

# The Challenges for a Better Europe

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**WE NEED TO STOP THIS INEQUALITY**



## Challenges FOR THE PLANET

1. NO POVERTY
2. ZERO HUNGER
3. GOOD HEALTH & WELL/BEING
4. QUALITY EDUCATION
5. GENDER EQUALITY
6. CLEAN WATER & SANITATION
7. AFFORDABLE & CLEAN ENERGY
8. DECENT WORK & ECONOMIC GROWTH
9. IDUSTRY, INNOVATION & INFRASTRUCTURE
10. REDUCED INEQUALITIES
11. SUSTAINABLE CITIES & COMMUNITIES
12. RESPONSIBLE CONSUMPTION & PRODUCTION
13. CLIMATE ACTION
14. LIFE BELOW WATER
15. LIFE ON LAND
16. PEACE & JUSTICE
17. PARTNERSHIPS FOR THE GOALS



@ Sustainable Development Goals, UN



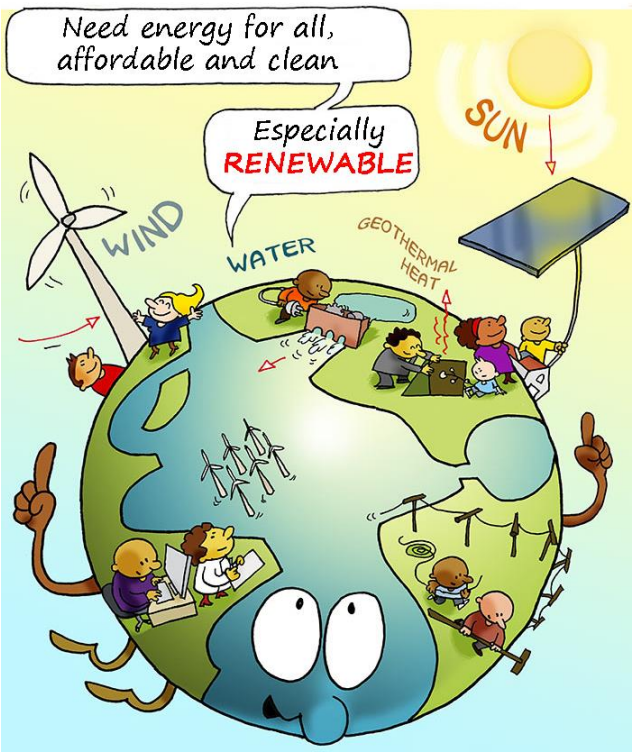
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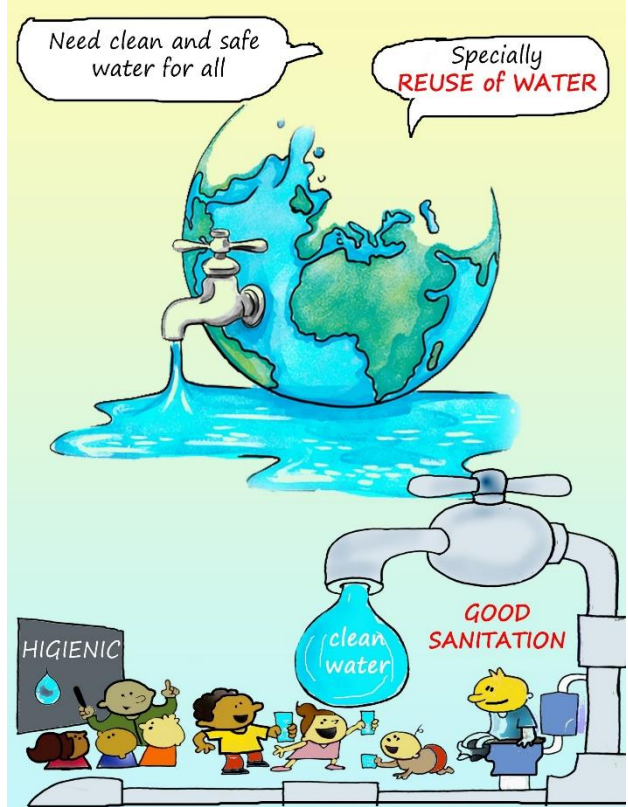
Most important four issues that are **BIG** challenges ....



