

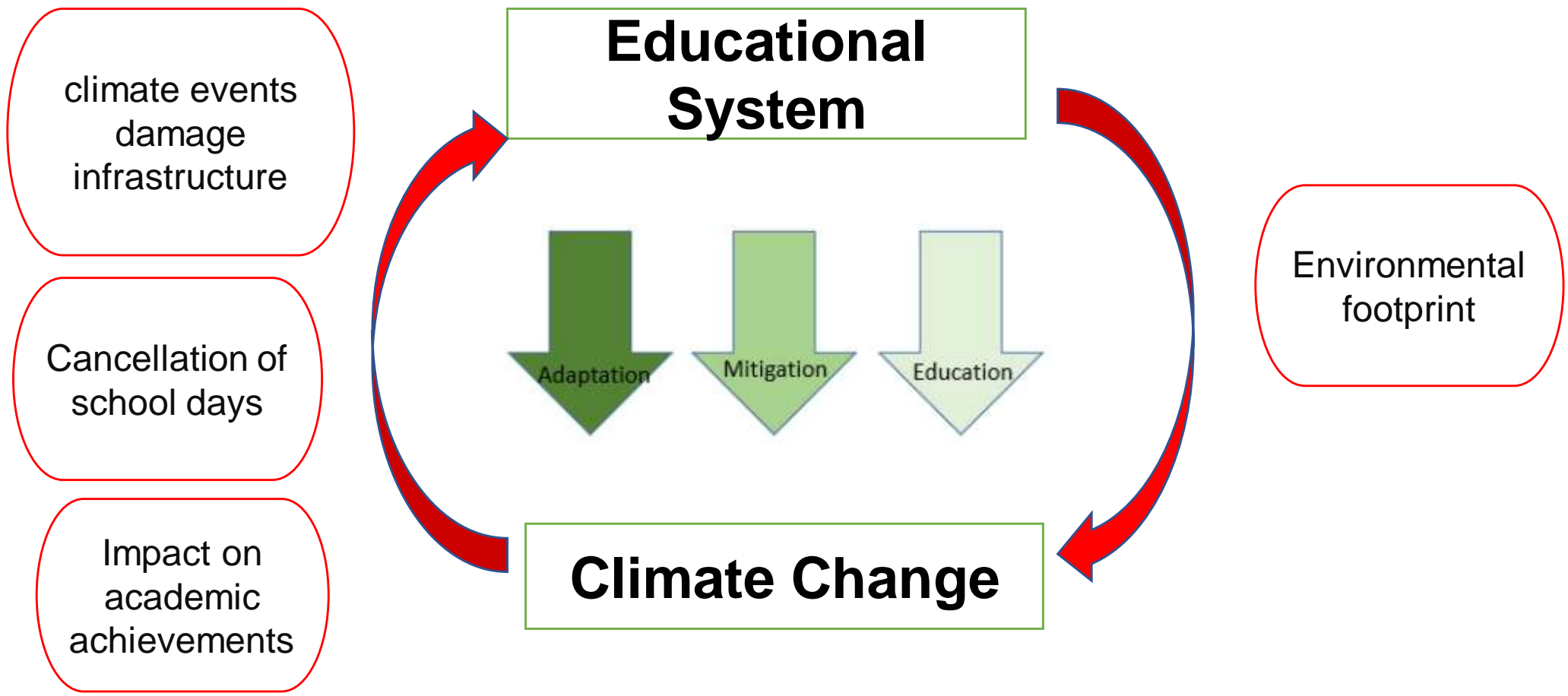
Exploring the Perspectives and Challenges of Forest School Teacher's Trainers in Developing Forest Pedagogy Approaches for Climate Change Education

Moriya Netzer, Prof. Ofira Ayalon, Dr. Dafna Gan

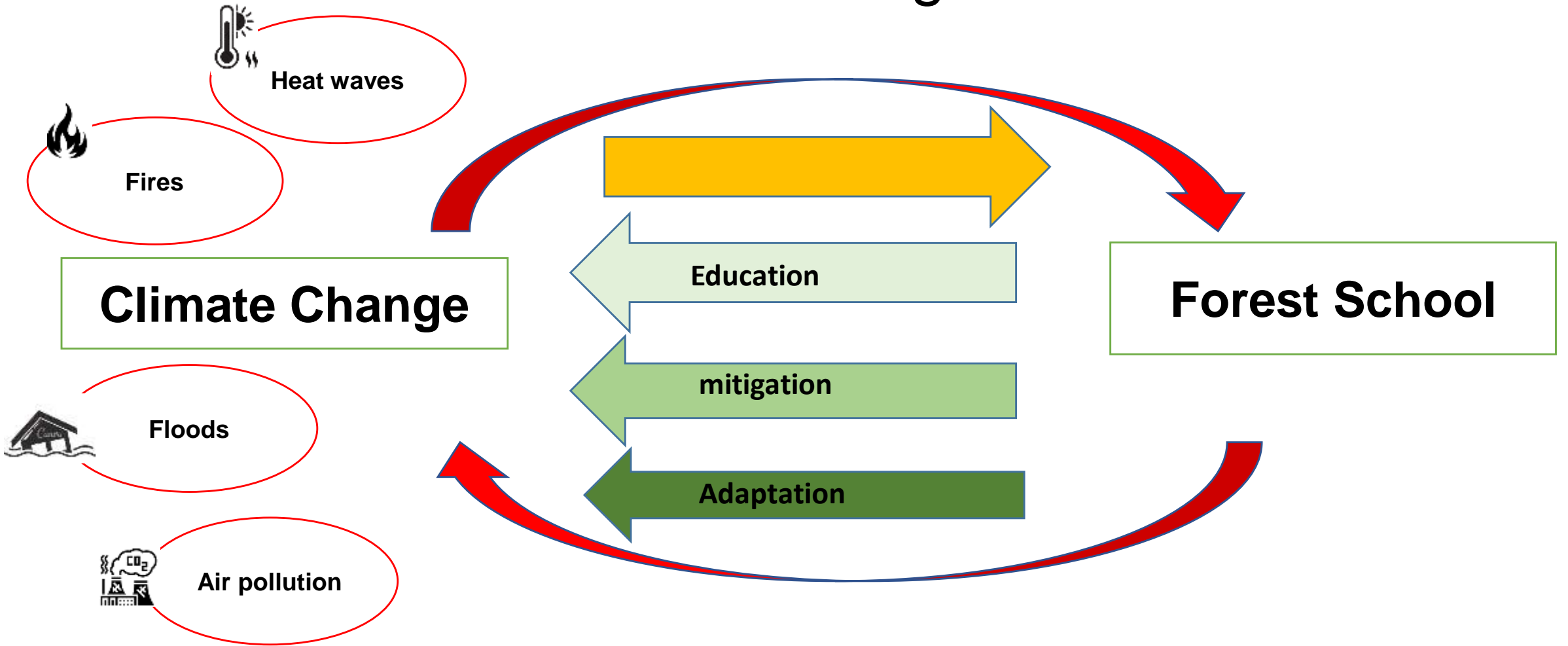
18th European Forest Pedagogics Congress 2024



