



Climate box

UNBOX IT

Climate Box

IO2 Learning Activities

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Content

Module 4: Personal Choice: Consumption and Efficiency	3
Topic 1: Energy Efficiency	5
Learning Activities	8
Unintended consequences	8
Energy routine efficiency	10
Heating routine efficiency	12
Topic 2: Consumer Choices	14
Learning Activities	16
The impact of the Domino Effect and Publicity on collective consumption practices	16
The effect of publicity, stereotypes and reward systems in influencing consumption behaviour	18
Consumption – collective problems; collective solutions	19
Topic 3: Choosing responsibly	21
Learning Activities	23
The harmful impacts of coal consumption	23
Eco-friendly heating – mission possible?	25
The future of the coal power plant	27
References	32

Module 4: Personal Choice: Consumption and Efficiency

No sane person desires to destroy the environment they live in. Environmental damage is usually a side-effect of actions that aim at making our lives safer, easier, and more-pleasant. If there were other, less damaging ways to achieve the same goals, we would gladly choose them, provided that they don't require significant sacrifices.

The starting point of environmentally conscious behaviour is the knowledge that our actions affect the world around us and come back to us. If we pollute the air, we will be the ones who have to breathe it. However, sometimes the connection between our actions and the consequences they lead to are not immediately visible. If we need to make an action that requires sacrifices immediately, but is good for us in the long term, we might doubt that it is really worth it. Electric cars sound all very well, but it can take a decade to make up the higher cost of the vehicle with the cheaper fuel. Who can afford that?

In resource consumption, though, this connection is clear. Wasting energy and water leads to higher bills and does not benefit anyone. We don't need to care about the environment first to be concerned about our costs of living. In saving resources, we help ourselves and the environment. When there is a conflict of interest, we usually rationalise away – if we cannot afford to live a 'green' life, maybe it is not that important to start with? But if we are already taking the responsible actions, why deny their impact on the environment? In helping ourselves, we are also helping the planet.

Personal resource efficiency requires knowledge of where most of the waste occurs, and of the possible ways of reducing it. It is also about consumer choices – smart choices. In the end, it is about priorities – what can I do to prevent waste? Do I insulate my home to reduce heating costs? Do I replace my coal-fired stove with an electric radiator? Do I learn some simple tips and tricks from my neighbour to cut the heating costs?

In order to become more responsible consumers, we need to be able to find out the information we require. We also need to be able to communicate with our peers, to learn from

them and to teach them. We need to be able to find support where it is available – from the governments, NGOs, friends and family. And most of all – we need to be able to think critically – to be able to understand which actions benefit both us and the environment. There are political and economic forces that try to push their own interests – for example, convincing us that we cannot do without coal. We need to make our own judgements in order to truly understand what actions serve us best.

Content:



Topic 1: Energy
Efficiency



Topic 2: Consumer
Choices



Topic 3: Choosing
responsibly

Topic 1: Energy Efficiency



Research indicates that resource and energy efficiency represent an excellent combination of eco-friendly behaviour and personal motivation. Users always have a motive to reduce their bills and would do so given the knowledge and opportunity. This unit helps them analyse several aspects of their consumer behaviour and elaborate ways they can improve their efficiency, realising a financial benefit while reducing their environmental impact.

The activities in this unit start with the realisation that actions often have unintended consequences, and when people are focused on a single goal without regard for the broader context, they often get results that are bad both for themselves and for the environment. Acknowledging that fact encourages behavioural change.

People seldom waste resources intentionally, most often they simply haven't considered there were alternatives. In the domestic sphere, there are three starting points to support responsible behaviour by providing appropriate knowledge and suggestions.

Private electricity consumption is not only very expensive, but can also be very harmful to the environment, depending on how the electricity is generated. Adopting measures from installing more efficient appliances to turning off the existing ones that are not in use is easy, and very impactful. Learners can enjoy a reduction in their electricity costs and contribute to environmental protection at the same time.

The same principles apply to home heating – it is energy-intensive and costly, and any slight efficiency measure pays off. Perhaps the situation is slightly different with water consumption – the financial impact of saving is not that great. However, water saving measures are very simple and easy to implement, they often relate to personal behaviour and do not require any investment. Personal resource efficiency is a good way to act "green". The impact of wasteful behaviour is probably most likely to be felt at the personal level, even if the climate contribution is a small one and the resource waste of large organisations or companies is disproportionately larger. The real impact on the climate requires broad awareness and ultimately determined collective action.

