6th WORLD WATER SUMMIT 2022
Water Management Locally - Globally
International Conference & Exhibition

August 24-25, 2022, Convention Centre – NDCC
Parliament Street, New Delhi - India

Global Investments For Good Water Governance

PRANAB J PATAR, PhD
Global Foundation (GFAEHW), New Delhi
- Member -
Deepor Beel Conservation Society, Govt. of Assam (Governing Council)
IUCN Commission on Education & Communication
IUCN World Commission on Protected Areas | Assam Science Society
Sustainability Council | Indian Science Congress Association
CoalitionWILD Global Mentorship Program | Responsible Tourism Society of India
International Council for Circular Economy (ICCE) | Climate Reality Leadership Crop

Global Foundation for Advancement of Environment & Human Wellness

A unique
Environmental &
Social Impact Organization *

Founded on

Triple Bottom Line Philosophy

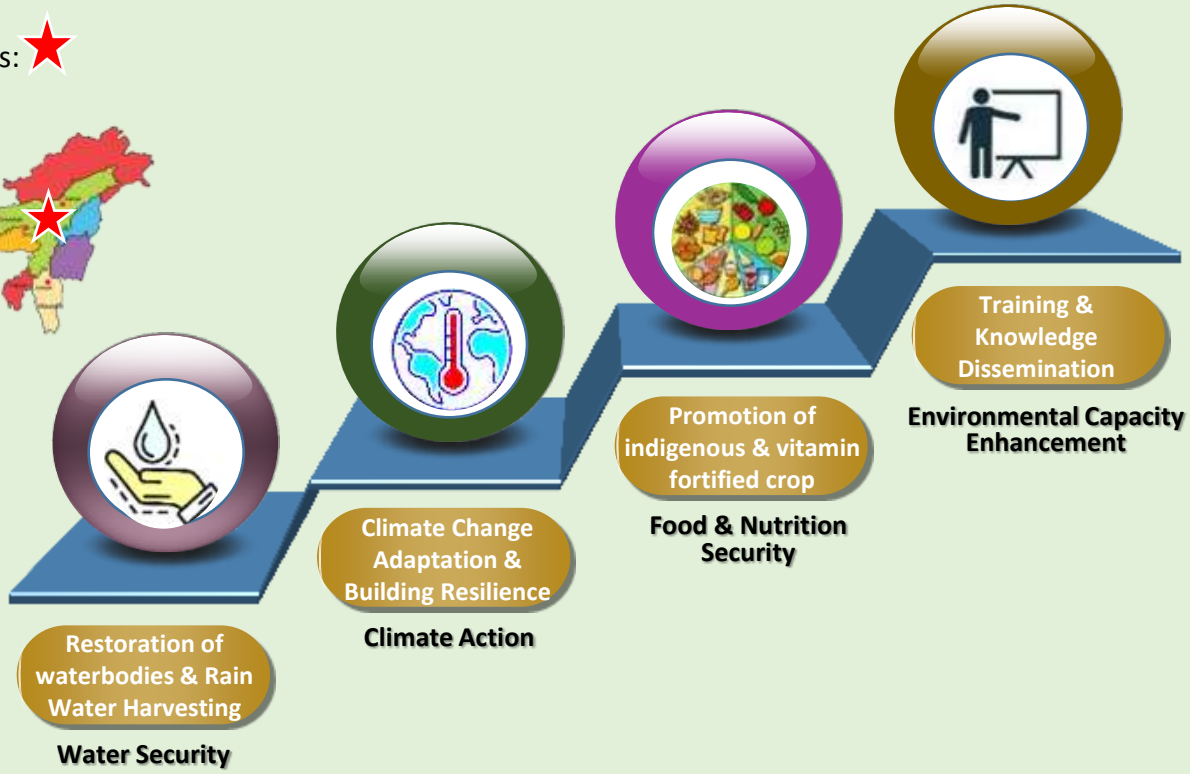
Committed to bring in **Innovative & Enduring Solutions**
to address socio-environmental challenges through
Multi-stakeholder, Trans-disciplinary & Hands-on Approach

Thematic Areas

Water Security	**Climate Security**	**Food Security**

* Registered as a 12A/80G compliant Charitable Trust in India

Broad Areas of Work



National Strategic Alignments:

| National Water Mission | National Mission for Sustaining the Himalayan Eco-system|
|National Mission on Strategic Knowledge for Climate Change| National Nutrition Mission 2018 |

Sustainable Development Goals:

| SDG 2: Zero Hunger | SDG 3 - Good health and well-being |
| SDG 6: Clean Water and Sanitation | SDG 13: Climate Action | | SDG 15: Life on Land |
|SDG 17: Partnerships for the Goals |

Awards & Accolades

Global Foundation For Advancement of Environment and Human Wellness

Partnerships & Collaborations

Media Coverage

Contemporary Challenges

Contemporary Water Issues












Not A Good Change

Climate change or not, there's little doubt now that extreme weather events in India are becoming more common

Extreme Heat

WHAT WE KNOW

Annual mean temperature of India has risen by 0.6°C in past 114 years

West coast and southern India are projected to shift to new, high-temperature climatic regimes