Climate Change and Educational System



Climate Change and Forest School



Global Examples: Climate Change Impact on Forest School

NEWS > LOCAL NEWS



Canadian wildfires cause breathing, visibility issues across Maryland Jun 07, 2023



U.S, Aus



Europe, U.S



<https://educatedbynature.com/health/outdoors-in-a-heatwave/>

<https://www.researchgate.net/figure/Examples-of-urban-tree-dieback-and-mortality-as-a-re>

Europe

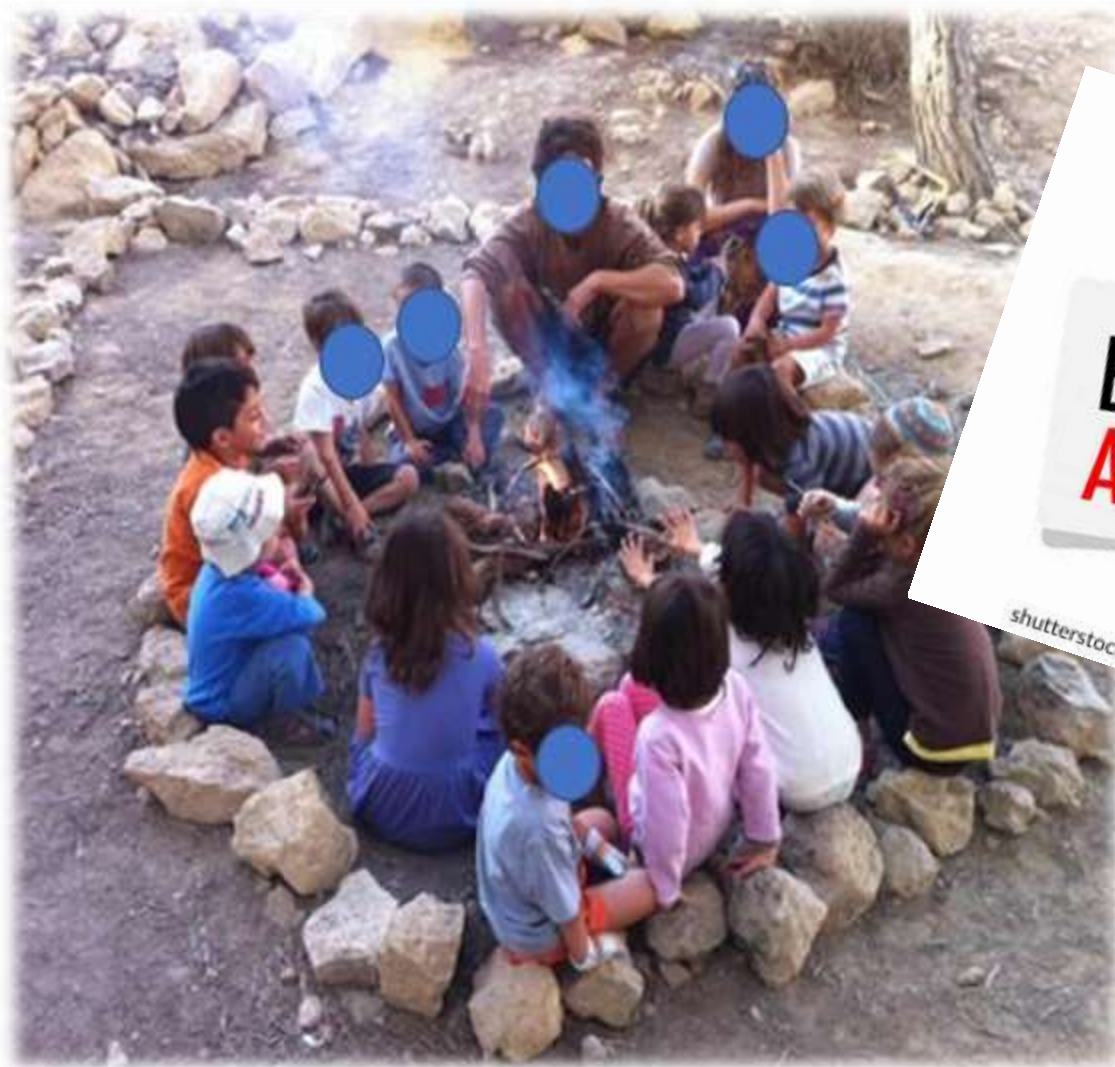
Europe, U.S, Aus



https://www.instagram.com/p/C2Pj70WuvdY/?img_index=1



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<https://gan-yaar.co.il/%D7%92%D7%9F-%D7%99%D7%A2%D7%A8/>