Methodology:

The first activity uses a hands-on exercise to stimulate personal reflection. Because of that, it is most effective in a face-to-face environment. The goal is to stimulate a self-reflection on the topic. All activities have an active discussion component. The trainer is advised to start the discussion with an example from everyday life, provoking the interest of participants. Information should ideally be elicited from the participants themselves, and only then completed by the trainer. In this way, participants are empowered to use their internal resources and seek the answers independently, with the trainer serving as a guide and an additional source of knowledge.

Learning Objectives:

- Raise awareness of the extent of resource wastage resulting from unreflective human actions. Acquire knowledge and systemise different techniques for saving on the electricity, water, and heating resources consumption.
- Adopt concrete behaviours for a more responsible resource consumption based on a proper understanding of the larger context.

Learning Materials:

 Presentation Materials: M4 – U1 – PPT2

 M4 – U1 – PPT3

Further Reading:

 U.S. Department of Energy. (2017) *Tips on Saving Money and Energy in Your Home*:
https://www.energy.gov/sites/default/files/2017/10/f37/Energy_Saver_Guide-2017-en.pdf



United nations Human Settlements Programme (2012) Going Green. A Handbook on Sustainable Housing practices in developing countries: https://www.unclearn.org/wp-content/uploads/library/going_green.pdf



One UN Climate Change Learning Partnership (UN CC:Learn). *A short course on Cities and Climate Change*: <https://unccelearn.org/course/view.php?id=21&page=overview>

Learning Activities

Activity Nr.

M4-U1-A1

Activity Name Unintended consequences

Activity Type Discovery Learning

Duration Approximately 35 minutes.

Nr. of participants Up to 20 participants

Language Level Moderate
 Progressive

Depth of information Basic (no required background knowledge)
 Advanced

Learning Objectives Increase the awareness of the participants on the tendency in many people to be goal-oriented without paying heed to the means of achieving that goal. Participants should become more aware of the reasons for their energy consumption choices, as well as their environmental impact.

Description

Step 1: Participants will each be given an A4 paper and will be asked to cut out from it the word WASTE in separate letters (one time is enough). The goal is to cut out as many letters as possible in 5 minutes. The 'winner' is the one who managed to prepare the most letters. 5 min.

Step 2: The competition is re-evaluated in light of how much paper has been wasted in the process. The true 'winner' is the participant who wasted the least amount of paper. A five-minute group discussion will be initiated, increasing the awareness of the participants on how often we do not think about the consequences of our actions when striving for a goal.

Participants could use the following questions:

- Have you ever been so focused on a goal, that you forgot about the consequences of your actions?
- Have you ever attempted to do something, only to achieve something entirely different?
- If you realise you didn't intend what you did, how easy is it to go back?

5 min.

Step 3: The participants will then split into groups of two and share with their partners instances from their daily routine where they recall energy or water being wasted.

5 min.

Step 4: Each pair will share with the rest of the group their conclusions and explain why they think their occurrence is common. They can be guided by the following questions:

- What are the reasons people waste energy or water?
- If people don't want that to happen, why don't they simply stop?
- Are there always simple solutions to this problem?

8 min.

Step 5: Practices reported by the participants will be systematised with the help of the trainer, from most impactful to the least ones. For example, leaving the water tap on all the time is very impactful, but easy to spot and not very common, while forgetting to turn a lamp off might not be very wasteful by itself, but being a common occurrence, it can pile up and lead to significant waste. The participants will then give suggestion on how these cases of waste can be avoided.

12 min.

Additional Remarks This is an introductory activity presenting a vital aspect of the climate issues we are facing today. It is highly recommended to deliver it in a live format.

Online Implementation This activity can be carried out in Zoom if the circumstances make it necessary. Participants need to present what they managed to do in **Step 1** via their cameras. Breakout rooms should be used for **Step 3** (<https://support.zoom.us/hc/en-us/articles/206476093-Enabling-breakout-rooms>).

Activity Nr.

M4-U1-A2

Activity Name Energy routine efficiency

Activity Type

- Quiz
- Story/Experience sharing

Duration Approximately 45 minutes

Nr. of participants Maximum 20 participants

Language Level

Moderate

Progressive

Depth of information

Basic (no required background knowledge)

Advanced

Learning Objectives Increase the participants' awareness on practical methods for reducing energy and water consumption and increasing daily routine efficiency.

Description

Step 1: The participants are given a quiz with nine questions (M4 - U1 - PPT2) regarding daily routine habits that consume a vital resource for basic needs – *Electricity and Water*. For each question, the trainer performs a quick survey of the group – how many participants are sharing in which of the listed behaviours. Each question is followed by a sheet with information providing the participants with various methods for increasing their energy efficiency and reducing the harmful impact of their consumption habits. Additional advice is provided at the end of the presentation.