WHAT CAN BE DONE

Stop towns from being heat 'islands' through planning

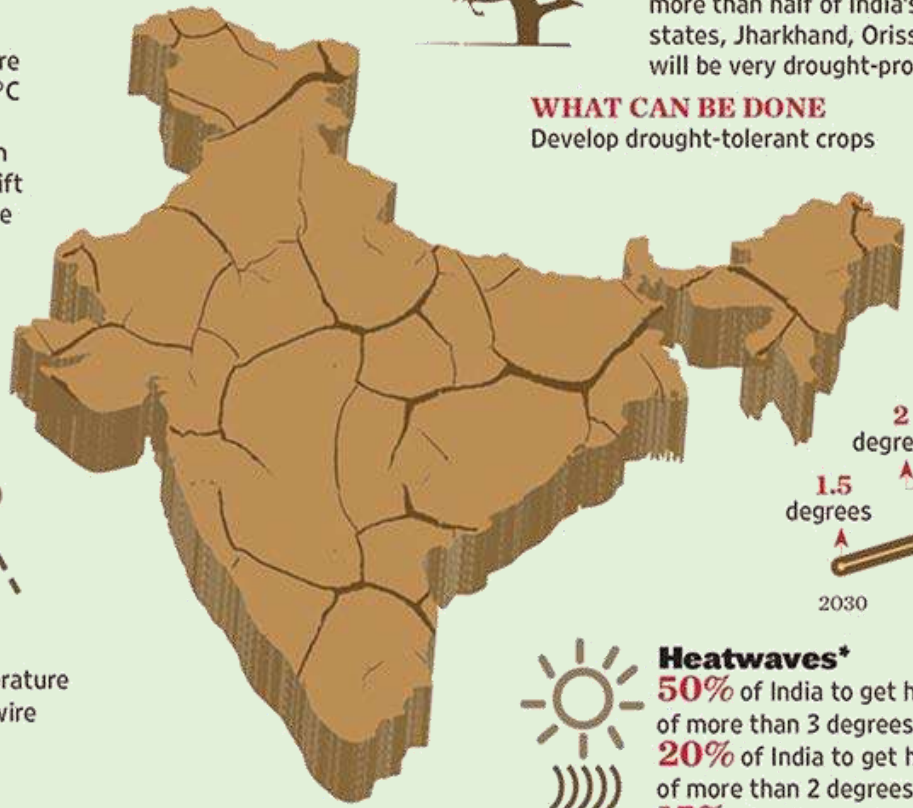
Droughts

WHAT WE KNOW

In 1987, 2002-2003 and 2009 droughts gripped more than half of India's sown area. Western states, Jharkhand, Orissa and Chhattisgarh will be very drought-prone

WHAT CAN BE DONE

Develop drought-tolerant crops



Rainfall

WHAT WE KNOW

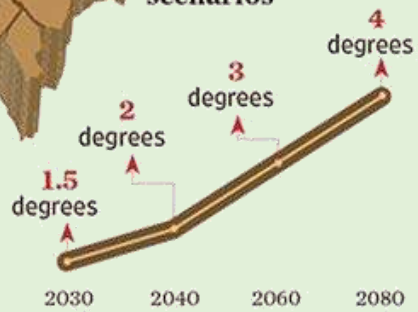
A decline in monsoon rainfall since the 1950s has happened.

A 2°C rise in global average temperature will make India's monsoon go haywire

WHAT CAN BE DONE

Boost hydro-meteorological systems to conserve water

Projections* India Warming scenarios



Heatwaves*

50% of India to get heatwaves of more than 3 degrees

20% of India to get heatwaves of more than 2 degrees

15% of India to witness heatwaves of more than 1.5 degrees

* In the absence of climate change solutions

Source: MoEF, IPCC, World Bank

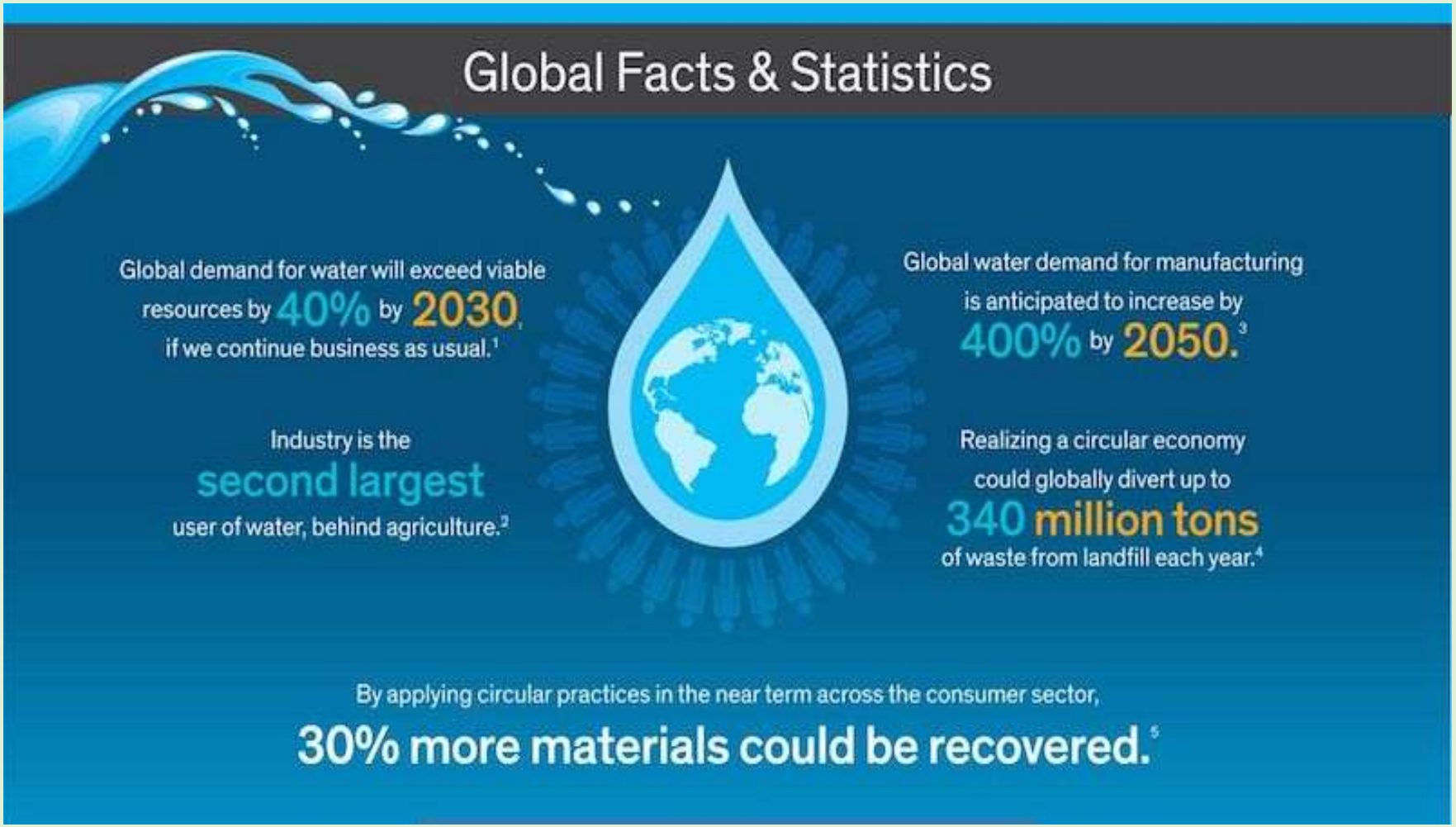
Source: https://www.team-bhp.com/forum/shifting-gears/221546-climate-change-impact-india-world.html