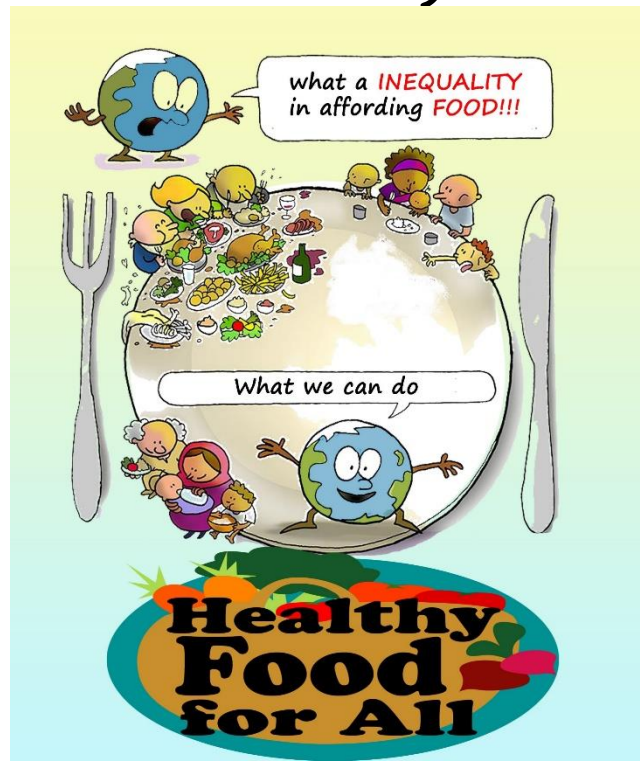
### Clean & affordable energy



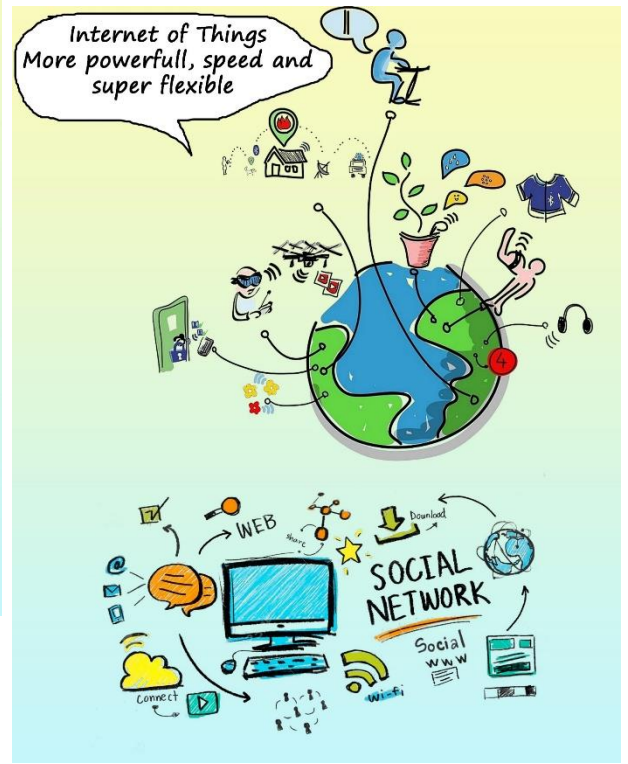
### Clean & safe water



### Zero hunger



### Internet of things



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And the **BIGGEST** challenge ....



# ZER



# WASTE

# CHALLENGE



Food WASTE



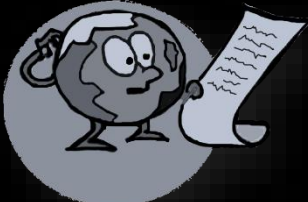
Water WASTE



Technology WASTE



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Will this pic **HAUNT** us??



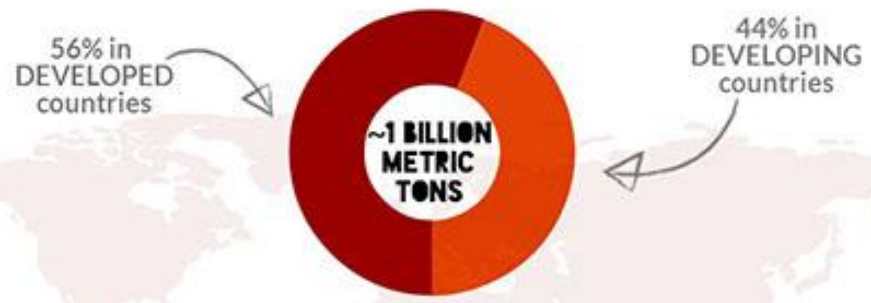
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# Food WASTE in GLOBALLY...

