

GREEN-ing INAF's habits

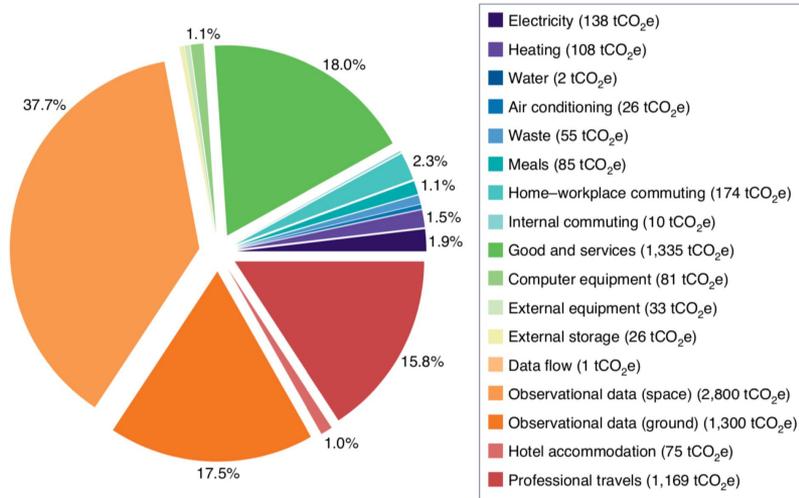
Online surveys applied to sustainable mobility

**Gruppo di Riqualificazione Ecologica ed ENergetica (INAF-GREEN)
& INAF's Mobility Managers**

Giovanni Bruno (OAct), Francesca R. Porta, Liana De Filippis, Elisabetta Bartone, Valentina D'Orazi, Leo Girardi, Dario Mancini, Mario Pepe, Richard Smart, Cristiana Spingola, Alessandro Barucci, Alessandro Bemporad, Simone Benedetti, Giacomo Bonnoli, Flavia Calderone, Maria Teresa Caria, Enrico Cascone, Federico Gasparo, Florin Vasile Goia, Elisabetta Liuzzo, Francesca Mangano, Martino Marelli, Rosalba Mattei, Alessandro Mura, Serena Pastore, Filomena Schiavone, Antonio Semola

Why?

- Significant environmental footprint of astronomical research
- Largest contribution: infrastructures: > 1000 kt CO₂e/yr ([Knödlseeder+2022, Nature](#))
- Growing literature, international working groups are gaining momentum (e.g. [Astronomers for Planet Earth](#))



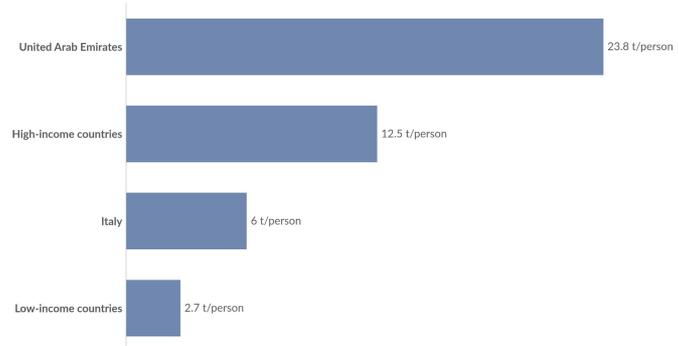
Distribution of IRAP's greenhouse gas emissions by source for the year 2019 ([Martin+2022](#))