The Global Risks Report 2022

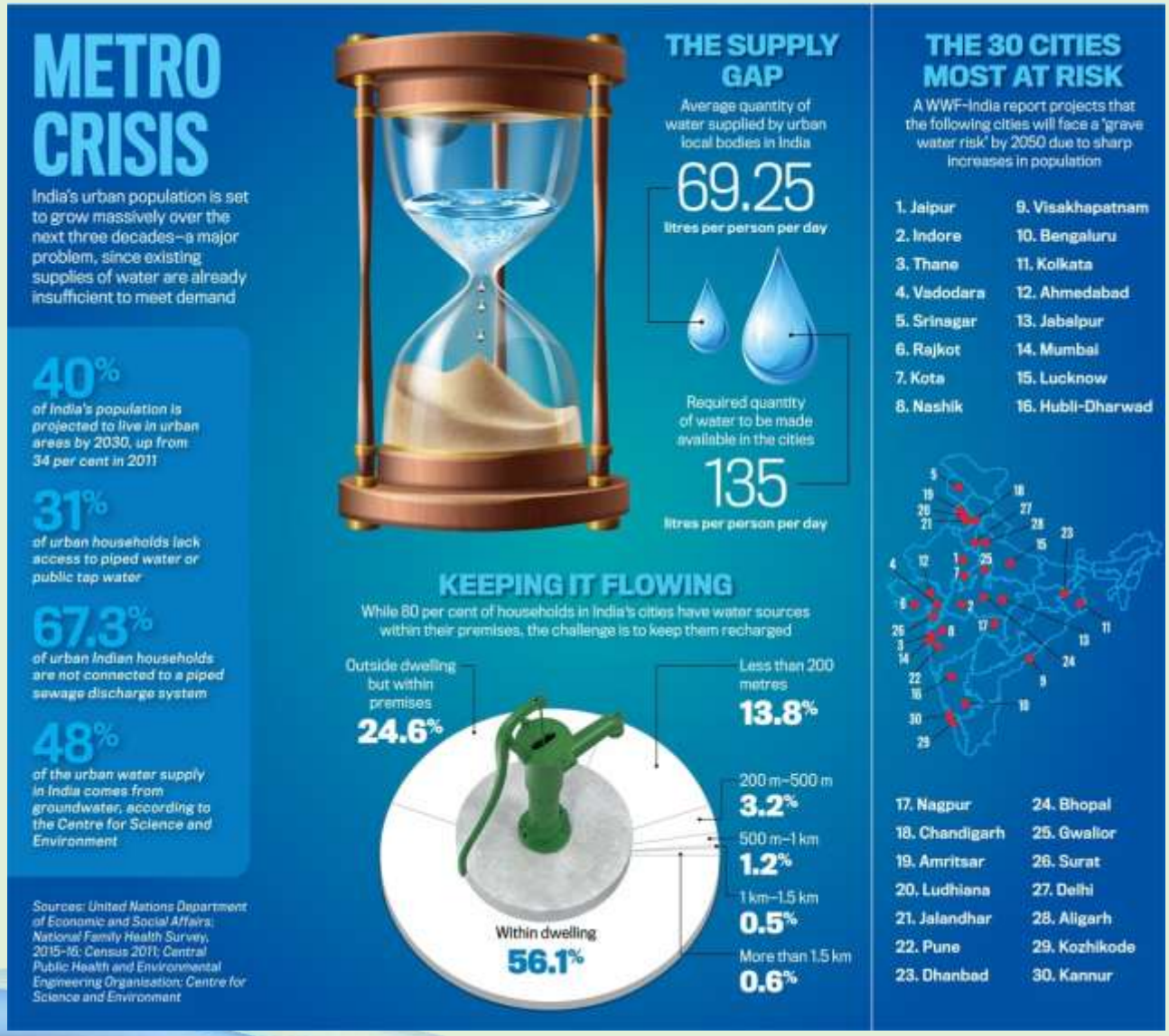
Source: weforum.org

Crisis or a Rising Opportunity

Increasing Global Demand



Urban Water Crisis



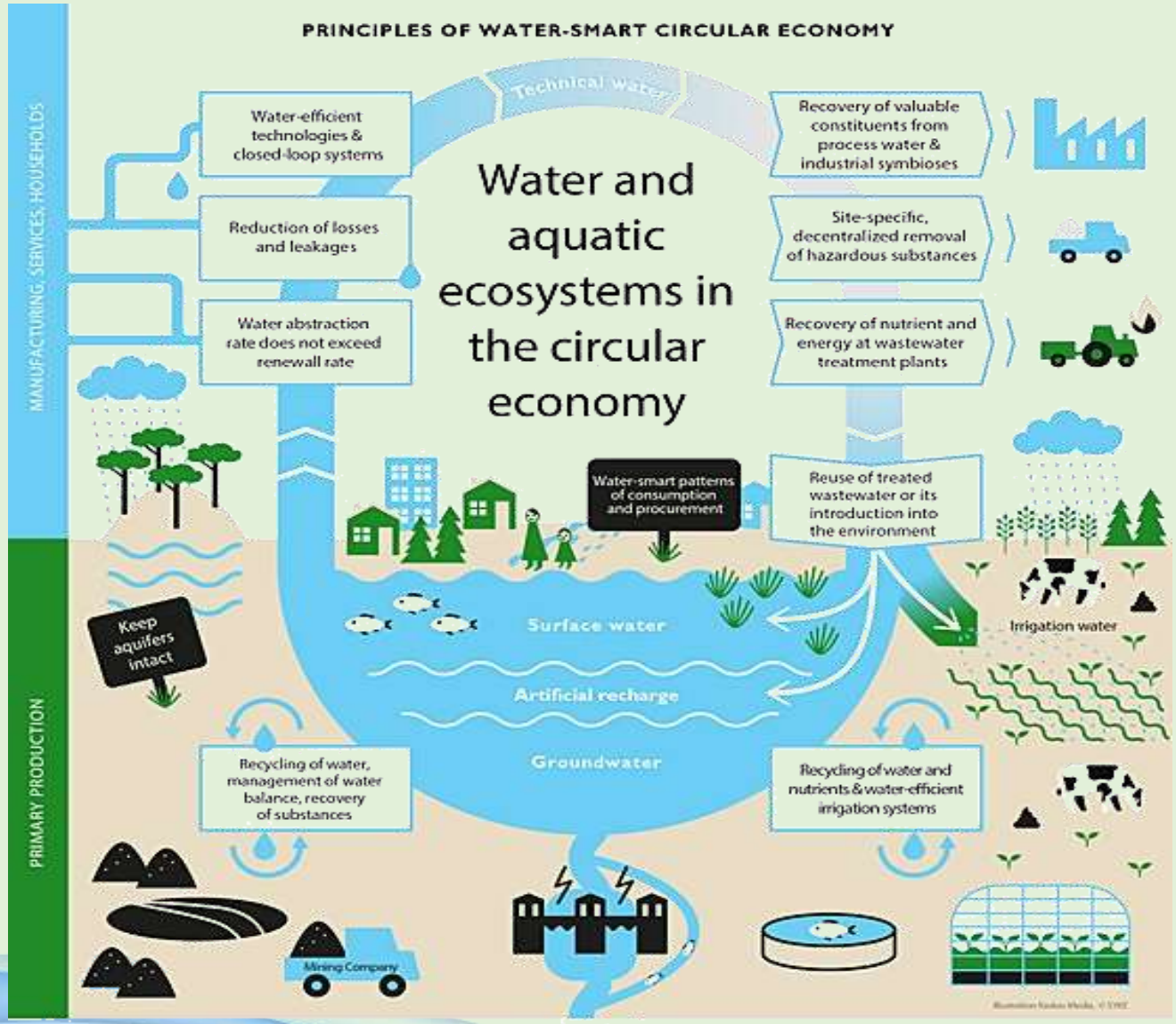
Source: https://www.indiatoday.in/magazine/nation/story/20210329-the-cities-of-woe-1781275-2021-03-20

An Opportunity or A Crisis

- "You never let a serious crisis go to waste. And what I mean by that it's an opportunity to do things you think you could not do before." - Rahm Emanuel, former White House Chief of Staff

- “Crises can act as catalysts for corporates, governments, and broader society to focus on building resilient water systems. We continue to watch the Cape Town crisis to understand how this event might create opportunities for water-focused investors in the near term.” - Sebastian Vanderzeil, Cornerstone Capital Group