15 min.

Step 2: After the quiz is completed, the group is divided in pairs. Each pair tries to come out with additional methods for saving on power and water use. They can use ideas from their personal experience, things they have heard/read, or try to come up with completely new ideas. Each pair presents its suggestions to the group. The trainer writes them down on a flipchart / whiteboard.

15 min.

Step 3: After all methods for saving energy and water have been presented, the group engages in an open discussion, reflecting on some of the ways they feel inclined to incorporate the knowledge they gained from this activity in their daily routine. Participants pay attention to the following questions:

- Which are the methods that require least investment?
- Which methods require a larger initial investment? How quickly do you think they will pay for themselves?
- Which methods are really simple and are easy to implement?
- If they had to pick one method to start with today, what would it be?

15 min.

Additional Remarks This activity requires the use of an additional file in PPT format.

Online Implementation This activity can be carried out in Zoom. The trainer can use the presentation provided and share it with the participants via the 'share screen' option. Work in pairs can take place in the breakout rooms.

Sources Bulgarian Agency for Sustainable Energy Development. Brochure: Advice for Energy Efficiency: https://www.seea.government.bg/documents/Broshura_AUER.pdf

Climate Box Project. Climate Education for Disadvantaged Adults. Transnational Research report.

Activity Nr.

M4-U1-A3

Activity Name Heating routine efficiency

Activity Type

- Quiz
- Story/Experience sharing

Duration Approximately 45 minutes

Nr. of participants Maximum 20 participants

Language Level

Moderate

Progressive

Depth of information

Basic (no required background knowledge)

Advanced

Description

Step 1: The participants are given a quiz with nine questions (M4 - U1 – PPT3) regarding daily routine habits that consume a vital resource for basic needs – *Heating/Cooling*. For each question, the trainer performs a quick survey of the group – how many participants are sharing in which of the listen behaviours. Each question is followed by a sheet with information providing the participants with various methods for increasing their heating efficiency and reducing the harmful impact of their consumption habits. Additional advice is provided at the end of the presentation.

Approximately 15 minutes.

Step 2: After the quiz is completed, the group is divided in pairs. Each pair tries to come out with additional methods for saving on heating and cooling their homes. They can use ideas from their personal experience, things they have heard/read, or try to come up with completely new ideas. Each pair presents its suggestions to the group. The trainer writes them down on a flipchart / whiteboard.

Approximately 15 minutes.

Step 3: After all methods for saving energy on heating and cooling have been presented, the group engages in an open discussion, reflecting on some of the ways they feel inclined to

incorporate the knowledge they gained from this activity in their daily routine. Participants pay attention to the following questions:

- Which are the methods that require least investment?
- Which methods require a larger initial investment? How quickly do you think they will pay for themselves?
- Which methods are really simple and are easy to implement?
- If they had to pick one method to start with today, what would it be?

Approximately 15 minutes.

Additional Remarks This activity requires the use of an additional file in PPT format.

Online Implementation This activity can be carried out in Zoom. The trainer can use the presentation provided and share it with the participants via the 'share screen' option. Work in pairs can take place in the breakout rooms.

Sources Bulgarian Agency for Sustainable Energy Development. Brochure: Advice for Energy Efficiency: https://www.seea.government.bg/documents/Broshura_AUER.pdf

Climate Box Project. Climate Education for Disadvantaged Adults. Transnational Research report.

Topic 2: Consumer Choices

Resources are consumed in all forms of human activity. How we proceed about our daily consumption has a considerable impact on the world around us. It is understandable that people wish to live pleasant and more comfortable lives. At the same time, however, it is important to realise one's own responsibility that goes hand in hand with consumption decisions for the environment, fellow human beings and future generations. Participants in this unit will reflect on their own consumption style and deliberate on how sustainable it is.

This unit is about looking at what factors actually influence human (consumption) behaviour. Education? The opinion on one's peers? It is a matter of habit? There are certainly no universal answers. If learners are more aware of any influencing factors in decision-making, this can positively influence not only their own behaviour, but also that of the people around them.

Methodology:

This unit relies on the active participation of all learners. This presupposes a level of interest in climate topics – some introductory activities from the other modules must be done to prepare the stage. Activity 1 and 2 are based on presentations with open questions on different observable phenomena related to collective action or consumption decisions. The presentations serve as a thread for step-by-step reflection and exchange on the participants' personal perceptions and actions in relation to the described phenomena or factors influencing consumer behaviour. They are not intended to offer definitive solutions for responsible consumer behaviour, but to arouse personal interest and provide a basis for further reflection on the topic. Differences of opinion between participants can be stimulating for the group discussion, although care should be taken to respect each other and their opinions.