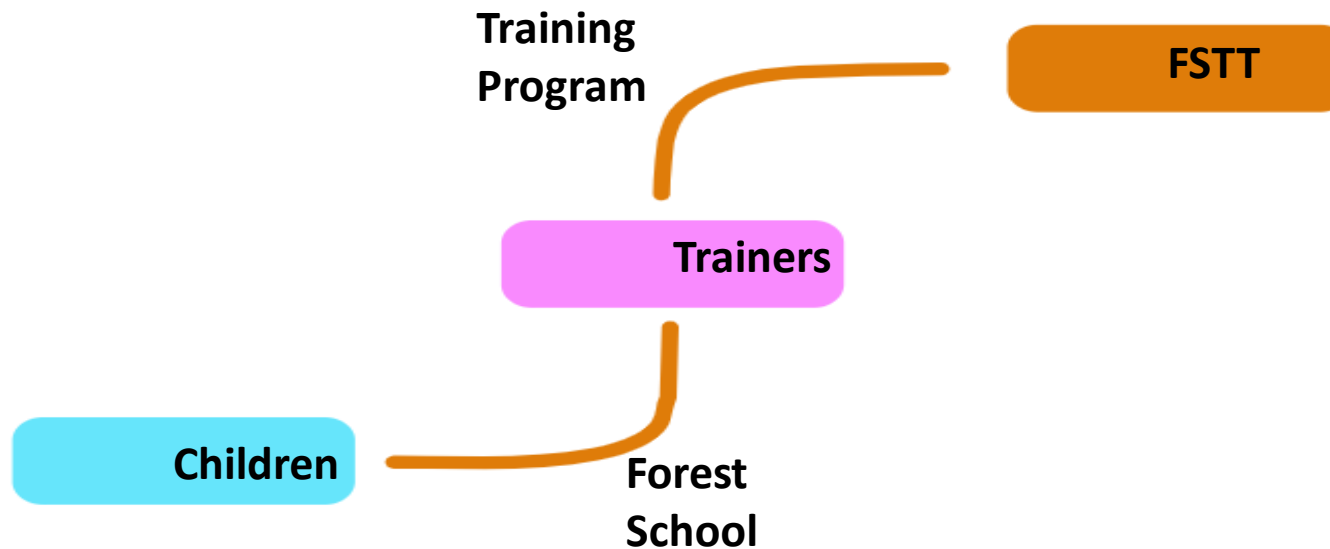
Aim of the Study:

Comprehend and compare Forest School Teacher's Trainer's perspectives on integrating climate change topics into forest school training programs



Research Questions:

1. What are the perspectives of **Forest School Teacher's Trainers** regarding incorporating climate change into training programs?
2. How does **Forest School Teacher's Trainers** introduce climate change topics within their training programs?

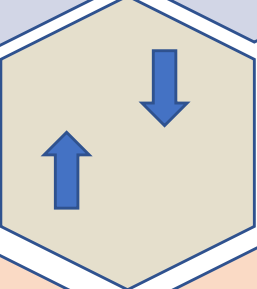




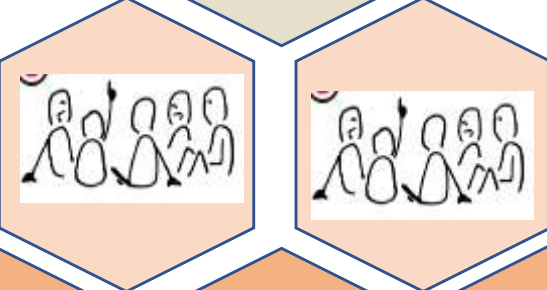
National authority



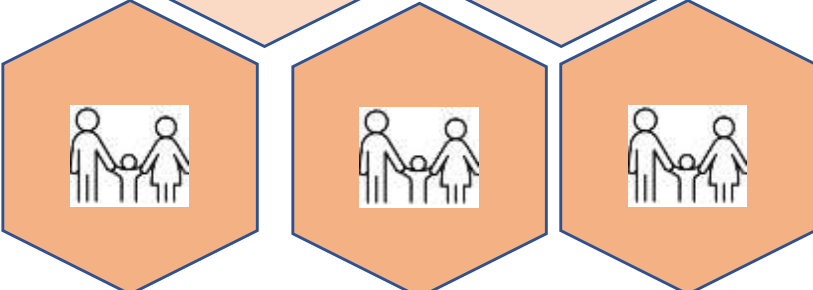
Local authority



Forest School Teacher's Trainers



Teachers



Parents

Method: Multiple-case study

Method suited for capturing complexity and diversity in cross-cultural research,
enhances the depth and breadth of understanding
(Stake, 2006; Gustafsson, 2017)