Average: ~ 28 tCO₂e/year/person

Per capita greenhouse gas emissions, 2024

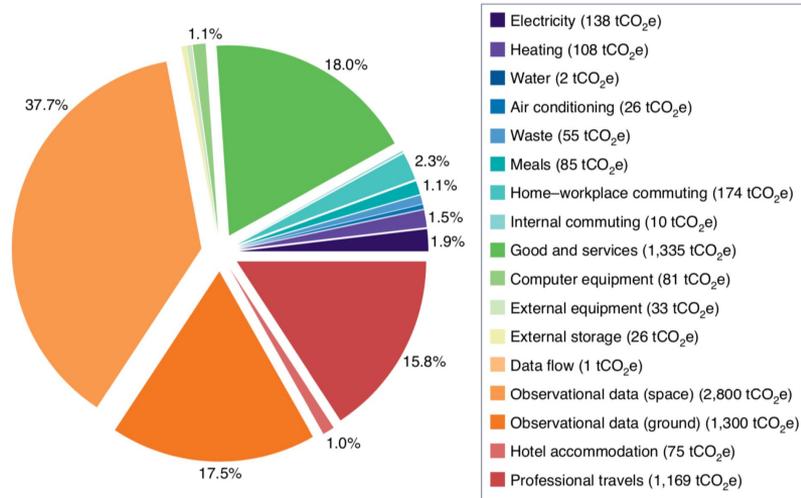
Greenhouse gas emissions include carbon dioxide, methane and nitrous oxide from all sources, including land-use change. They are measured in tonnes of carbon dioxide-equivalents over a 100-year timescale.

Our World In Data



What can we do?

- Systematic assessment of the impact of our activities (e.g. [ESO](#), [ESA](#))
- Study of optimisation strategies



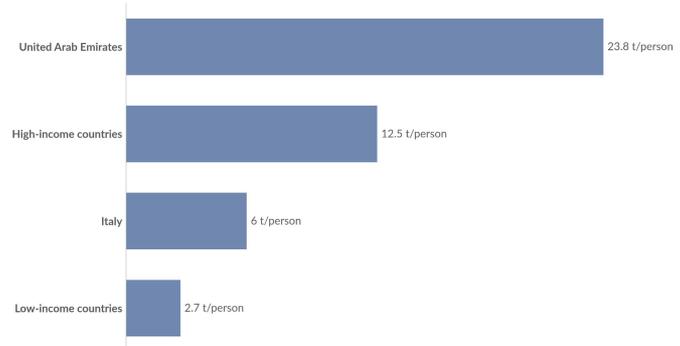
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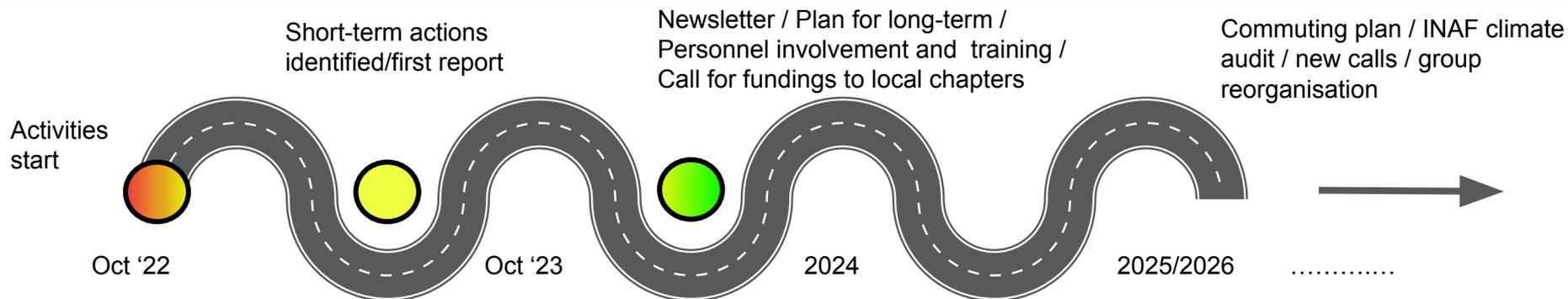
Our World In Data