Learning Objectives:

- Reflect on the environmental impact of participants' personal consumption.
- Become aware of possible factors influencing personal consumption behaviour.
- Build upon the personal example in order to influence others and achieve a more meaningful impact.

Learning Materials:



Example: Presentation Materials: M4 – U3 – PPT2



M4 – U2 – PPT3

Learning Activities

Activity Nr.

M4-U2-A1

Activity Name The impact of the Domino Effect and Publicity on collective consumption practices

Activity Type

- Storytelling
- Story/Experience sharing

Duration Maximum 60 minutes

Nr. of participants Up to 20 participants

Language Level

Moderate

Progressive

Depth of information

Basic (no required background knowledge)

Advanced

Learning Objectives Increase the participants engagement with climate issues. Make the participants aware of the ways in which collective consumption habits are influenced. Make the participants aware of different methods that affect eco-friendly culture and behaviour.

Description

Step 1: The participants will be asked to discuss four questions (M4 – U2 – PPT1), one in each step, regarding some interesting factors that might be influencing their consumption behaviour. The facilitator invites the participants to take part in a group discussion. Each participant will share with the group to what extent do they believe that a single action like buying an LED light bulb can have the positive Domino Effect on their consumption habits.

Participants share whether they think such an effect really exists and how it influences people’s behaviour. Especially important is their own point of view – if they think they will be more or less likely to follow an initial action.

15 min.

Step 2: The group moves on to discussing question two. Each participant will be invited to share their opinion on the possible contra-Domino Effect, where consumers might simply end up consuming more of a product when it is advertised as a sustainable one. Participants share whether they think such an effect really exists and how it influences people's behaviour. They will consider what they themselves are likely to do if they know a resource is less harmful for the nature.

15 min.

Step 3: The group moves on to discussing question three – regarding publicity in engaging with climate issues: would demonstrating your eco-friendly behaviour to the public make you less prone to private engagement, such as volunteering? What factors influence our private and public participation?

15 min.

Step 4: The group moves on to discussing question four – a reversed question three: Does private engagement with climate issues – doing one's part away from the public's judgmental eyes – make a person more prone to continue their eco-friendly consumption behaviour? What are the factors influencing someone to do one or the other?

15 min.

Additional Remarks	This activity requires the use of an additional file in PPT format.
Online Implementation	This activity can be carried out online without any structural changes.
Sources	Katherine White, David J. Hardisty, and Rishad Habib. The Elusive Green Consumer. Harvard Business Review. July–August 2019: https://hbr.org/2019/07/the-elusive-green-consumer

Activity Nr.

M4-U2-A2

Activity Name The effect of publicity, stereotypes and reward systems in influencing consumption behaviour

Activity Type

- Storytelling
- Story/Experience sharing

Duration Maximum 60 minutes

Nr. of participants Up to 20 participants

Language Level

Moderate

Progressive

Depth of information

Basic (no required background knowledge)

Advanced

Learning Objectives Make the participants more aware of different methods that affect eco-friendly culture and behaviour.

Description

Step 1: The participants will be asked to discuss four questions M4 – U2 – PPT2), one in each step, regarding some interesting factors that might influence their consumption behaviour. The facilitator invites the participants to take part in a group discussion. Each participant will share with the group to what extent do they believe that making people’s eco-friendly actions public is a good method for influencing the behaviour of others. Participants can share if they themselves have noticed such practices, and what is their opinion of them.

15 min.

Step 2: The group moves on to discussing question two: How inclined would they be to commit to a more sustainable consumption if they were publicly praised for their energy-efficiency efforts?

15 min.

Step 3: The group moves on to discussing question three – whether they associate eco-friendly behaviour with any sort of political ideology and if they think either individual or collective solutions are more important.

15 min.

Step 4: The group moves on to discussing question four, reflecting on whether they find themselves thinking the quality of a product is inherently reduced when it is adapted to being ecologically friendly and sustainable. Arguments must be illustrated by concrete examples.

15 min.