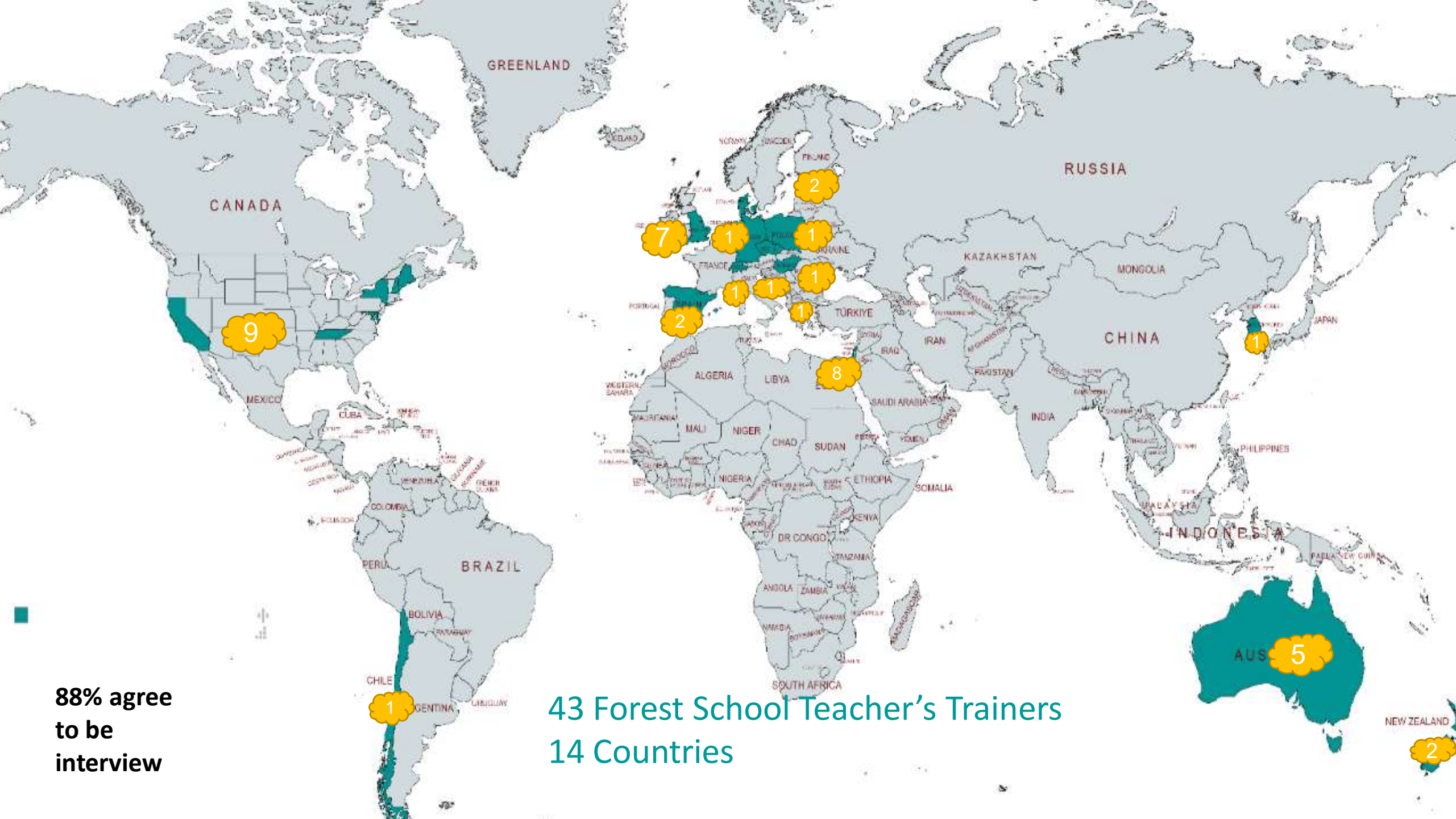
Semi-structured in-depth interviews



A screenshot of the Forest School Association website. The top navigation bar includes links for Home, About FSA, Training, Practice, Local groups, News, Jobs, Webinars, Careers, Symposium, FSA Book, Contact, and a JOIN US button. The main content area features a section titled 'Find a Forest School Trainer' with a sub-heading 'Database of FSA Registered and Endorsed Forest School Trainers below.' Below this, there are three buttons: 'Choose a trainer', 'Add a trainer', and 'Printable listing'. A paragraph of text explains the standards for trainers, distinguishing between FSA Registered and FSA Endorsed Forest School Trainers.

<https://forestschoollassociation.org/find-a-forest-school-trainer/#!directory/map>

Trainer's websites



88% agree to be interview

43 Forest School Teacher's Trainers
14 Countries

Research Questions:

1. What are the perspectives of **Forest School Teacher's Trainers** regarding incorporating climate change into training programs?



<https://www.istockphoto.com/search/2/image?phrase=questions%20children%20forest>

Climate Change and Forest School



*“The last years were really dry...with warm winters...It I had a **perfect conditions** to work all year long...”*
(Interview 23, Poland)



*“Normally we would have quite a bit of snow... Now we’re dealing with a lot more rainy days. you prefer snow to really wet kids...so your risk of hypothermia goes up. **We talk** [with the stuff] **about using the building more** and need different kind of training”* (Interview 41, USA)



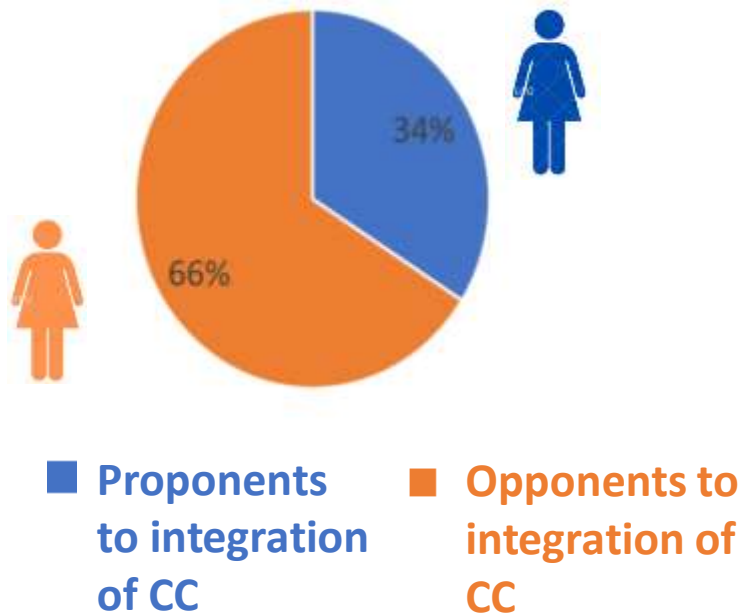
*“We recently had a three-day workshop for kindergarten teachers ...it was 35 degrees. There are various ways to deal. **It's about managing my energy resources.** I will not do what I had planned for this week in my annual plan”*
(Interview 14, Israel)