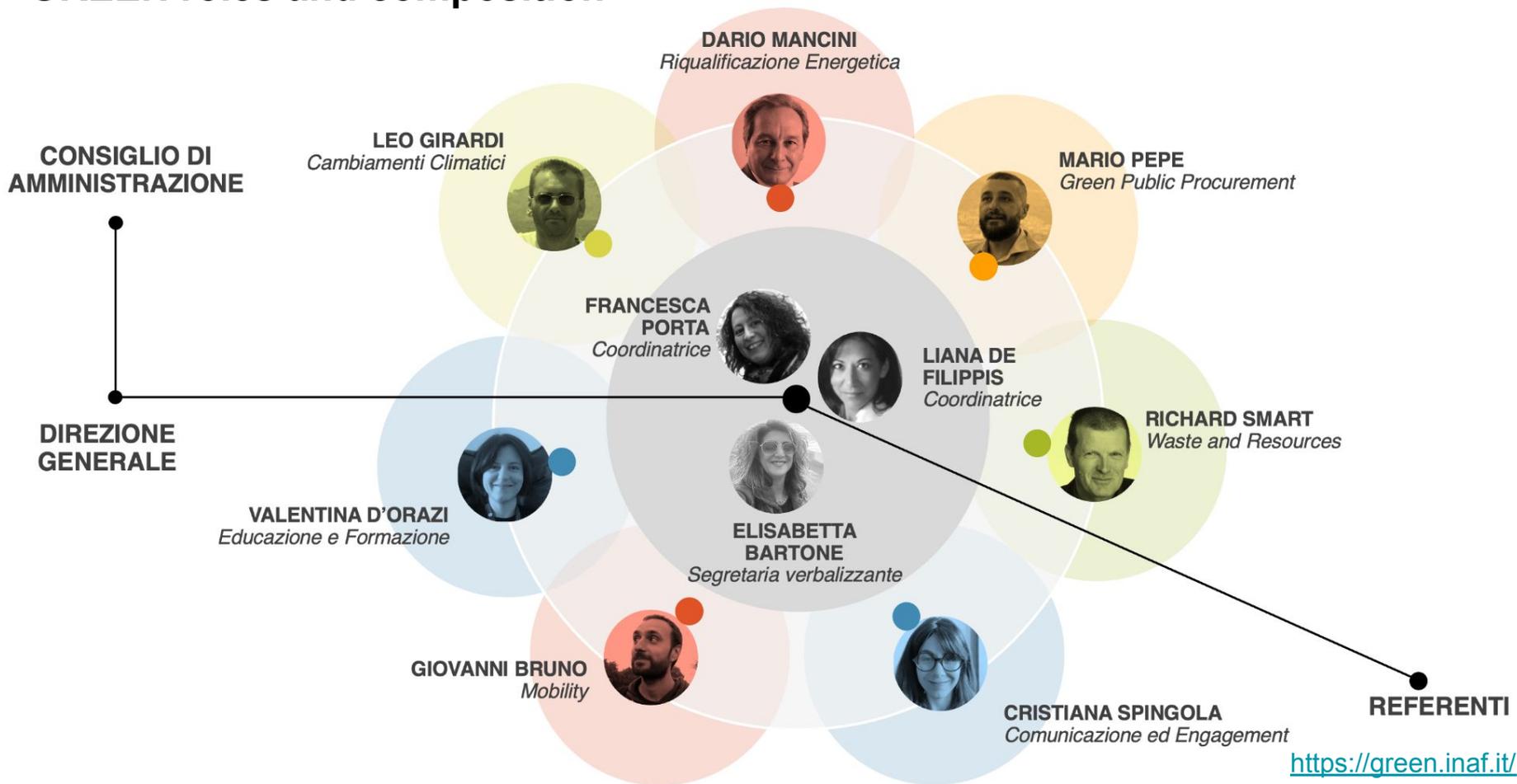
INAF permanent group for Green Actions

(First meeting in Oct 2022, formalised by “Determina” DG in Feb 2023)