Additional Remarks	This activity requires the use of an additional file in PPT format.
Online Implementation	This activity can be carried out online without any structural changes.
Sources	Katherine White, David J. Hardisty, and Rishad Habib. The Elusive Green Consumer. Harvard Business Review. July–August 2019: https://hbr.org/2019/07/the-elusive-green-consumer

Activity Nr.	
M4-U2-A3	
Activity Name	Consumption – collective problems; collective solutions
Activity Type	Story/Experience sharing
Duration	Approximately 60 minutes
Nr. of participants	Up to 20 participants
Language Level	<input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Progressive
Depth of information	<input checked="" type="checkbox"/> Basic (no required background knowledge) <input type="checkbox"/> Advanced
Learning Objectives	Self-reflect on the most effective methods of saving resources. Empower participants to act as climate leaders among their peers

Stimulate reflection on the importance of taking action on climate change as a community rather than as individuals.

Description

Step 1: The participants will engage in a group discussion and share with their peers any instances in which they have shared/received information regarding consumption habits that aim at saving resources with/from their social circle. For example, some people collect rainwater and use it for watering the plants at home. Others make sure to turn off the heating while opening the windows to let fresh air come in.

10 min.

Step 2: The group will be split into pairs. Each pair will select the methods they deem most prominent and set about presenting it in an appealing way in the form of a poster. The poster should be aimed at their peers – family, friends, colleagues, and neighbours. Participants will need to consider the essence of the chosen method, what the characteristics of their target audience are, what their message will be, and how they will communicate it. They are free to enhance their presentation with any method they deem appropriate.

25 min.

Step 3: The pairs will present their results to the group. Others will comment on the effectiveness of their presentation and give suggestions for improvement.

15 min.

Step 4: The group will reflect on the impact of the words of mouth factor in transforming consumption behaviour.

10 min.

Online Implementation	This activity can be carried out in Zoom using breakout rooms for Step 2 (https://support.zoom.us/hc/en-us/articles/206476093-Enabling-breakout-rooms). Participants might wish to concentrate on creating a presentation instead of a poster in these circumstances.
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Topic 3: Choosing responsibly

Desiring to live a more sustainable life and being able to do so are different things. First of all, priorities must be identified, and actions must be planned to address them. Fossil fuels, particularly coal, have been demonstrated to have the most adverse effect on the climate. But can we afford to give up coal? And if we can, do we know how to? There are numerous alternatives, but they all come with their advantages and drawbacks.

Not all information about resources can be presented in advance as there are constant new developments. Furthermore, the funding mechanisms supporting a smoother clean energy transition on an individual level also change rapidly. Therefore, participants must improve their own research skills and identify where and how they can seek support. Reasonably, they cannot be expected to find all necessary information by themselves, but they must be able to identify whom to turn to for support and advice.

Participants need to rely not only on their research skills, but on their critical thinking skills as well. Misinformation regarding fossil fuels is everywhere, and sometimes even actual facts can be manipulated. To complicate the situation even further, there are valid social, economic, and political reasons for clinging to an, otherwise outdated, energy source. Only acknowledging the reality – including other people’s emotional reality – will enable the participants to take an active stance in the transition towards cleaner energy.

Methodology:

Using different methods - brainstorming, presentation and discussion, research, role play - the proposed activities encourage learners to take a conscious and active stance in the transition from fossil to clean fuels. They are supported in making the best use of their own knowledge and skills. The ability to research relevant and up-to-date sources of information, guidance and support should be highlighted as central (Activity No. M4 - U3 - A2).

Learning Objectives:

- Make participants aware about the environmental and health impact of fossil fuels.
- Enable participants to search for affordable alternatives.
- Stimulate a broader understanding of the problem of fossil fuels, taking into account both pro- and contra arguments.

Learning Materials:



Example: Presentation Materials: M4 – U3 – PPT1



M4 – U3 – PPT2

Further Reading:



EndCoal Fact Sheet Series (<https://endcoal.org/resources/end-coal-fact-sheets/>):

- The Dirty Facts About Coal
- Coal and Climate Change
- Coal and Water
- “Clean Coal” is a Dirty Lie
- The Clean Energy Advantage
- Deadly Energy: the health impacts of coal



Harvard Medical School. (2011) *Full Cost Accounting for the Life Cycle of Coal*:

<https://chge.hsph.harvard.edu/files/chge/files/MiningCoalMountingCosts.pdf>



One UN Climate Change Learning Partnership (UN CC:Learn). A short course on Human Health and Climate Change:

<https://unccelearn.org/course/view.php?id=20&page=overview>

Learning Activities

Activity Nr.

M4-U3-A1

Activity Name The harmful impacts of coal consumption

Activity Type

- Story/Experience sharing
- Visual Learning

Duration Approximately 25 minutes

Nr. of participants Up to 20 participants

Language Level

Moderate

Progressive

Depth of information

Basic (no required background knowledge)

Advanced

Learning Objectives Inform the participants of the harmful effects of coal burning. Fostering the initiative of participants for collective action through a group discussion.