## 1/4 TO 1/3 OF ALL FOOD PRODUCED FOR HUMAN CONSUMPTION IS LOST OR WASTED

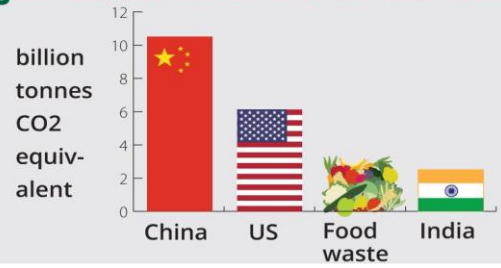
HERE'S THE BREAKDOWN:



THOSE LOST CALORIES COULD FILL HUNGER GAPS IN THE DEVELOPING WORLD



If global food waste was a country, it would be the third largest greenhouse gas emitter after the US and China



925,000,000 MILLION PEOPLE are HUNGRY

1,300,000,000 BILLION TONS of FOOD is WASTED



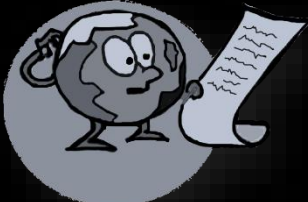
# 1 in 7 people are HUNGRY

@ FAO of United Nation



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Will this pic **keep** us in PEACE ??



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# Global Water CRISIS....

**WASTED WATER**



MORE THAN 1/3 of the world's drinking water supply is **LOST** before it ever reaches consumers, mostly from **UNSEEN LEAKS**



In **DEVELOPING COUNTRIES**



the percentage is even higher:

**40-50%**

This wasted water is called non-revenue water (NRW) with estimated **LOST REVENUE** to utilities of