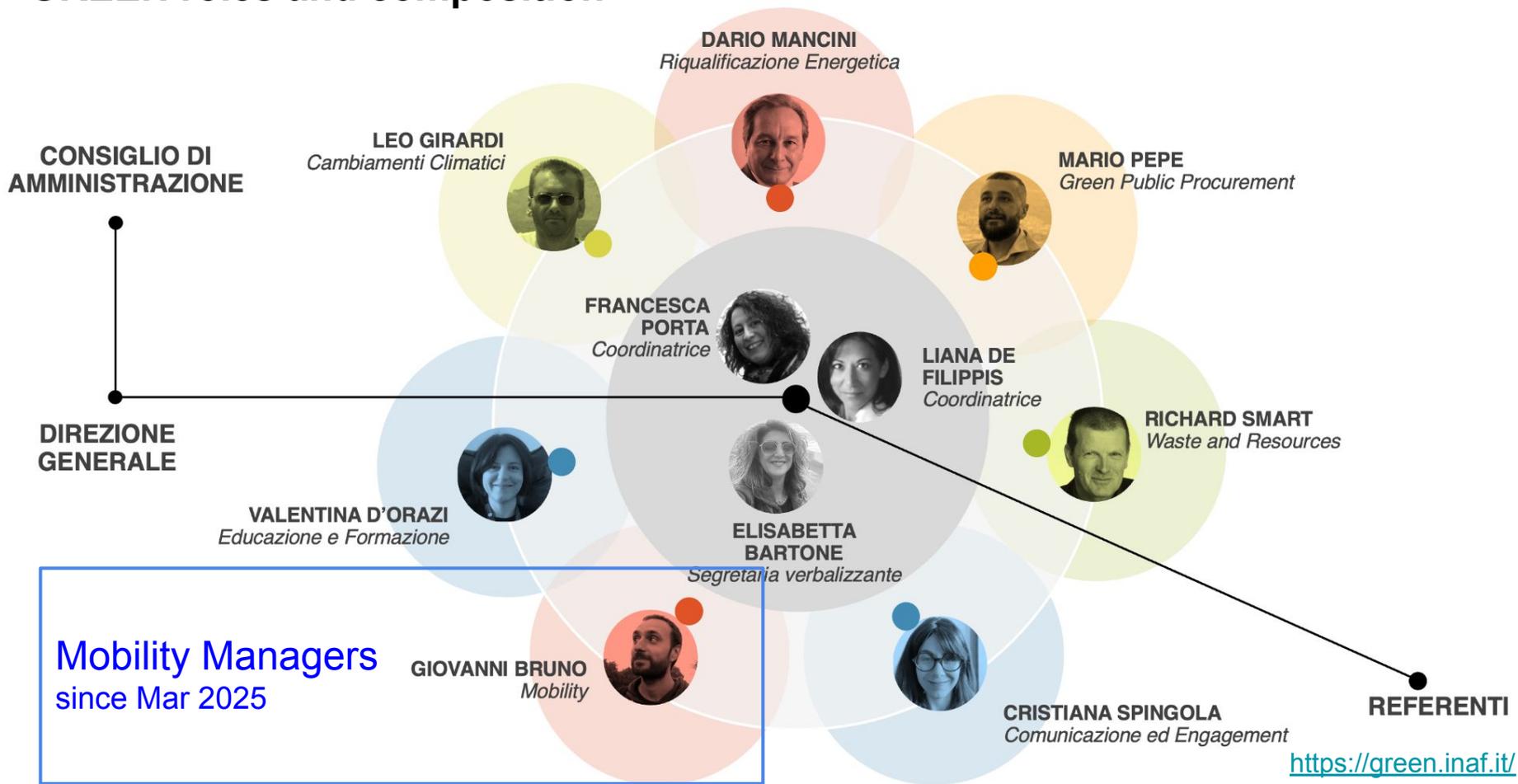
- Define positive actions to protect environment and promote energy efficiency
- Yearly report + operational programme for DG and INAF board of directors
- Goals:
 1. Identifying short-, medium-, and long-term actions and their priority
 2. Feasibility and cost estimates (e.g. upgrades on infrastructures)
- Budget assigned by INAF board



GREEN roles and composition



GREEN roles and composition



Mobility topics

Home-workplace commute

- A Mobility Manager for every institute
- A commuting plan for institutes with > 100 people
- Encouraging sustainable commuting
- Charging pods for electric vehicles?
- Supporting smart working



Work-related travel

- Supporting alternatives to short-haul flights and related best practices
- Promoting hybrid/remote meetings
- Monitoring impact in CO₂eq



Home-workplace commute



- 17-people WG coordinated by GREEN member
- Effort to adapt to [Italian law](#)
- Remote-only collaboration (like GREEN) with established tools
 - Online meetings and mostly-online training
 - Shared documents and presentations → always up-to-date
 - Shared, upgradeable and repeatable survey



- $CO_2e/km/person$ estimates
- Major issues that require use of private car
 - Lack of alternative infrastructure
 - Insufficient safety
- Time slots with largest intervention needs

Home-workplace commute



- Local presentation but unique collection of results
 - Specific and general results
- Data for 37% of staff, analysis just started
 - Data aggregation following public reports
 - “Classic” + AI analysis comparison
- Coordination with institute Directors + Municipality
- Yearly follow-up