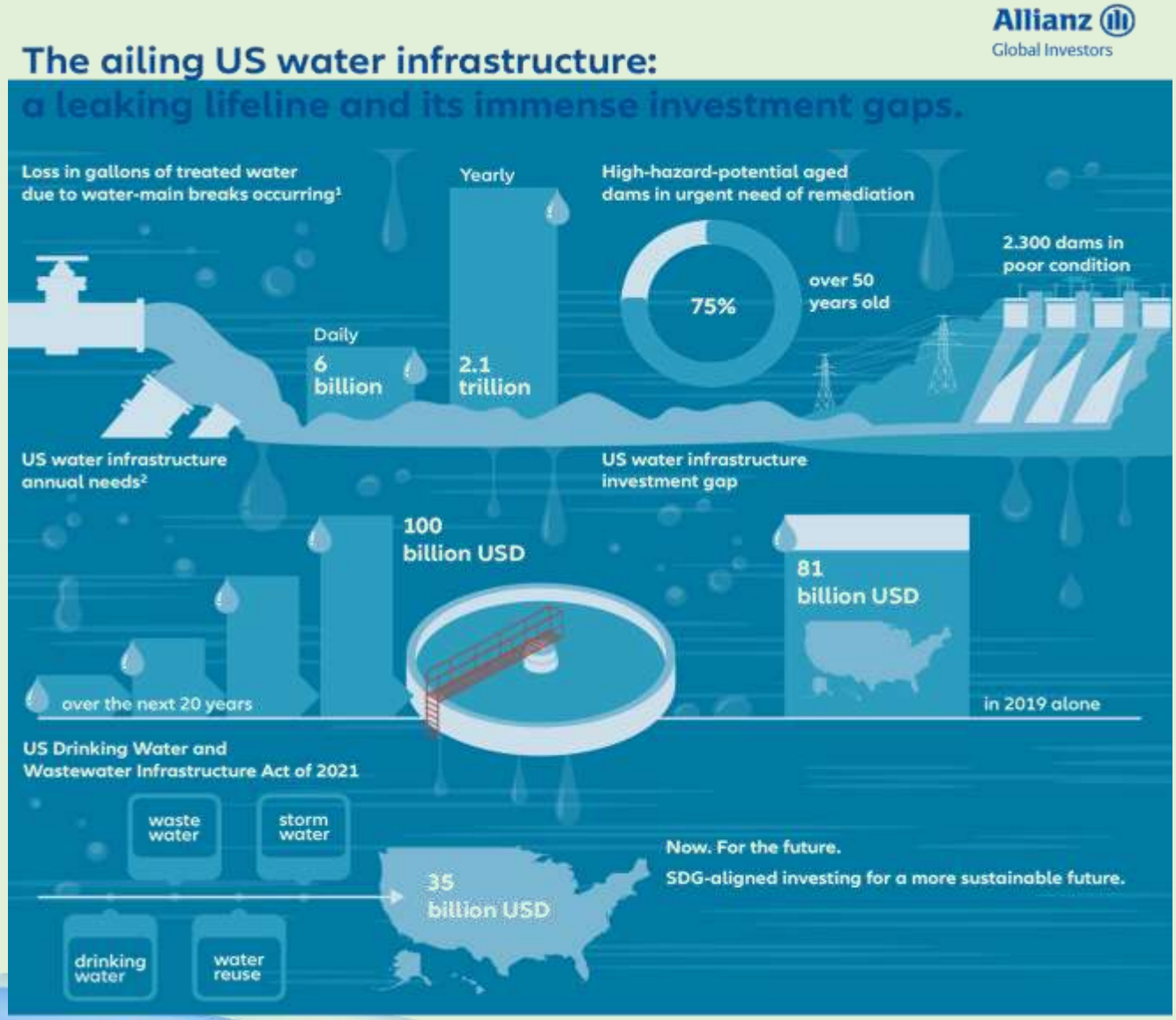
Emergence of Circular Economy



Source: https://www.syke.fi/en-US/Research__Development/Circular_economy/Water_in_circular_economy(45493)

Swelling Cost Or An Investment Opportunity

Investment Urgency

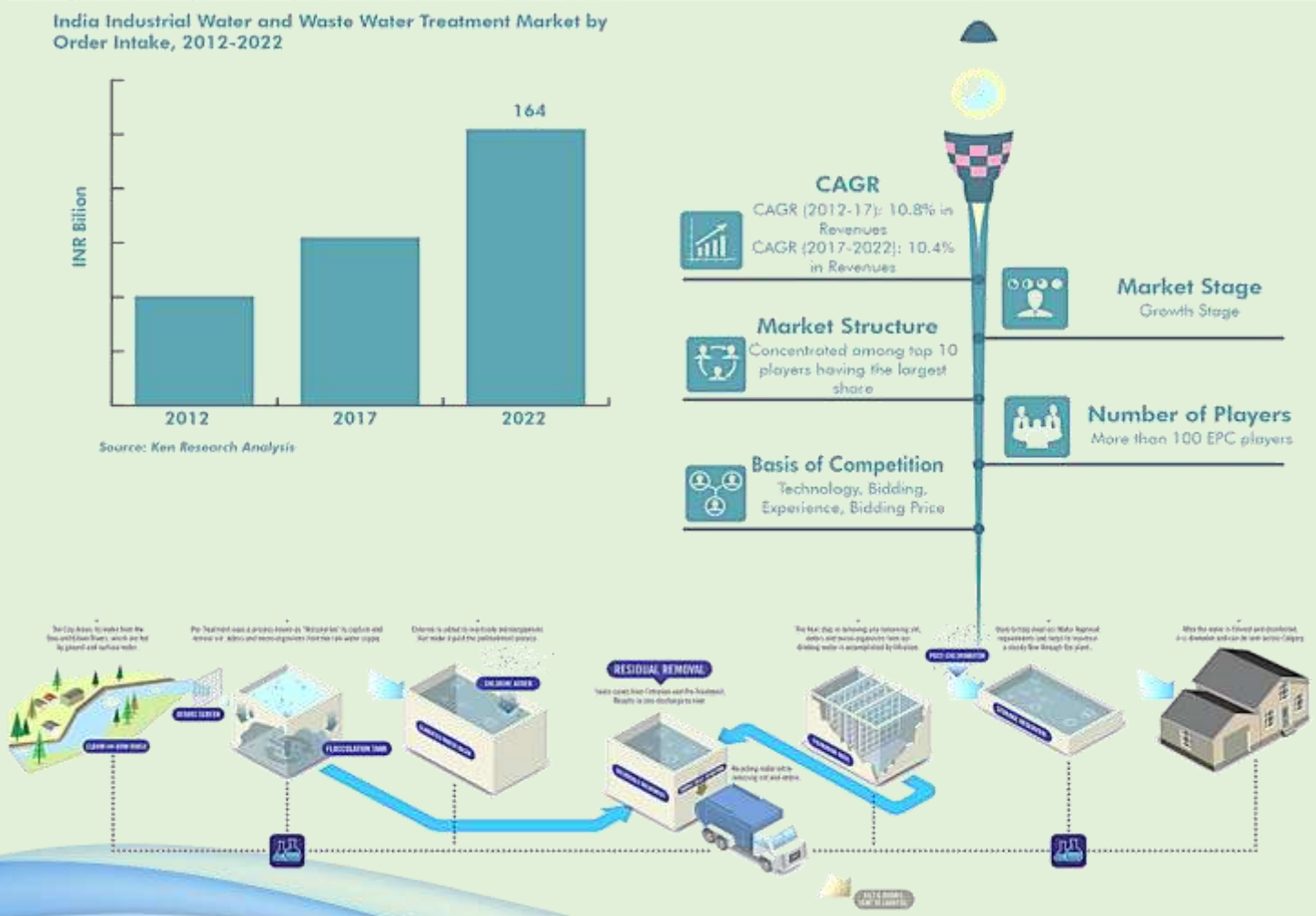


Source: https://us.allianzgi.com/en-us/offshore/sustainability/sustainable-ideas/water-infrastructure