Description

Step 1: The participants will be invited to watch several video materials regarding the harmful impact of coal burning to our environment and health. Alternative videos can be selected from the sources list or based on the trainer's knowledge.

 **Coal 101: What's Wrong with Coal?**

<https://www.youtube.com/watch?v=9Wv2GKaukZU>

2:17 min

 **WHO: Breathe Life - How air pollution impacts your body**

<https://www.youtube.com/watch?v=GVBey1jSG9Y&t=8s>

1:18 min

 **DW Planet A. The history and future of coal, explained**

<https://www.youtube.com/watch?v=42yF2t7xMHY>

8:21 min

Step 2: After the presentation, the participants will each then be asked to share their thoughts and feelings with the rest of the group and discuss what possible alternative methods for resource consumption can be made available/used in their area.

The participants will be guided by the following questions:

- Do you agree that using coal is really harmful for humans?
- Do you use coal directly or indirectly?
- Do you know how much of the energy produced in your country relies on coal?
- Are you willing to seek alternatives?
- Do you know how to?

Online Implementation	Providing the participants with the video material, Step 2 of the activity can be completed in Zoom without any structural changes.
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Sources	National Sierra Club. Coal 101: What's Wrong with Coal?
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<https://www.youtube.com/watch?v=9Wv2GKaukZU>

WHO: Breathe Life - How air pollution impacts your body?

<https://www.youtube.com/watch?v=GVBey1jSG9Y&t=8s>

DW Planet A. The history and future of coal, explained

<https://www.youtube.com/watch?v=42yF2t7xMHY>

DW Planet A. How coal is displacing millions

<https://www.youtube.com/watch?v=W8y4PM041UQ>

FRONTLINE PBS. Coal's deadly dust

<https://www.youtube.com/watch?v=650dKRmcONk>

Activity Nr.

M4-U3-A2

Activity Name Eco-friendly heating – mission possible?

Activity Type Research activity

Duration Approximately 60 minutes

Nr. of participants Maximum 20 participants

Language Level Moderate
 Progressive

Depth of information Basic (no required background knowledge)
 Advanced

Learning Objectives Increase the participants' competence in actively engaging on their own with informing themselves on climate change topics. Become informed on methods for resource consumption that are cost-effective and environmentally friendly.

Description

Step 1: The participants will participate in a brainstorming focused on alternative, eco-friendly heating options. They will elaborate:

- What alternative heating options do they know of?
- In addition to heating, are there any other options for increasing house warmth during the cold season (i.e., thermal insulation)?
- What is the relative cost of each heating option?
- If there is an initial investment, how soon can they expect to profit from reduced energy cost?
- Are there any public support measures they can benefit from to increase their heating efficiency or replace a especially 'dirty' source of heating?

15 min.

Step 2: The participants will engage in a group research activity in order to discover the exact programmes and financial instruments supporting an individual eco-friendly energy

transition available in their country / city. They will be informed of the existence of EU programs, such as the LIFE programme (https://cinea.ec.europa.eu/life_en) and its mission of involving and empowering citizens in the clean energy transition. With the help of the trainer, they will browse and try to discover any national or local funding instruments, such as programmes for enabling the thermal insulation of homes or replacing fossil-fuel heaters (using coal) with cleaner alternatives.

25 min.

Step 3: The group will discuss the instruments discovered, focusing on several aspects:

- Are there any instruments active in this moment, or planned for the near future (financial aid for thermal insulation, assistance for replacing heaters, heating aid, or similar)?
- Who is offering this assistance?
- Are any of the participants eligible for applying for those instruments r?
- Are those participants willing to take part in the application?
- What are the requirements for an application?
- Who can support them with advice and administrative assistance?

20 min.

Additional Remarks The trainer can avoid overwhelming the learners by doing a preliminary research on the local/regional/national context, thus giving the participants a direction in which to search.

If necessary, the trainer also draws attention to the possibility of encountering misinformation or manipulated information and discuss how this can be checked or dealt with.

Online Implementation This activity can be carried out in Zoom, where the trainer will share the questions. Research will be conducted independently by each participant.

Sources LIFE Programme https://cinea.ec.europa.eu/life_en

Activity Nr.

M4-U3-A3

Activity Name The future of the coal power plant

Activity Type Role Playing

Duration Approximately 60 minutes

Nr. of participants Up to 20 participants

Language Level Moderate
 Progressive

Depth of information Basic (no required background knowledge)
 Advanced

Learning Objectives For the participants to become more aware of the intricacies around the different perspectives on the climate change issue, providing them with the knowledge to make more informed choices in the future.

