairy markets require new paradigms

SPEED IN ACTION

- Rapidly changing market scenarios require quicker decision making / faster execution
 - flexible/what if strategies upfront
 - fact driven execution

ACCESS TO MARKET

- In a fast running environment, gaining visibility is key: technology is of a paramount importance and more is yet to come

MARKET INTELLIGENCE

- Volatility is a fact to cope with not to suffer: are available tools adopted? at their best?
- Market transparency is still largely an utopia while it is of a paramount importance for the fair market functioning

“Insanity is doing same thing over and over and expecting different results” (A.Einstein)

BACK UP