Radical increase in water & sanitation investment

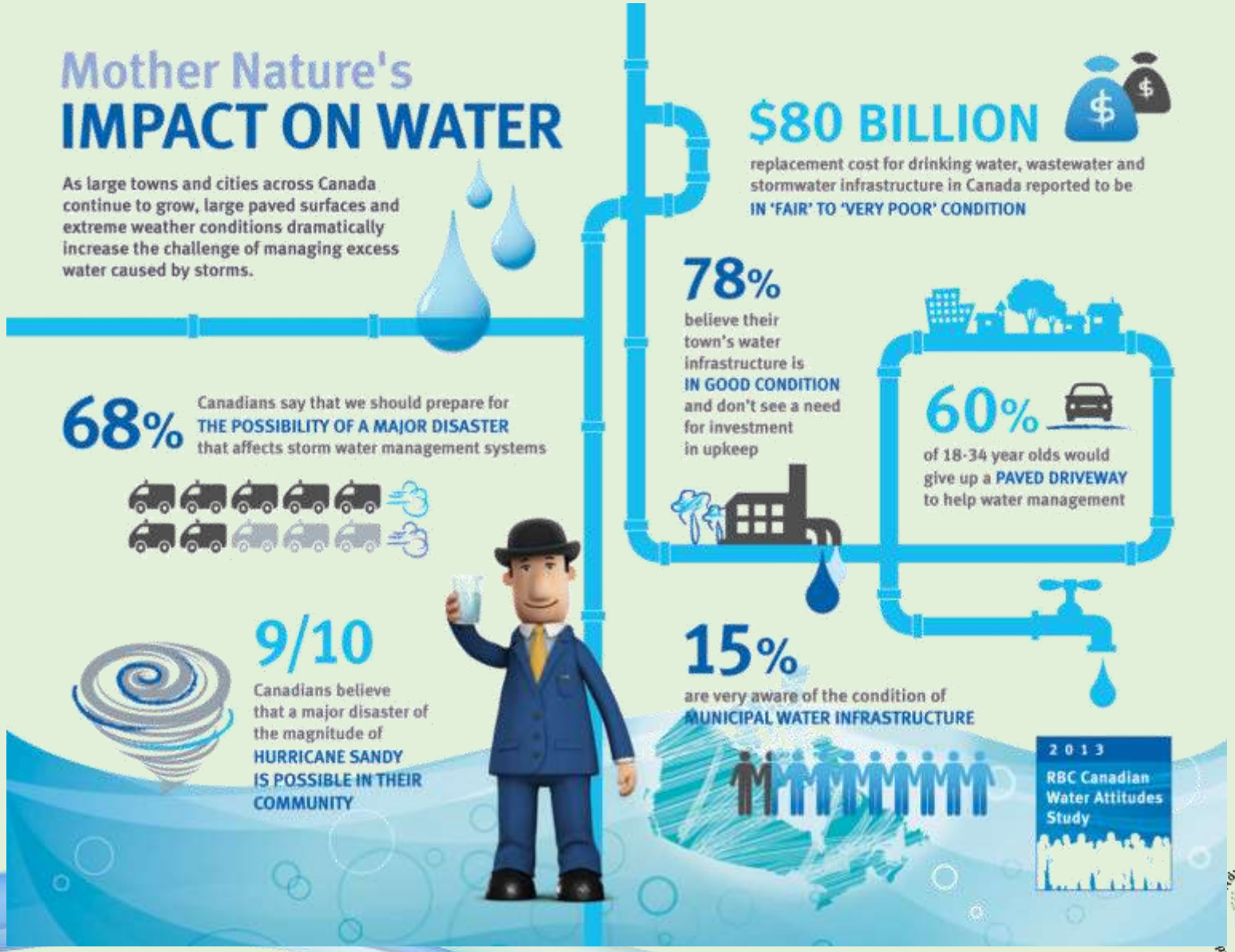
Source: https://www.who.int/news/item/13-04-2017-radical-increase-in-water-and-sanitation-investment-required-to-meet-development-targets

India Industrial Water and Waste Water Treatment Market is Expected to Reach INR 164 Billion by 2022: Ken Research.



Source: https://www.kenresearch.com/energy-and-utilities/clean-technology/india-industrial-wastewater-treatment-market/144546-103.html

Growing Similarities



Source: https://www.watercanada.net/be-prepared-but-not-right-now-public-on-overloaded-stormwater-systems/

Demand≡Opportunity

Attractive Opportunities in the Wastewater Treatment Services Market

Increasing growth of food, pulp & paper and chemical industry are attributed to increase the demand for wastewater treatment services in APAC

53.0 USD Billion 2021-e

71.6 USD Billion 2026-p

CAGR of 6.2%

In terms of value, the wastewater treatment services market is projected to reach 71.6 USD billion by 2026, registering a CAGR of 6.2% during the forecast period.

The global market growth is attributed to increasing adoption of environmental regulations

New product launches may offer lucrative opportunities for market players in the next five years.

Rise in power generation industry is attributed to increase the demand for plastic additives within automotive industry

Source: https://www.marketsandmarkets.com/Market-Reports/wastewater-treatment-service-market-38039841.html

Why Invest in Water

- **Underserviced basic need**: fixed supply for increasing demand.
- Investing in **water supply chain**: efficiency, treatment, delivery or recycling vectors.
- The increase **need for solutions** are strong fundamental investment drivers in the long-run.
- **Segmented sector**: stand-alone performance drivers in Utilities, Industrials, Technologies and Infrastructure.
- **Wide array of funds** with different strategies and ESG overlays.
- These funds invests through **global listed equities**. This allocation can fit in a traditional equity portfolio.
- **ESG Investment at its core**. Investment bring solutions to water scarcity, efficiency and quality challenges.