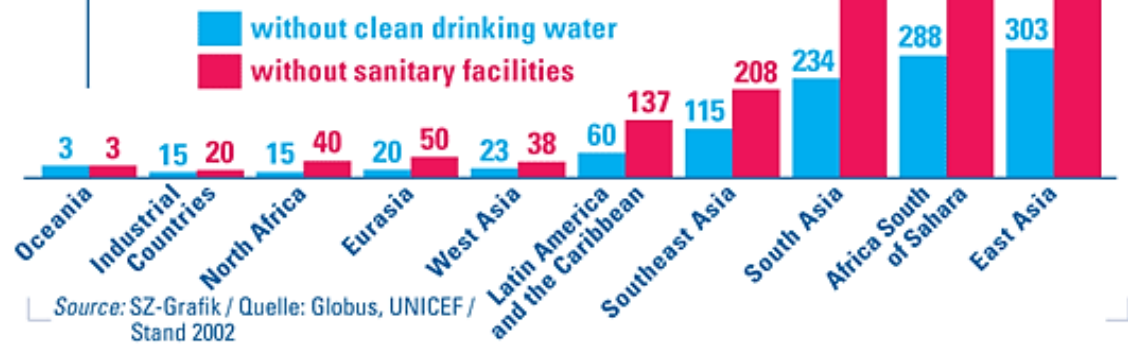
**\$14B ANNUALLY**

Source: Miya & The World Bank with Clean Edge analysis

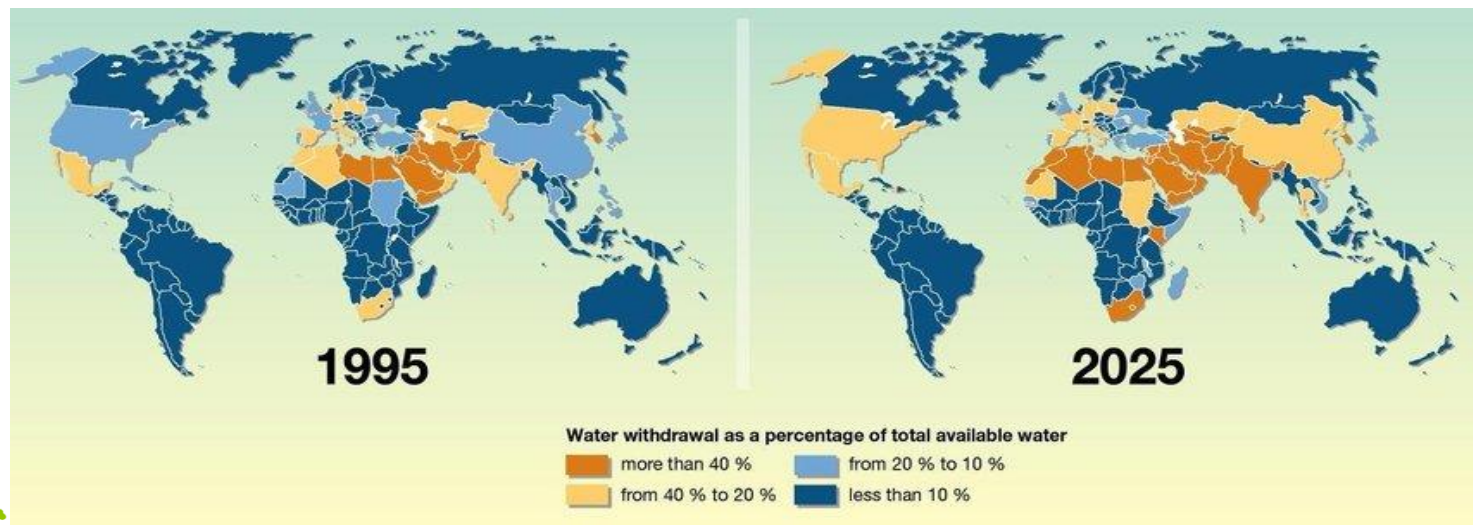
## > Water Shortage

- ➔ 1,2 billion people all over the world live without clean drinking water;
- ➔ 2,6 billion people without sanitary facilities

Data in millions



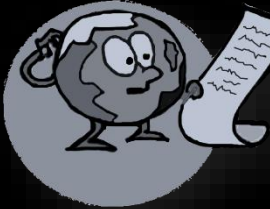
Source: SZ-Grafik / Quelle: Globus, UNICEF / Stand 2002



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@ UNICEF





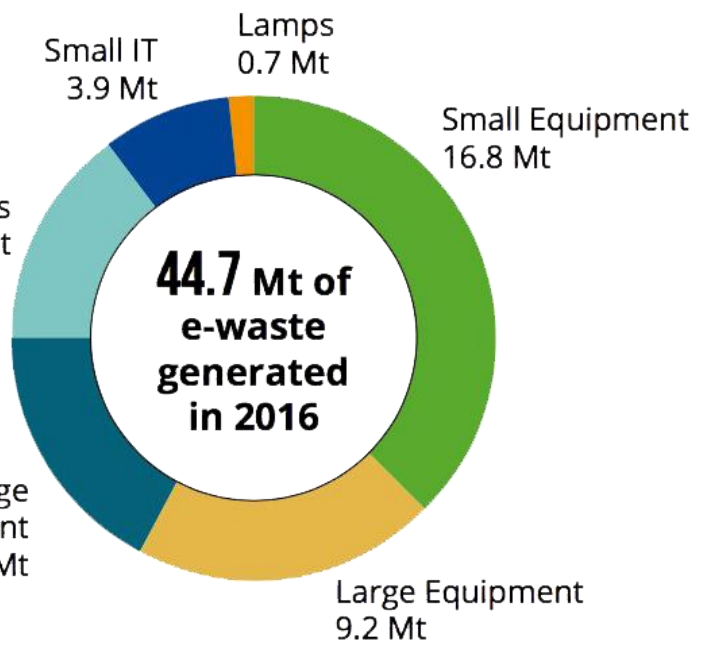
# Are we really **PROGRESSING** with TECHNOLOGY??



