## IAE Sustainability Commission

Institute for Economic Analysis (IAE-CSIC) 2<sup>nd</sup> Environmental Action Plan: February 12, 2024

## Mitigating our environmental impact:

2<sup>nd</sup> Environmental Action Plan (2024-2027)

The world faces an unprecedented set of environmental threats, from climate change and biodiversity loss to water and air pollution, and resource depletion. These challenges not only jeopardize the health and well-being of current and future generations but also pose significant risks to global economic stability and prosperity. The CSIC, as a large research institution, and specifically, the IAE, as an economic research center, recognizes its responsibility to contribute to efforts aimed at mitigating these threats and fostering a more sustainable and resilient future.

In November 10, 2021 we had the first meeting of the IAE sustainability committee. An action plan was elaborated with several actions to be implemented during the next years to reduce the environmental impact of the institute and thereby contribute to improving the CSIC's environmental performance.

We present the Environmental Action Plan for the period 2024 to 2027 for the IAE. This plan is a follow-up of the actions proposed there, as well as new actions with the objective of minimizing the environmental impact of the institute. Approaching net zero carbon emissions, following the European objective of achieving climate-neutrality by 2050 is a central objective. In this sense, energy consumption plays a key role since that is the biggest cause of environmental impact by an economics research institute such as the IAE. Decarbonization of economies is one of the main environmental challenges over the coming years, and directly linked with global warming and climate change. However, we want to also implement other measures to address other environmental impacts and reach a more sustainable path. These measures include the minimization of resource use and improved waste management to reduce the environmental load generated by our daily activities.

We list the different measures we proposed in 2021, with a description of the different actions carried out and their results or potential outcomes. Besides, we also propose new measures and actions for the next 3 year period. We set different levels for measures:

## CSIC level: building & institutional resources use:

Actions which need to be reconsidered and/or discussed with CSIC:

- Energy efficiency/self-consumption of our building. E.g., awnings (toldos) on sunny side of building, solar panels, and green-roof (<u>https://en.wikipedia.org/wiki/Green\_roof</u>), as at the ICTA-UAB building). These are key measures to reduce energy consumption, as well as to reduce our environmental impact, by reducing the carbon footprint of the Institute of Economic Analysis (IAE-CSIC). The following actions will be specifically proposed:
  - The installation of photovoltaic solar panels on the roof of the institute, which is now disused, would allow energy self-sufficiency, avoiding CO<sub>2</sub> emissions from other conventional (fossil) energy sources, and at the same time, would drastically reduce the electricity bill. Likewise, on days or periods in which all of the generated electricity is not consumed, it allows obtaining extraordinary incomes from the sale of the excess generated electricity to the electrical grid.
  - As an alternative to solar panels, we had considered the installation of a green roof would allow better regulation of the building's temperature, reducing energy needs. However, we decided that the possible costs and time required make it inviable in the short-term and that solar panels were a wiser use of the available space.
  - Our first priority is to install insulation panels on the sunny side of the building. The building's green glass walls make it extremely hot in certain offices on that side during the summer. This causes high air-conditioning costs, which substantially increase the environmental impact of our building. Panel installation is a relatively low-cost solution and we have identified a company that can carry out the work. (Additionally, we have a lead for finding a second, possibly cheaper, option). This will produce financial

savings in the relatively short-run, as well as being a vital step for environmental reasons.

- In addition, the installation of awnings on the windows most directly exposed to the sun, these being those that have a south-east and south-west orientation. These awnings would provide a significant reduction in energy needs in the warmest months of the year.
- 2. Green supply criteria (e.g., add environmental requirement in electricity procurement, promote train options in travel when *BCD Travel*'s contract is up for renewal, check green criteria in supplies provision, for appliances check efficiency labels, etc.): we have improved the environmental awareness by informing different departments and particularly, supply and purchasing heads of the institute. We have increased the green supplies during this period, but still there is room for improvement. The next specific actions in this sense will be oriented to reinforce the need of green supply with the heads of supply and purchasing of the institute:
  - Inform suppliers that the institute is determined to acquire green supplies, acquiring supplies with Ecolabeling when possible.
  - Make awareness and promotion of sustainable mobility in the travels of the members of the institute (inform travel agencies). This will be made by the department of supplies when directly managing travel arrangements of the members of the institute.
  - Assess the possibility of being supplied by renewable power supply instead of current supplier (this is compatible with point 1 of this plan).
- 3. Resource use (e.g., post-covid, consider hot air dryers instead of paper): the environmental impact of this action will be better assessed after the consideration of point 1 and 2 of this section, as energy self-consumption or renewable energy supply could move the preference towards hot air dryers. This action will be considered in future sustainability plans.

4. Water recycling Toilets: check the possibility to install toilets that use greywater directly from the sink in the future, when bathrooms need to be updated.