Source: https://www.whitestaginvesting.com/

Water Trading

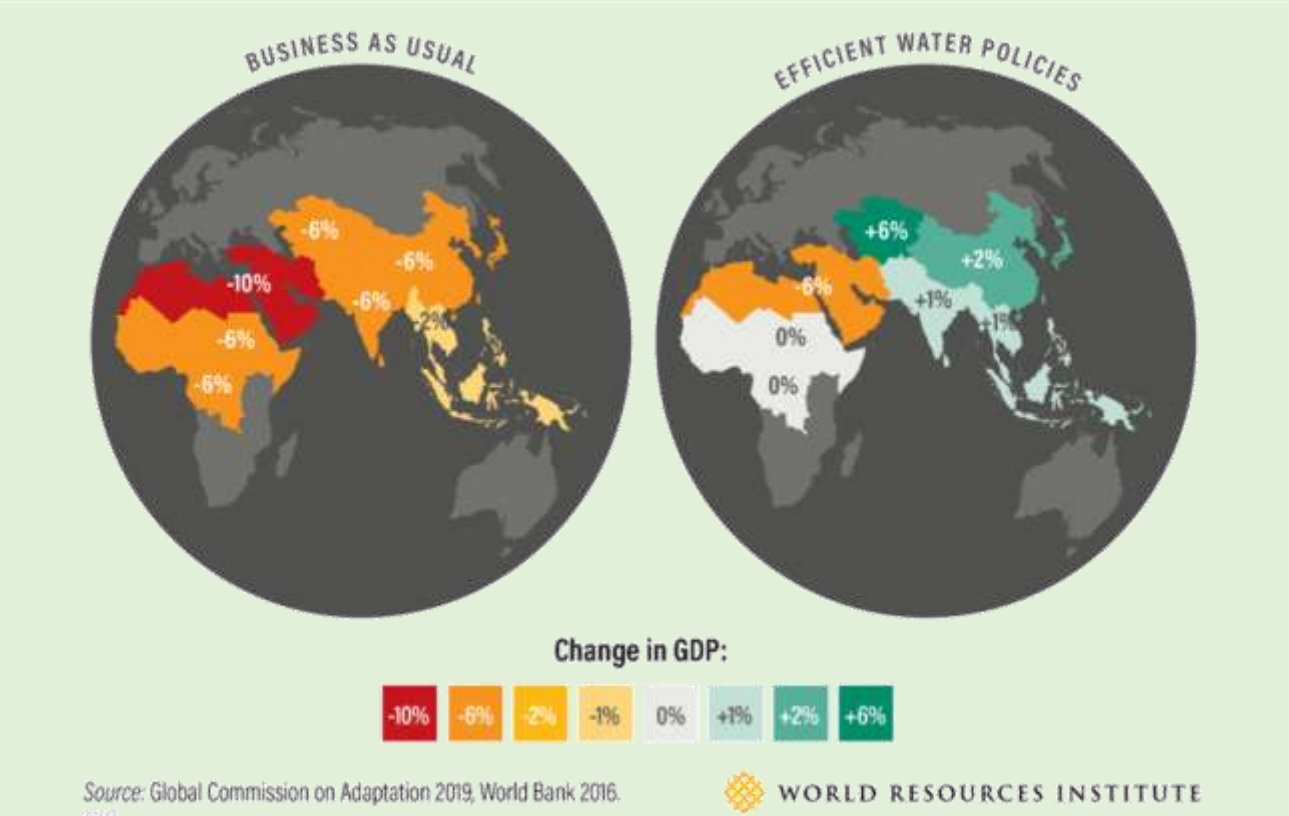
Exchange Traded Funds

Water-themed Exchange Traded Funds (ETFs) provide investors access to a wide variety of stocks in the water industry, including water utilities, infrastructure, equipment and materials companies.

ETF	Invesco Water Resources ETF	First Trust Water ETF	Invesco Global Water ETF
Ticker	PHO	FIW	PIO
Exchange	NASDAQ	NYSE Arca	NASDAQ
AUM	USD 1.06 billion	USD 488.85 million	USD 202.8 million
Expense Ratio	0.60%	0.55%	0.75%
Number of Holdings	36	36	49
Top 3 Holdings	• Danaher Corp (NYSE: DHR) • Roper Technologies Inc (NYSE: ROP) • Ecolab Inc (NYSE: ECL)	• IDEXX Laboratories Inc (NASDAQ: IDXX) • Danaher Corp (NYSE: DHR) • Agilent Technologies Inc (NYSE: A)	• Danaher Corp (NYSE: DHR) • Geberit AG (SW: GEBN) • Ecolab Inc (NYSE: ECL)

Source: https://www.poems.com.sg/

Projected GDP Change by 2050



- Research indicated that securing water for our societies by 2030 could cost just over **1% of global GDP** — about 29 cents per person, per day from 2015-2030.
- **Every dollar** invested in water access and sanitation yields an **average $6.80** in returns. The World Bank found that failing to implement better water management policies could result in regional **GDP losses from 2-10%** by 2050.

Source: https://www.wri.org/

Innovation, Scaling Up & Smart Economy

- There is an urgent need to make **alternative water resources** available for different functions and multiple users.
- Prospect of a **'water smart' economy and society** in which all available water resources are managed in such a way as to avoid water scarcity and pollution, increase **resilience to climate change**, appropriately manage water-related risks, and ensure that all valuable substances that could be obtained from waste water treatment processes, or are embedded in used water streams, are recovered.

Entrepreneurship and Employment Opportunities

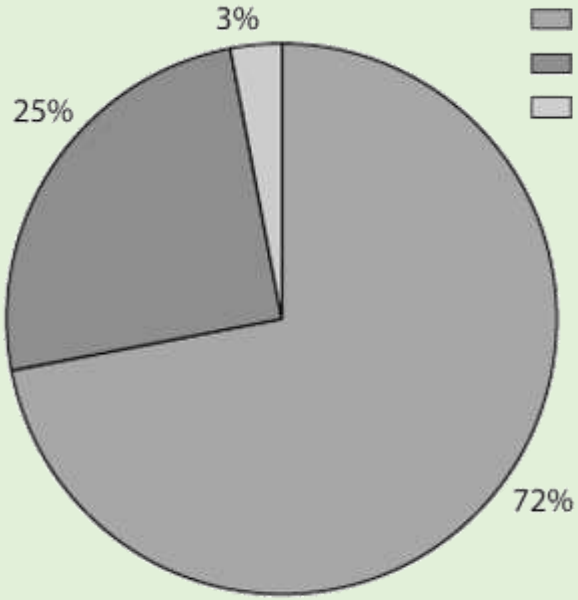
- Investment in small-scale projects providing access to safe water and basic sanitation in Africa could offer an estimated economic return of about **US$28.4 billion** a year.