Description

Step 1: The trainer prepares the participants to engage in a role-playing game in which they are each asked to take on one of the roles described below (roles are available in M4 - U3 - PPT3). The story revolves around the complex nature of the issues of coal burning itself (environmental benefits/harm), the jobs that coal-fired power plants provide, activists (people outside the industry who are affected by coal mining and the power plant), and the difficulty of accommodating diverse interests (mayor/decision makers). The role of the mayor can be taken by you or an experienced participant, it provides the general framework for the game.

Approximately 10 minutes.

Philip/Philippa, mayor of P. (to be read by all participants)

You are the mayor of the city of P. The city houses a nearby coal mine and a power-plant dependant on it. The coal and the power it produces have become a part of the local identity, and are providing employment for many local residents. Yet the damage for the environment is becoming ever more visible, as are calls to transition to an eco-friendlier



source of power. The municipality is a majority shareholder in the plant, so you have the power to influence its future. The plant has been operating at a loss as of lately, mainly because of rising CO2 quota prices, and you cannot afford to balance your budget for long. Yet the social functions it fulfils are undeniable.

In order to devise a plan on how to proceed next, you have summoned a group of concerned citizens from both sides – the anti- and pro- coal ones. With their help, you hope to be able to find a solution.

Anti-coal participants:



Anton

You are a father of three children and a passionate climate activist. Your oldest has developed an asthma and you are convinced the coal-based power plant is to blame. You cannot allow your younger children to be harmed in the same way. The plant must be stopped – now! Whatever the cost, the health of the children is more important.

Elena

You are an architect and used to thinking long-term. As such, you are concerned with the effects of global warming and the need to act immediately to prevent the worst consequences. A building recently collapsed because of flooding damaging its foundations, and you see a clear link between the still operating power plant and the worsening climate. The longer we wait, the more extreme the climate will get, and worse the damage will be.

Olga

You are a local activist of the Green party. You have campaigned for a number of issues – from planting more trees to fighting animal cruelty. But there is one issue that dwarfs them all – the local power plant, polluting the air in a several-hundred kilometres radius. If you cannot overcome this beast, all your efforts have been for naught. You cannot convince people that nature matters if there is a smoking chimney in the background!



 **Peter**

You are a forester and have seen the damage the power plant caused to the local wildlife and plants. You cannot understand why people would do such a vile thing knowingly – perhaps in the past, when they didn't see the connection, it was excusable, but not anymore!

 **Maria**

You are a journalist and are extremely worried about the heated discussion about the power plant in the local newspaper. It seems as if coal burning will still be a viable option for a long time, which you know is not true. Rising CO2 quota prices will doom it sooner rather than later. You wish that people were better informed.

 **Felix**

You are an entrepreneur dealing in solar panels. You are working very hard to keep your business afloat and are committed to the idea. You don't understand why coal should be subsidised. If the subsidies were dropped, so much more people would seek your services because using solar panels will be the cheaper option!

Pro-coal participants: **Marc**

You are a coalminer, like your father before you. The local mine and the plant it supports have made the city. In the past, they built the hospital, the stadium, the local park. How can people be so blind! They want to throw it all away- and for what? Who will invest so much in the city? These so-called 'eco-activists' are ruining the city!

 **Sylvia**

You are working in the power plant's administration. You know how much efforts are made to keep the plan up to date. New filters have been installed, greatly reducing pollution. The plant is spending a fortune on CO2 quotas. But it is also providing a stable source of employment for most of the city and investing much in it. You think that is a worthwhile cause and are prepared to defend it.

**Luiza**

You are a proud mother of three children. You have chosen to take care of their upbringing and forsake a career. This is only possible because your husband has a responsible and highly paid job at the power plant. The plant has provided your family with security and numerous social benefits. You are not going to allow some rich eco-activists who have nothing better to do with their time threaten your family!

Emily

You are a restaurant owner. Your restaurant is located close to the power plant, and the workers and their families are your primary customers. The power plant is good for all – not only its workers, but the community are large and the local businesses. You cannot imagine how life would be if the plant were to close – it would be a disaster for all!

Paul

You are experiencing financial difficulties. Luckily, you can afford to heat your home, because the energy from the local plant is cheap. But it has been getting more and more expensive, and now there is talk of closing down the plant. This will simply not do! What are these people thinking? They are speaking of a future decade away, where the climate ‘might’ get slightly worse. You are going to freeze to death now if they have their way!