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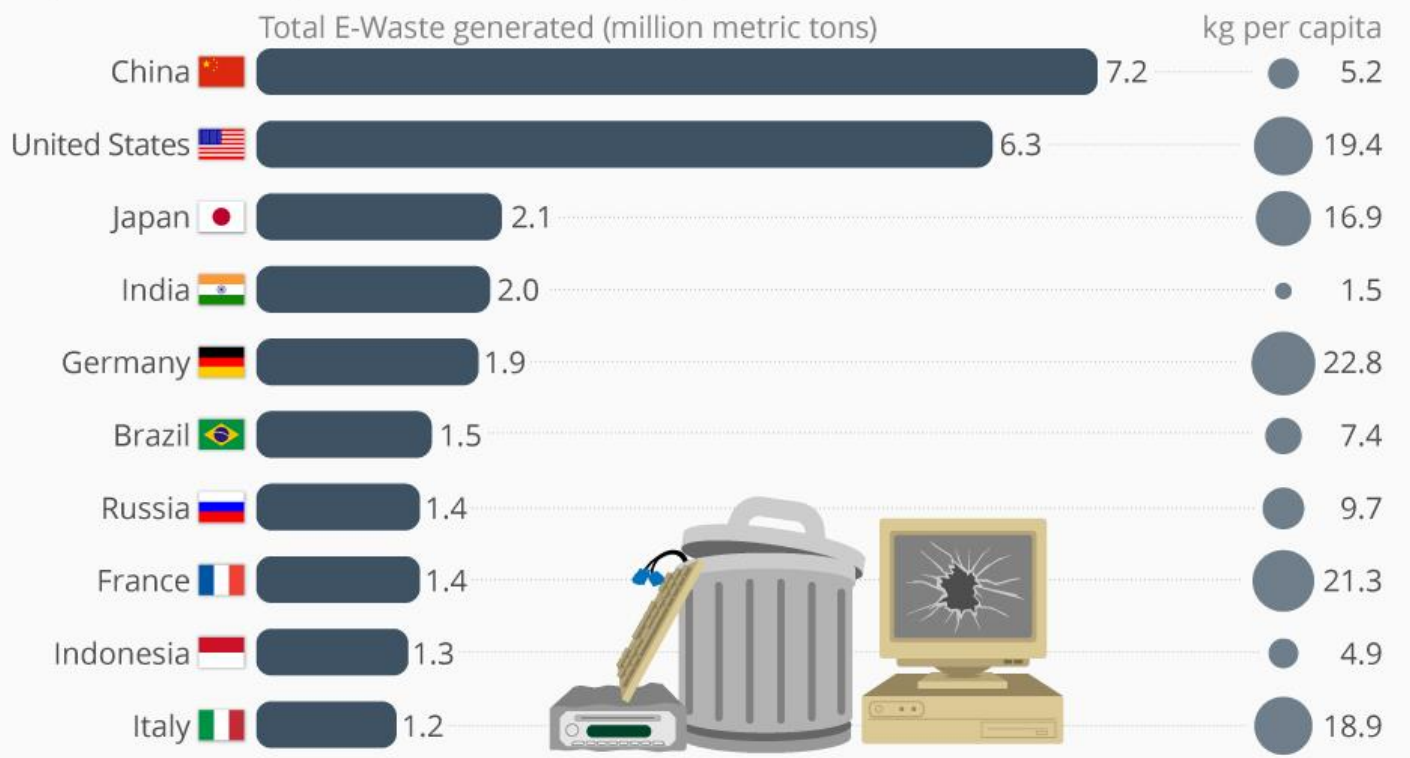


# Global status of **TECHNOLOGY WASTE**....



## These Countries Generate the Most Electronic Waste

Top 10 countries by the amount of e-waste generated in 2016\*



\* includes discarded products with a battery or plug including mobile phones, laptops, televisions, refrigerators, electrical toys and other electronic equipment