## Individual level as well as IAE recommendations and information:

In this section we proposed a set of individual measures and actions to reduce the environmental impact of the institute. Here we evaluate the results of these measures so far, and propose new ones:

- 3R's as a general rule for resource use: Reduce, Reuse, Recycle (in that order): we need to increase the awareness on this. Next actions will be posting new signs and posters, and placing them in salient locations around the institute. The recycling bins are widely used. In response to frequent questions owing to differing advice about the plastics bin: we suggest people put hard plastics as well as plasticated containers such as juice cartons into the yellow plastic recycling bins, but not thin plastic bags.
- 2. Thermostats: following several general recommendations of public institutions: Heat to 19-21°C in winter, A/C cool to 24-26°C in summer: we plan to post signs in each office in the institute next to the thermostat to alert the users the accepted temperature ranges. Outside the offices, we have also talked to reception and cleaning personnel in order to keep them informed on this temperatures policy. The result of this action has been reasonable, as most of workers of the institute have followed the recommendations. We will update the signs during the period of this plan to reinforce this action as heating is the most important source of energy consumption. One area for improvement: We request those who put the thermostat at 23° in the dining area to recall the suggested 19-21° upper limit and to turn the heating off after they leave the room.
- 3. Lighting: Talk to reception to check lights, heating, AC, blinds when offices vacated: we informed reception by email and with signs to follow this recommendation. This action has also worked satisfactorily during the period, although there is room for improvement. For the next years we will reinforce the awareness through signs, and informal talks to people in charge (reception).

Another important measure related with lighting is gradually substituting bulbs towards more efficient ones: this is related with green supply measure. Some bulbs have been replaced, and more will be replaced during the next plan period.

- 4. Printers:
  - a. Use of recycled paper or print 2-sided (make 2-sided the default/predermined) on all capable printers. We set printers to reduce paper use by printing two sides. It has worked satisfactorily during the period.
  - b. Watch for excessive ink on cover pages. We have set signs next to the printers to point this out. It has also worked satisfactorily.
- 5. Plants adapted to Mediterranean weather. We already have plants along the institute that do not need much water. However, we will specifically talk to gardeners on this issue, in order to gradually substitute all plants of the institute.
- 6. Individual travel/commuting:
  - a. Promote sustainable mobility, like walking, biking, train, etc. whenever we can and place more weight on conference proximity and quality over quantity. We have been encouraging faculty and staff to come by the most environmental transport method available to them. In particular, we encourage use of the train and bicycle. Some members of the IAE have joined together to cycle to Barcelona after work.
  - Information on CO2 usage for relevant activities (driving, flying, train, electricity, gas, etc.): <u>https://www.carbonfootprint.com/calculator.aspx.</u>
    In addition, we would like to help the CSIC use its influence as far as possible to encourage Halcon viajes to include train options more readily. Some faculty have observed that they were obliged to fly even when train was perfectly feasible and greatly more environmental. This is important given that we are obliged to use *BCD Travel* services. If a more environmentally-minded travel agent could be identified, that would be excellent.

**<u>Seminars</u>**: given the importance of seminars in the environmental impact of the institute, we highlight this section.

When organizing the Bellaterra or any other seminar, and in order to be aligned with the sustainability guidelines of the IAE, the following suggestions have to be considered. These suggestions are ordered from less to more restrictive: the more restrictive the recommendation is, the better for the environment. We have made an effort to implement all of these actions, specifically by talking to organizers and funds administrators. An email was sent to them with all of these recommendations, obtaining satisfactorily results by most of them during the period. However, more efforts can be made during the next planning period.

For the next period we will explore the possibility of assigning a CO<sub>2</sub> emissions budget per seminar series, so that the organizers can make the tradeoffs themselves between speakers; and between online and in-person.

- 1. Consider coordinating the seminar with the local academic institutions (notably the UPF, but keep in mind also UB, ESADE, and IESE).
- 2. Keep in mind whether the speaker is working on topics that interest a large group of Bellaterra researchers, their visit can be beneficial to many people. Consider as well if there are also PhD students working on it, or second year courses on these issues.
- 3. Consider asking the speaker to offer a lecture/class to the PhD students or to the BSE master students.
- 4. Consider coordinating with CEMFI and UC3M, as the speaker can go by train from Barcelona to Madrid.
- 5. If the speaker is from outside Europe, consider asking the speaker whether she is traveling to give other seminars in the region. If so, please adapt the schedule of the Bellaterra Seminar to the schedule of the other seminars.
- Suggest the speakers to take better airlines as well as direct flights, even if it is more expensive. This is increasing our budget, but reducing our impact on the environment. For example, a flight from NYC to Barcelona can go from 740KgofCO2 (direct flight) to 900 Kg of CO2 (1 stop).

7. Consider offering the seminar on Zoom for those speakers from further away. For example, the US West Coast or Australia. The organizers can use the sustainability goals of the institution as an argument to invite one speaker to a seminar. To continue to improve online seminars (and foster interaction): increase interactivity by video linking a seminar room for local participants; hybrid seminars; or recycle online recorded seminars.

**<u>Research</u>**: the research we carry out in the institute can also be important to achieve sustainability, not just in the CSIC or the IAE.

- 1. Emphasize the environment and related research in dissemination and in hiring. We have improved this aspect during the period, by fostering research in environmental and ecological economics with several projects, including an ERC grant in these topics, and several publications. Besides, a Master's Degree in Energy, Climate Change, and Sustainability have been developed in the Barcelona School of Economics during the period. An important group of researchers working in environmental topics have also joined the institute during the period. We will continue fostering research in these topics during the next plan.
- 2. Encourage and support BSE environmental newsletter; an Energy Centre is planned: a very active Energy Research Group has been created during the period.