- Such investments also seem to have a beneficial effect on employment. In the United States, every **US$1 million** invested in the country's traditional water supply and treatment infrastructure generates between 10 and 20 additional jobs.

- Meanwhile, the U.S. Department of Commerce's Bureau of Economic Analysis found that **each job** created in the local water and wastewater industry creates **3.68 indirect jobs** in the national economy.

- Another study in Latin America found that investing **US$1 billion** in expanding the water supply and sanitation network would directly result in 100 000 jobs.

The Rise of Social Enterprises



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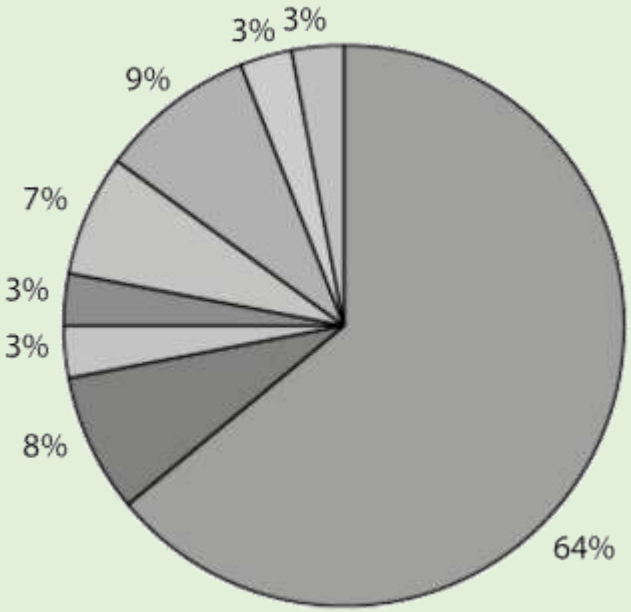
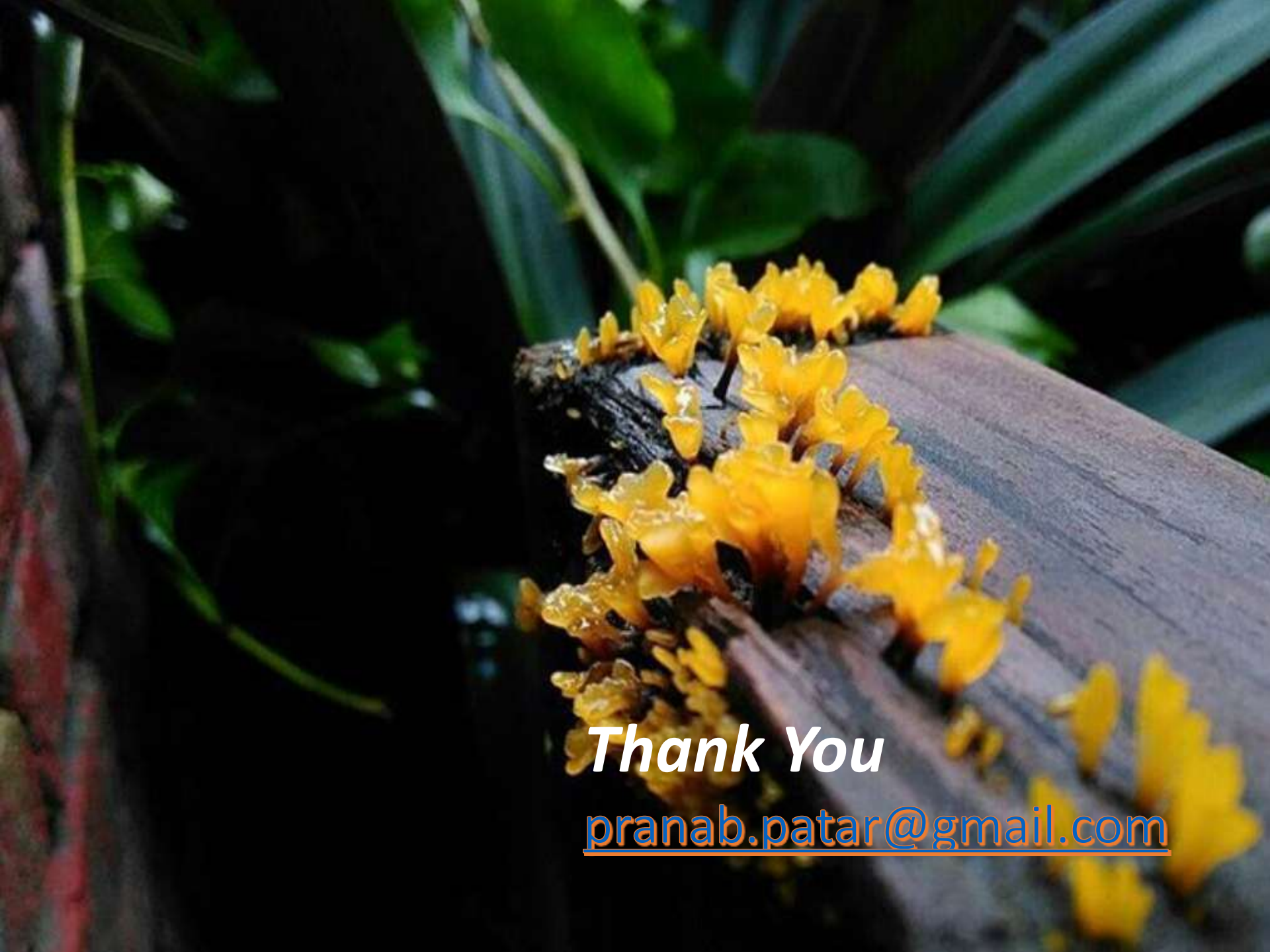


Source:
https://www.researchgate.net/publication/322155956_New_generation_of_social_entrepreneurs_Exploratory_research_and_cross_case_study_analysis_of_new_generation_of_social_enterprises


Thank You
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