CC BY ND  
@StatistaCharts

Source: The Global E-waste Monitor 2017



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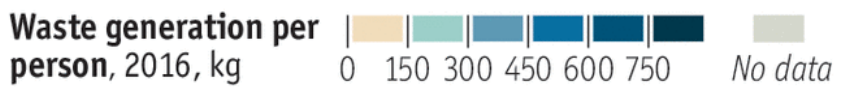
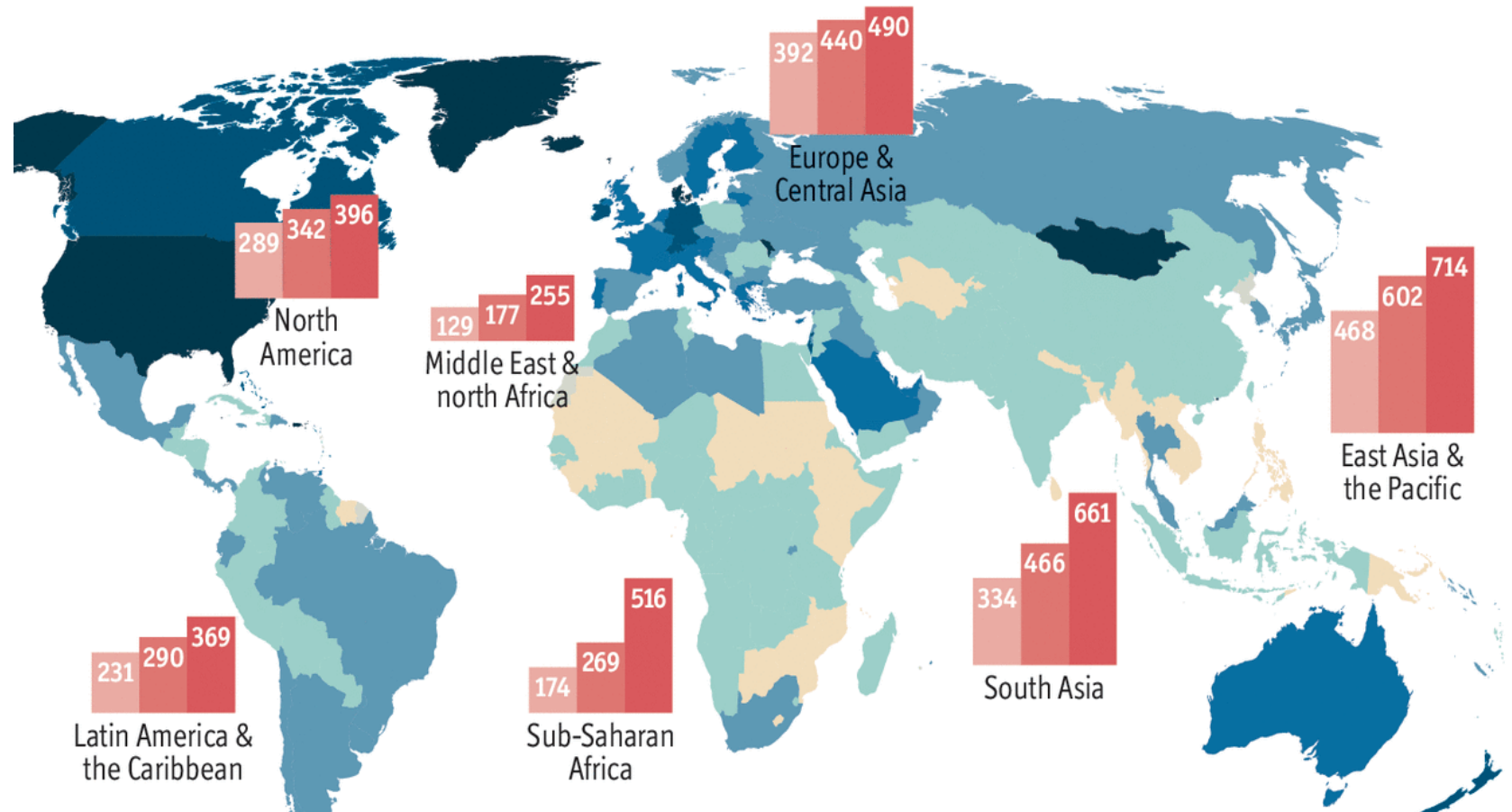