Jon

You describe yourself as a patriotic citizen. The mine and power plant are a source of local – and indeed, national, pride! Who is interested in closing them down? Why is the government backing down to these foreign influences? Isn't it clear what they are trying to do – close down our plants providing cheap energy, so they can sell us their own, more expensive one? Shame! Treason! But if all citizens unite in defence of their home, they cannot be outwitted so easily.

Step 2: Role play – After everyone has understood the rules, the game will initiate. The setting is a town meeting where the mayor has summoned concerned citizens to discuss the future of the coal power plant. The story will revolve around the complex character of the

issues related to coal burning and the climate (utility/harmful effect), professional occupations (the problematic of people losing their job), activists (people outside the industry who are impacted), and the hardships one might face trying to please different people (the mayor – decision makers). The mayor will act as a moderator in the discussion and try to find an option acceptable to the majority.

35 min.

Step 3: After the narrative has been played out, the group will discuss their thoughts and emotions on the topic openly. They will comment on how attached they got to the role they received, and whether the arguments of others could reach them. They will also elaborate on whether their understanding of the problems related to coal power has been enhanced.

15 minutes.

Additional Remarks	During the role play, the trainer watches out for participants who identify too much with their roles and become emotionally unstable. The purpose of the activity must be clear at all times.
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Online Implementation	This activity can be carried out online with little modifications – participants should be sent their roles via chat or mail and can carry out the discussion online.
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References

Bulgarian Agency for Sustainable Energy Development. *Brochure: Advice for Energy Efficiency*. Last retrieved 25.07.2021, https://www.seea.government.bg/documents/Broshura_AUER.pdf

Climate Box Project. *Climate Education for Disadvantaged Adults*. Transnational Research report.

Deutsche Welle Planet A. (2021) *Video: The history and future of coal, explained*. Last retrieved 25.07.2021, <https://www.youtube.com/watch?v=42yF2t7xMHY>

Deutsche Welle Planet A. (2021) *Video: How coal is displacing millions*. Last retrieved 25.07.2021, <https://www.youtube.com/watch?v=W8y4PM041UQ>

EndCoal *Fact Sheet Series*. Last retrieved 25.07.2021, <https://endcoal.org/resources/end-coal-fact-sheets/>):

European Commission (2021). *LIFE Programme* https://cinea.ec.europa.eu/life_en

FRONTLINE PBS. *Video: Coal's deadly dust (2019)*. Last retrieved 25.07.2021, <https://www.youtube.com/watch?v=650dKRmcONk>

Global Footprint Network. *Footprint calculator*: https://www.footprintcalculator.org/?fbclid=IwAR1xsUQCrvvXTuVDXIGbXwXem_3h7pQnDBajNHIAIMZ4X35xnFO9hdDSXpl

Harvard Medical School. (2011) *Full Cost Accounting for the Life Cycle of Coal*. Last retrieved 25.07.2021, <https://chge.hsph.harvard.edu/files/chge/files/MiningCoalMountingCosts.pdf>

Katherine White, David J. Hardisty, and Rishad Habib (2019). *The Elusive Green Consumer*. Harvard Business Review. Last retrieved 25.07.2021, <https://hbr.org/2019/07/the-elusive-green-consumer>

National Sierra Club (2013). *Video: Coal 101: What's Wrong with Coal?* Last retrieved 25.07.2021, <https://www.youtube.com/watch?v=9Wv2GKaukZU>



One UN Climate Change Learning Partnership (UN CC:Learn). *A short course on Cities and Climate Change*. Last retrieved 25.07.2021, <https://unccelearn.org/course/view.php?id=21&page=overview>



One UN Climate Change Learning Partnership (UN CC:Learn). *A short course on Human Health and Climate Change*. Last retrieved 25.07.2021, <https://unccelearn.org/course/view.php?id=20&page=overview>

United nations Human Settlements Programme (2012) *Going Green. A Handbook on Sustainable Housing practices in developing countries*. Last retrieved 25.07.2021, https://www.unccelearn.org/wp-content/uploads/library/going_green.pdf

U.S. Department of Energy. (2017) *Tips on Saving Money and Energy in Your Home*. Last retrieved 25.07.2021, https://www.energy.gov/sites/default/files/2017/10/f37/Energy_Saver_Guide-2017-en.pdf

World Health Organisation (2018) *Video: Breathe Life - How air pollution impacts your body*. Last retrieved 25.07.2021, <https://www.youtube.com/watch?v=GVBey1jSG9Y&t=8s>