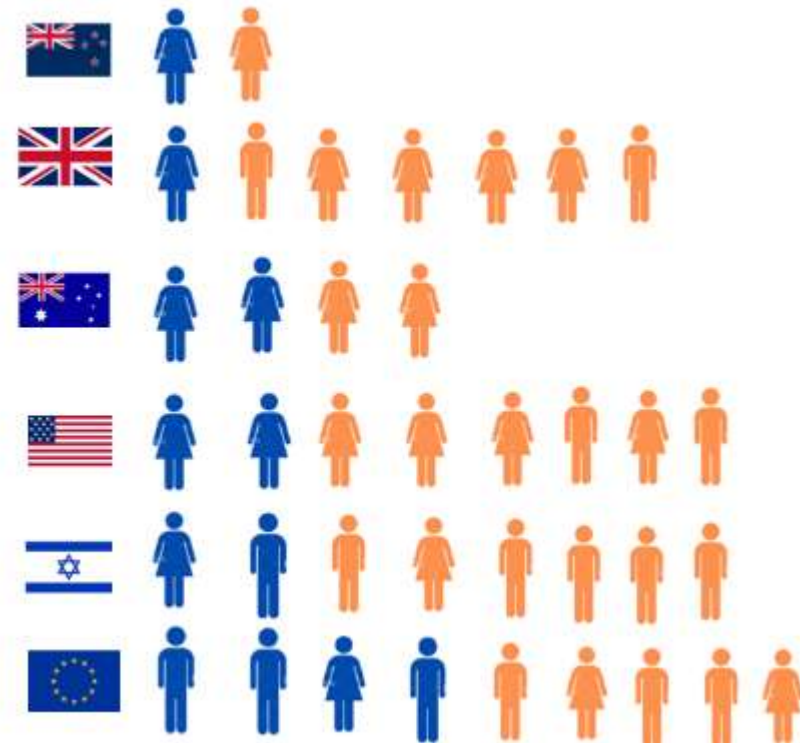
*“ we have extremes temperatures and fires and floods. Children may not want to care and protect nature just because they've been playing in nature It needs to have **intentional teaching** around it [CC]”*
(Interview 43, Australia)

Analysis of CC integrating in Forest School Training

The percentage of proponents and opponents to integrating CC in the training program (n=43)



Number of proponents and opponents to integrating CC in the training program by country



Understanding Opponents: Reasons for Excluding CC in Training Programs (# of quotes)



Educational and practical concern (20)

Scientific issue (4)

Limited time (8)

Not age appropriate (8)



Social and psychological concerns (26)

Controversial issue (10)

Installing discomfort and anxiety (16)

Social and psychological concerns



"...the amount of emotion it [cc] brings up in people. There's enough grief... I don't want to deal with that climate grief in training program"

(Interview 32, UK)

"We should not be putting the weight of environmental issues that are adult problems to solve when all it does is create anxiety and a sense of hopelessness"
(Interview 36, USA).



Educational and practical concern



"In the theory of the development, the concept of time and change for the children before eight or nine years, it is not something they understand... you have to talk and to teach about CC when it is possible for the child to understand"
(Interview 27, Switzerland).



"CC is science, it is in mainstream schools, whereas I am thinking don't worry about teaching that"
(Interview 34, UK)

Understanding Proponents: Reasons for Including CC in Training Programs (# of quats)



Learning opportunities (17)

Outdoor learning (12)

Forest pedagogy (5)



Educator's responsibility for the future (10)

Children have the ability to understand (6)

Children have the right to know (5)

Educators are responsible for the future



"[I tell the trainers] This isn't just... let's just go off into the woods and have fun and then go home and forget about it.

It's actually how we live, how we are going to build this culture that is caring for the future"

(Interview 29, UK)

"The UN rights of the child says children have a right to have a say on matters that are going to impact their futures. At the moment there's nothing greater than CC which is impacting children's futures"

(Interview 4, Australia)



Learning opportunities



“We had a meeting once a month, this meeting was about sprouts... there were no sprouts yet because it hadn't rained... a month later, there were still no sprouts...the whole group, were like, ‘Wait, the previous meeting was supposed to be sprouts, and now there are still no sprouts?! What's going on here?... suddenly people notice something is different about CC”

(Interview 15, Israel)

“It's one of the best ways to do any climate education because children will know what it feels like when they're out in the sun”
(Interview 29, UK)

Common Ground:

Shared Categories of Opponents and Proponents on integrating CC

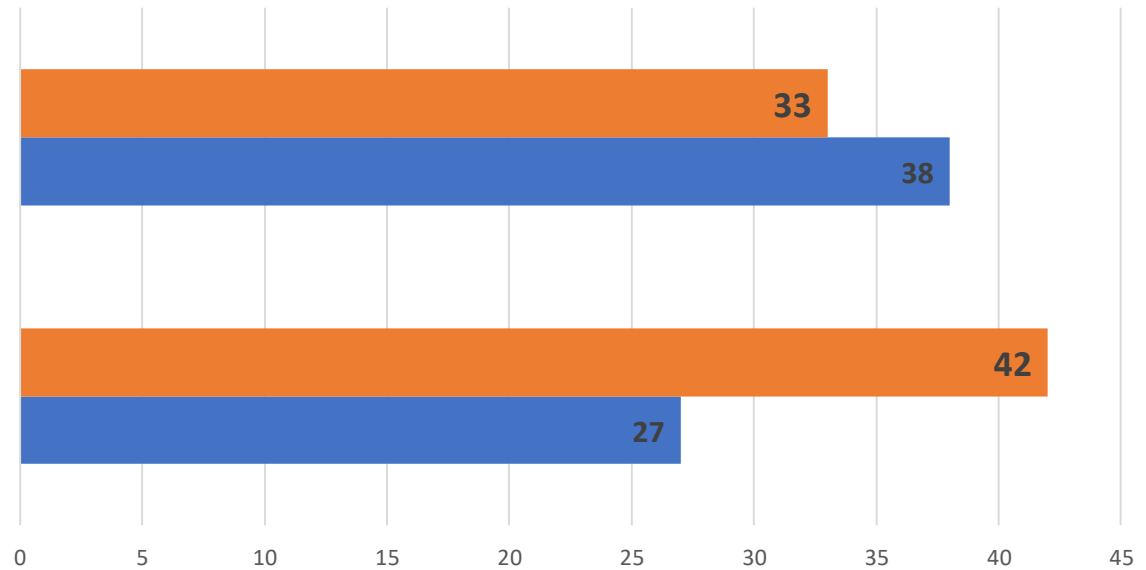


Sustainable behaviour



Nature connection

Number of code for each category



Number of quotes

■ Opponents to integration of CC
■ Proponents to integration of CC

Opponents to integration of CC

Proponents to integration of CC

Nature connection



“we're not directly talking about CC...one way of combating CC is connecting children to the earth... being out in nature and learning to love...so that then they become the future guardians...”

(Interview 20, New Zealand)

“A lot of educators have hung on to that quote you 'can't care for nature unless you love it' ...children may not want to care and protect nature just because they've been playing in nature... we in age-appropriate ways go through the discussion and the ethics of what sustainability...”

(Interview 4, Australia)

Sustainable behaviour



“we use bottles and bring water and it's limited...we tell them please be careful with water. these very simple actions are enough for the little children...We don't need to talk about [CC]”(Interview 6, Czech)

“Bringing water in a container and feeling what is limit [or other] sustainable practices, must have alongside discussions about ...sustainability” (Interview 43, Australia)

Forest schools: opportunities for adaptation and mitigation

“The aim is to make some effects on CC by propagating the importance of the forest ... this is about mitigation but also adaptation ...if we promote the role of the FS in the forest, then it helps to convince people that there should be more and more forests in the country (Interview 11, Hungary)”



Gazelle Valley,
Jerusalem



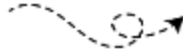














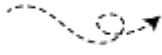


Research Questions:

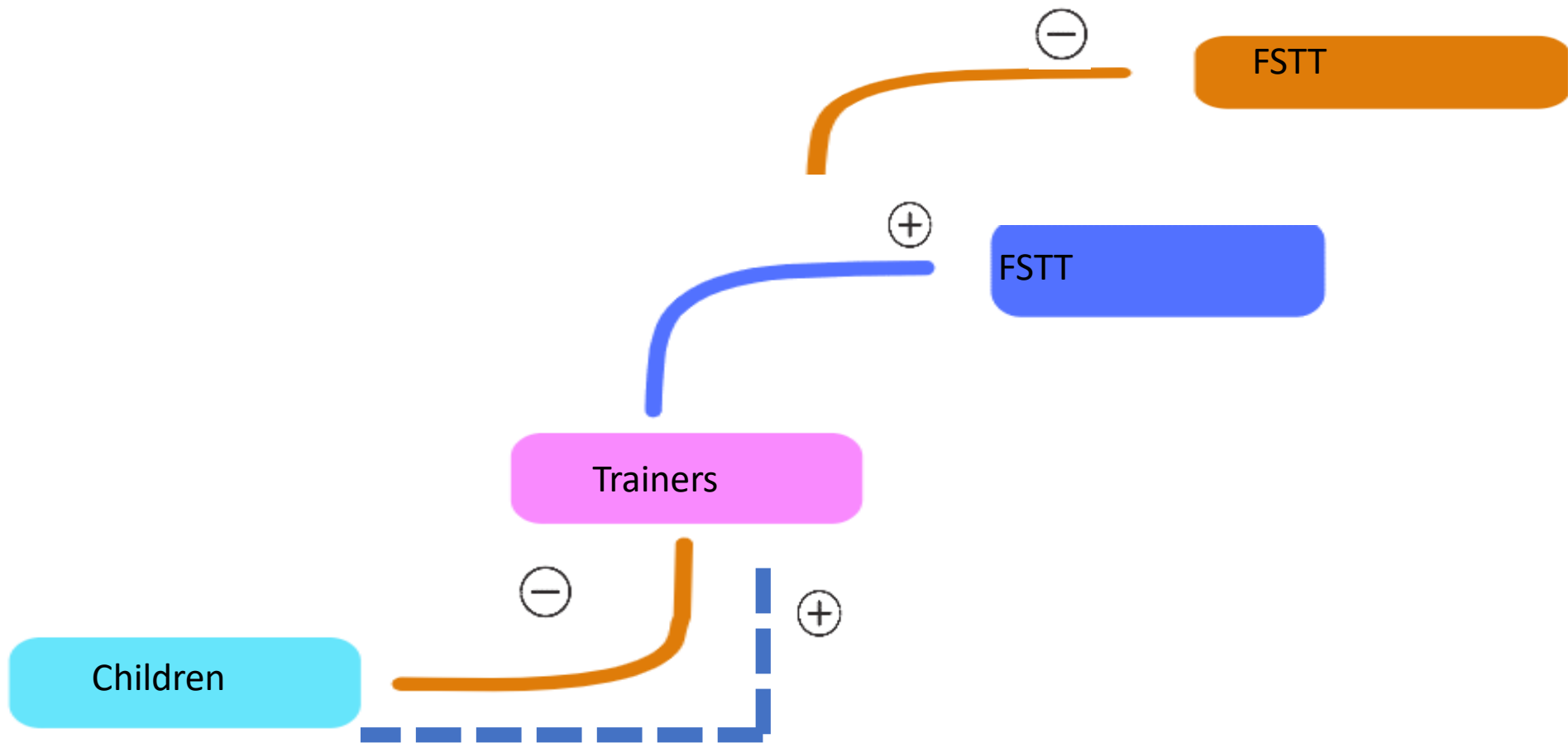
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<https://www.istockphoto.com/search/2/image?phrase=questions%20children%20forest>