Remote-only collaboration: a case study



- A common collaboration platform
- Easy access
 - Mailing list
 - Material in the cloud
 - Consistent platform for meetings
- Keep data secure
- Asynchronous work
- Multifaceted communication (mail, video calls, phone calls)

Privacy/other concerns: platform choice

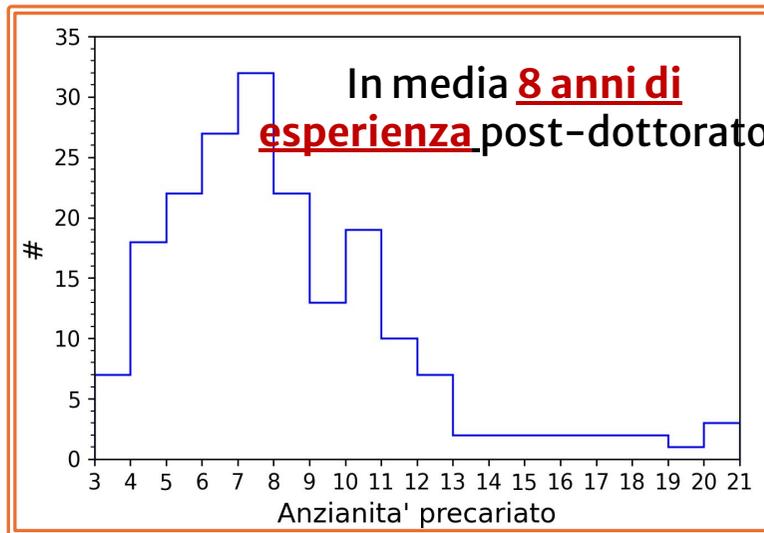
- We all know we are not



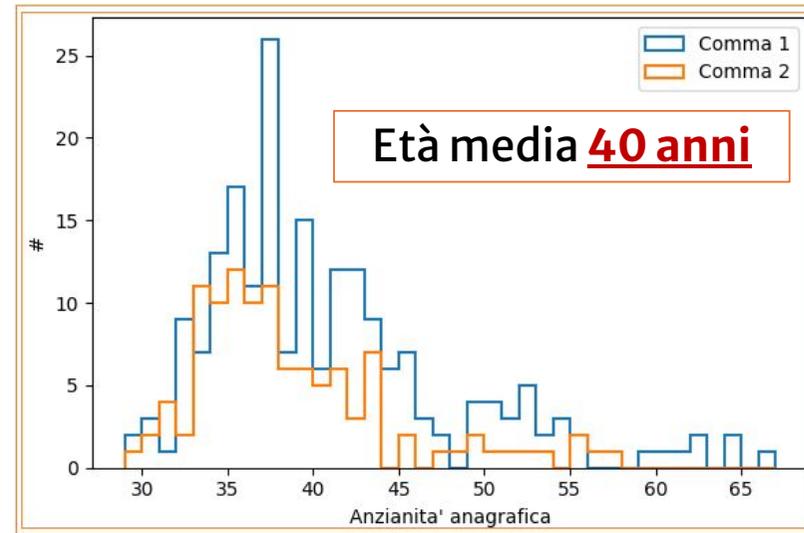
(I'm sorry I'm not there)

La situazione del personale precario in INAF è **INSOSTENIBILE!**

1.200 Tempo Indeterminato Vs **650** precari: più di 1 precario ogni 2 persone di ruolo



Plot di un campione rappresentativo dei precari INAF al 31/12/2024



Dei **650**, **287** possono essere stabilizzati:
173 tramite chiamata diretta (comma 1)
114 tramite concorsi riservati (comma 2)

Entro l'anno, l'attuale situazione determinerà l'esodo di > 100 lavoratori altamente qualificati e il MUR se ne lava le mani

È **URGENTE** che INAF **PROCEDA ORA** con le **STABILIZZAZIONI TRAMITE MADIA**: unica soluzione per questa emergenza



Molti colleghi (972) hanno già firmato, per sostenerci e aggiungere il nome alla lista del QR,
contattaci a retestabilizzandi1.inaf@gmail.com