# Regional WASTE generation GLOBALLY....



## Throwaway world

Regional waste generation, tonnes m 2016 2030 forecast 2050 forecast



@ The Economist

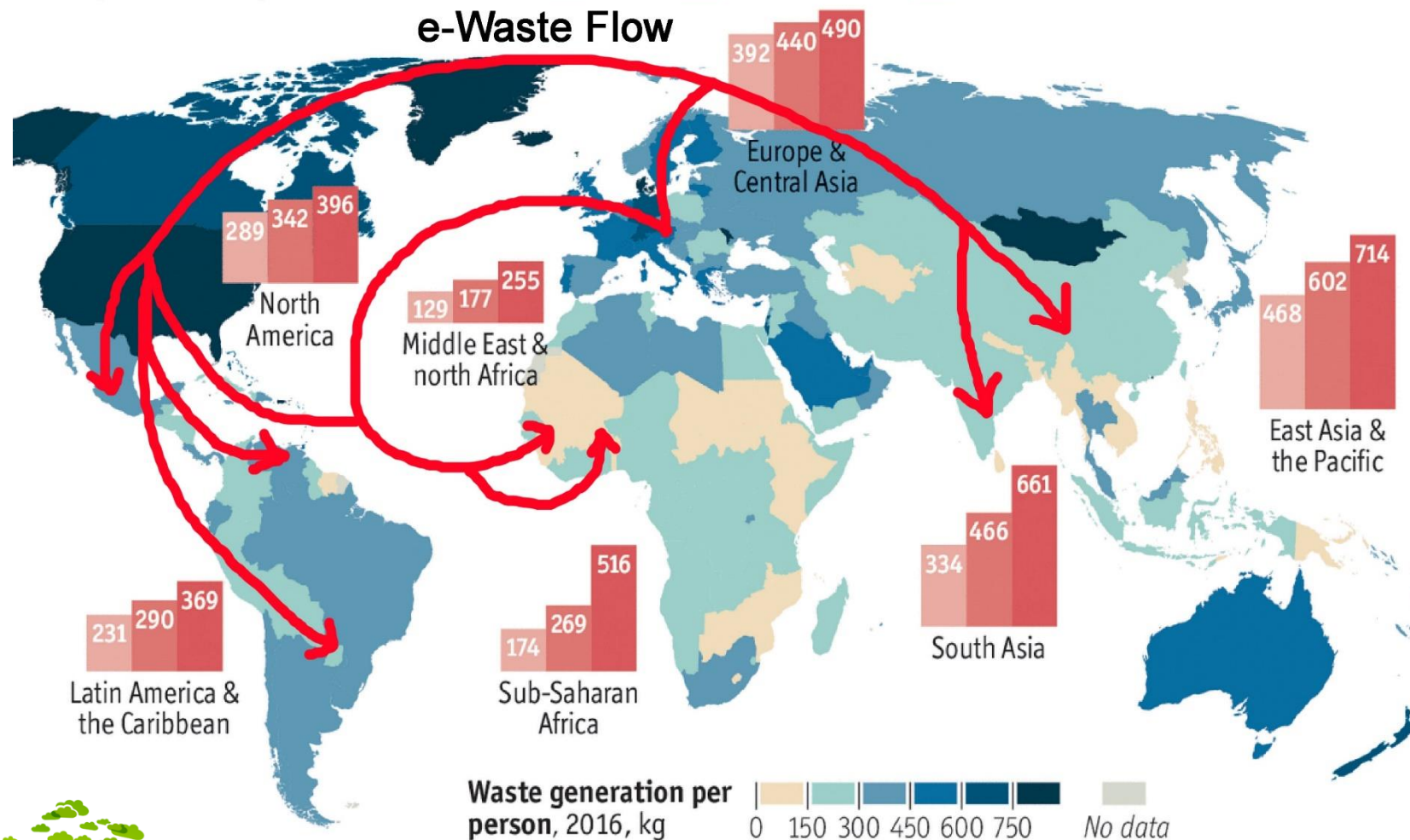




# e-WASTE flow throughout the world...

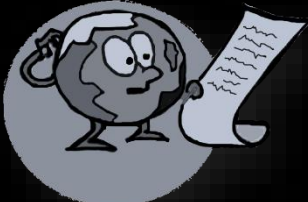
## Throwaway world

Regional waste generation, tonnes m 2016 2030 forecast 2050 forecast



@ The Economist





# Do we really **Imagine** our PLANET in **Future**??



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# We have HOPE so we CAN DO....