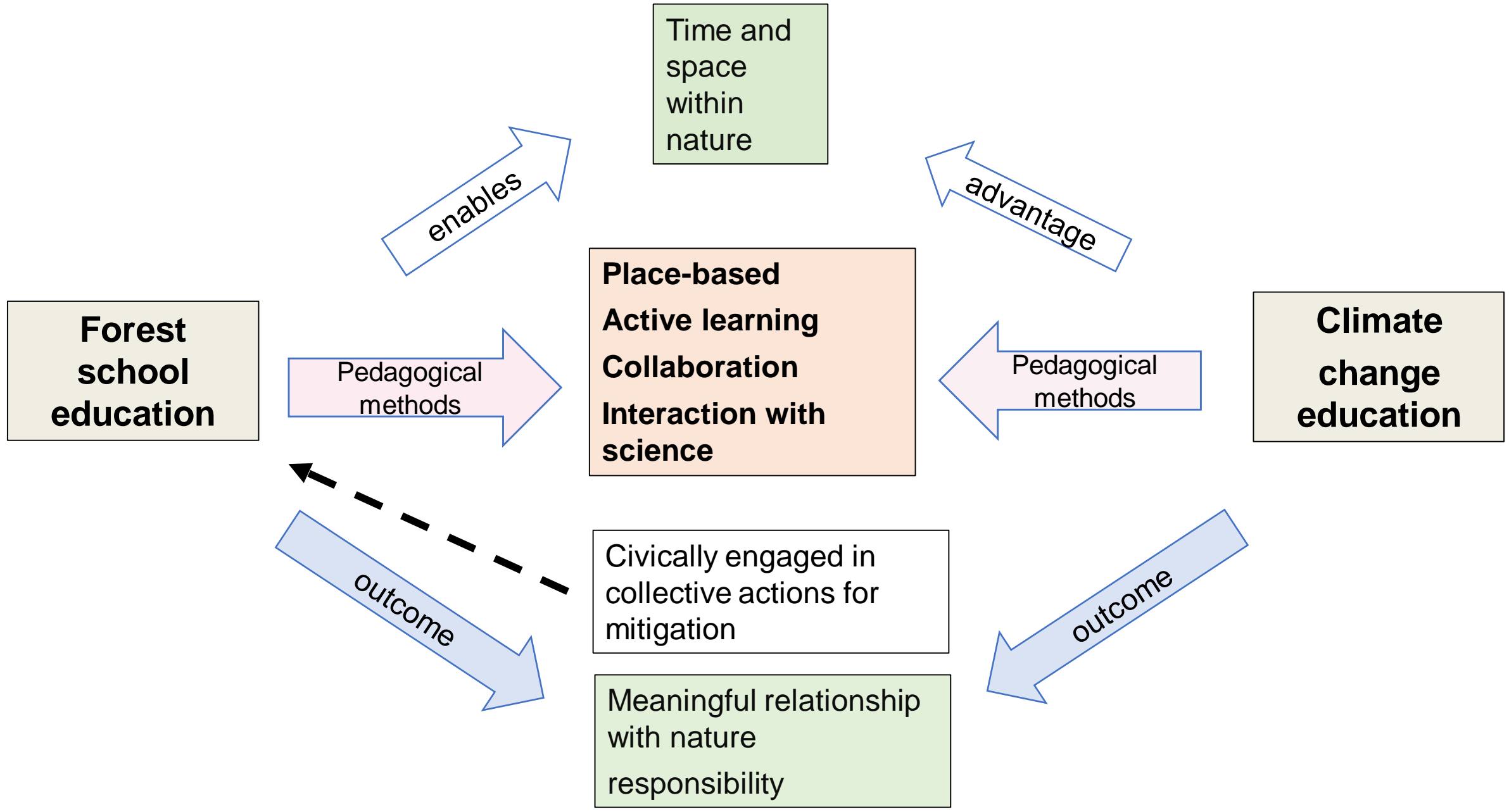
Pedagogical Approaches for CC education in the Training Programs

Method		Direct/ Indirect	Country
Collaboration with the Forest Service	Collaboration with foresters on forestry aspects related to CC		
Ecostory telling	Creating narratives that convey environmental concepts		  
Indigenous Knowledge	Indigenous worldview centered on post-humanism relationships		  
Keeping track of biotic and abiotic changes	Techniques to monitor changes in biotic and abiotic components in natural environments		     
Project Approach	Learning through hands-on projects of real-world problem		 



Pedagogical Approaches and Skills in FS and Climate Change Education

Method	FS principle/skill	CCE strategy
Collaboration with the Forest Service	Social interaction	Scientific knowledge and skills to engage in CC mitigation and adaptation
Ecostory telling	Storytelling imagination	Creativity
Indigenous Knowledge	Place-based	Place-based
Keeping track of biotic and abiotic changes	Observation	Scientific Knowledge
Project Approach	Experimental and hands-on learning	Experimental and hands-on learning, participatory

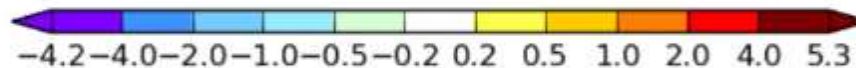
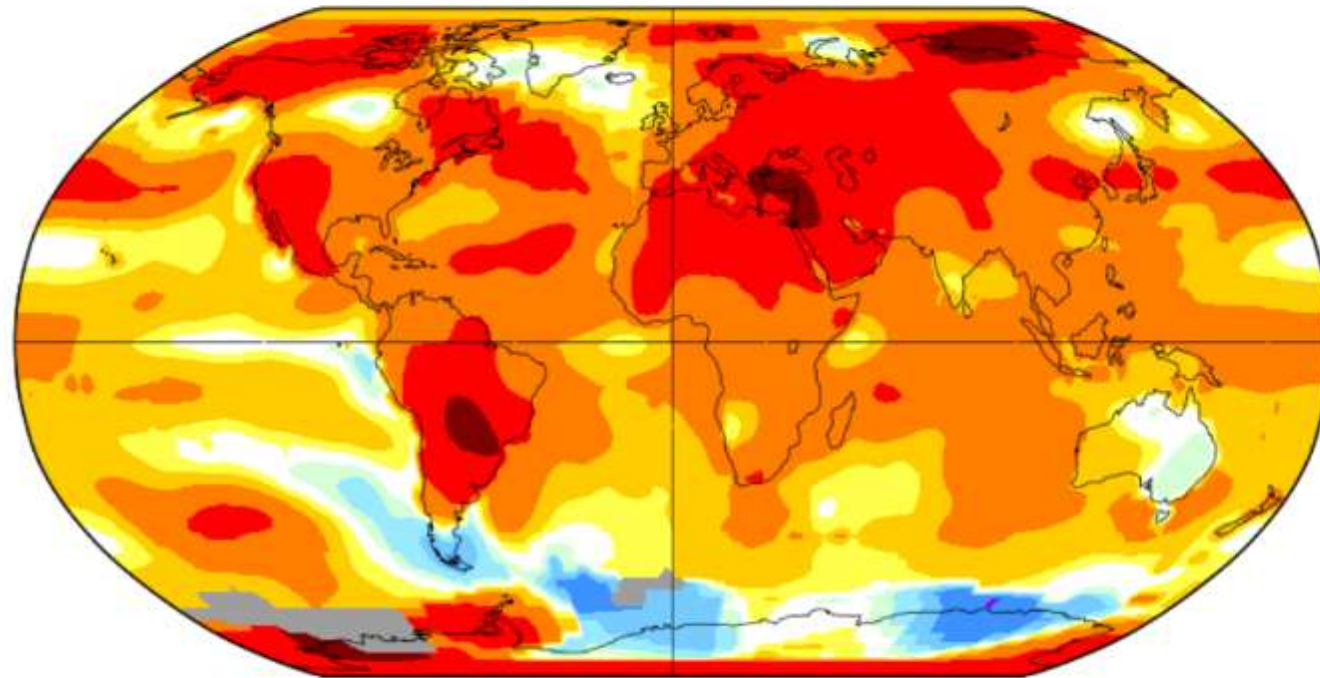


Global temperature anomalies for meteorological summer in 2023 (June, July, and August)

June 2024

L-OTI(°C) Anomaly vs 1951-1980

1.19



Note: Gray areas signify missing data.

Note: Ocean data are not used over land nor within 100km of a reporting land station.

Connecting with Nature

“There are two parallel streams of young people's feelings of connection with nature...

***One stream** presents nature connection as a primarily positive experience...*

***Second stream** examines this painful side of connection, children's encounters with nature include witnessing environmental degradation and destruction” (Chawla, 2020)*



Empowering Hope

“There are ways to support young people socially and emotionally as they face environmental change, by building their sense of agency, enabling them to see that they are not alone in taking action to address challenges and encouraging hope” (Chawla, 2020)



Thank You For Listening



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Pedagogical Approaches for CC education in the Training Programs



Sit Spot

“Sitting in nature, students generate a connection to the place. From this connection...they become aware” (Interview 15, Israel)



Indigenous Knowledge

We focus instead on...the indigenous understanding of reciprocity”
(Interview 20, USA)



Collaboration with the Forest Service

“We have a module called forest basics. There's a lot about how we can adapt our forest to CC” (Interview 11, Hungary)



Eco storytelling

"We've written stories about where has all the water gone? Did the trees drink it? So children will want to rescue them" (Interview 3, Australia)



Creating Games

"I present myself like that owl, and I have big issues because people are cutting the forest, so I don't have where to live now, and I have less food" (Interview 5, Chile)

Keeping track of phenology changes

"Teaching to be observant is a good way of being brought up in terms of CC... it's the start of a lifelong exposure that then allows you to notice those changes and be observant to care enough to do something about it" (Interview 29, UK)

Activism and Project Approach

"...we need to engage with children in taking" (Interview 4, Australia)