## Traditional business is linear



### Adopt

Raw materials or resources

### Business

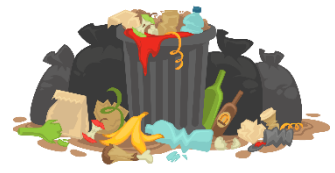
Manufacturing & distribution



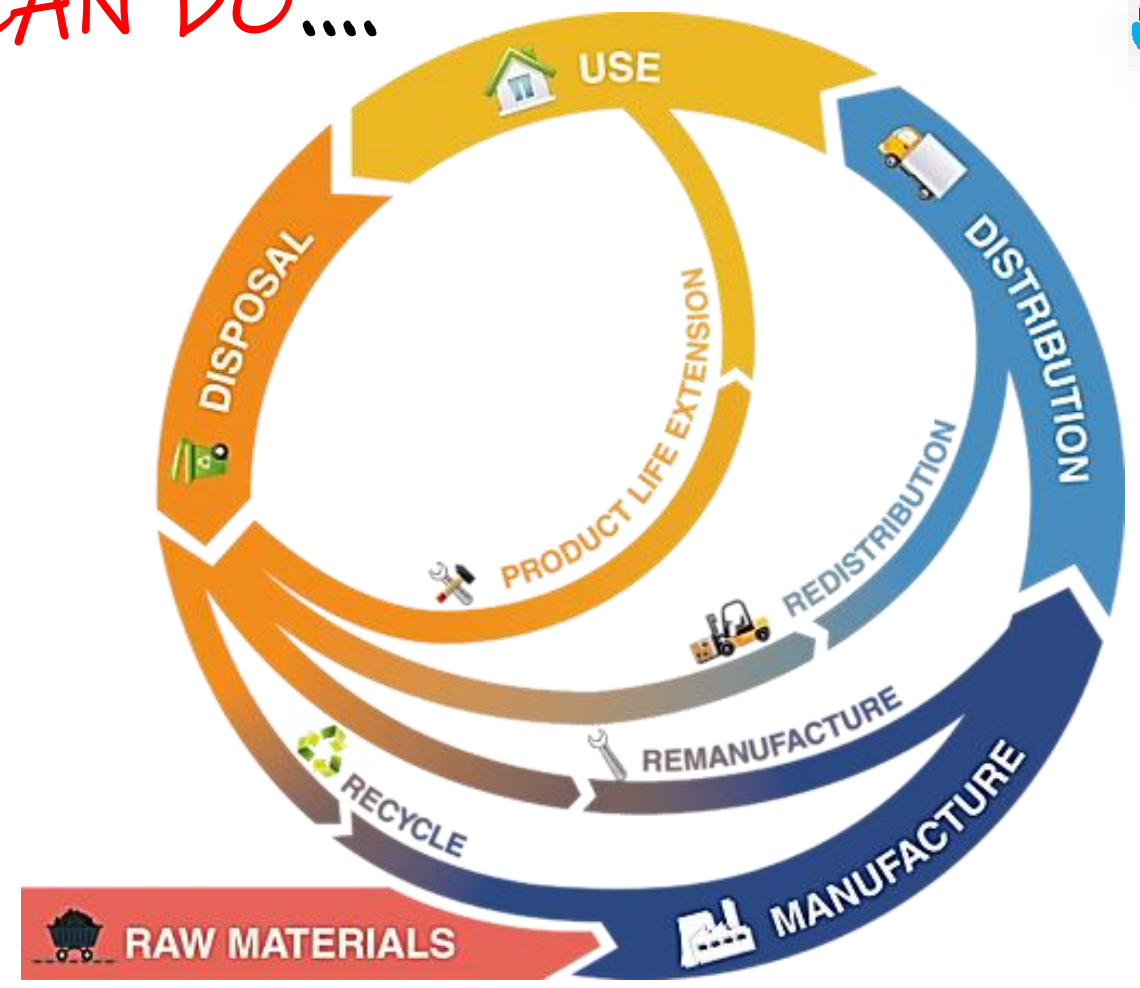
### Consumption



### Dispose



Using **RESOURCES** and  
Returning **GARBAGE**



## CIRCULAR ECONOMY ...A different concept

### Smaller the circle, Smaller the impact and Bigger the benefit



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# Re-thinking: Reducing-Reusing-Recycling...



## GREEN and CLEAN technology:

- ✓ Using more non-toxic, bio-compatible and bio-degradable materials.
- ✓ Using low-cost and simple materials processing systems.
- ✓ Using more and more flexible and nano- technology that will minimize the product size....so minimize the raw materials
- ✓ Need substitution: Design new materials behaving like ORGANS!  
We need STEM Materials!
- ✓ Packaging Strategy : Design new bio-degradable materials for packaging. Less packaging Less Garbage



The specific vision of the research work should be to build effective cooperation between science and society, to materialize new smart technology for science and to pair scientific nobility with social awareness and responsibility.

Idea is to **SEE** the world through  
**Sustainability-Environment-Economy**



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# PLANET

# The Challenges for a Better Europe

*Obrigado,  
we are proud of investing  
our knowledge to have  
**GREEN WORLD***



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Thanks to

Suman Nandy for the support in preparing this presentation and to my group



**If you want to go fast go alone if you want to go further  
Science has to be made with ethics and responsibility**