Platform for Clean Cooking in Schools

Axis: 1. Transitioning Energy, Industry and Transport
Key objective: 3. Ensuring universal access to energy
Solution: Clean cooking in schools
Host initiative: Sustainable Energy for All (SEforALL), World Food Programme (WFP), World Bank - Energy Sector Management Assistance Program (ESMAP), Modern Energy Cooking Services (MECS) Programme, Middle East Green Initiative - Forward7
Scope:

- Geographic: Global
- Sectoral: Energy (clean cooking), Institutional (schools)
- Other aspects: Environment, gender equality, education, health, food security

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Levers assessment:

- **Risk-informed decision-making:** Low maturity
  - *There is currently a lack of clear data on fuel use in schools across low- and middle-income countries, the costs associated with transitioning to clean cooking solutions and the health and environmental impacts of current practices. In many cases it is also unclear which schools implement school feeding programmes and what technologies are available to them - for example whether a school has access to electricity, or it purchases or collects its fuel*
  - *No benchmark to draw from*
- **Technology shifts:** Medium maturity
  - *There have been many recent developments in the field, with increasing interest from private sector partners. However, the market remains fairly fragmented, with limited coordination among stakeholders..*
  - *Local manufacturing, effective distribution networks and last mile reach in certain regions e.g., sub-Saharan Africa is lacking*
  - *There are several institutional clean cooking appliances on the market, notably Electric Pressure Cookers (EPC) that can cook 85-100 litres of food per round and electric rice steamers.*
  - *EPCs and other clean cooking appliances have solid proof of concept in terms of usability and benefits in the household sector*
- **Knowledge & capacity building:** Low maturity
  - *Awareness among end-users of traditional (non-clean) stoves in institutional settings remains low, particularly regarding the health and environmental drawbacks of current practices and the potential benefits of cleaner alternatives. End-users capacity also needs to be strengthened to ensure the correct use and care of clean cookstoves.*
  - *Academic evidence on the health, environmental and socio-economic impacts of institutional cooking, and particularly those deriving from the transition to eCooking is still lacking*
  - *On-the-ground technical capacity also needs to be strengthened, particularly in relation to the correct installation, repair, and maintenance of electric appliances and potentially local assembly*

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    - *Knowledge of carbon financing processes, requirements and opportunities is lacking across all governmental bodies involved in school feeding programmes and other stakeholders*
- **Inclusive decision-making governance & design:** Low maturity
    - *Mandates are important, but not always clearly laid out*
    - *As the benefits are broad the number of stakeholders (ministerial and private) is very large*
- **Standards & taxonomies:** Medium maturity
    - *Some countries have MEPS that has been developed by MECS for standards and regulations for the importance of clean cooking solutions in certain countries (e.g., Tanzania and Kenya)*
    - *For institutional solutions as this is a new focus these standards do not necessarily apply*
- **Supply:** Medium maturity
    - *While eCooking presents the opportunity to generate electricity locally, contributing to nations' energy security and economic development, where rural electrification is low, infrastructure gaps negatively affect supply limiting access, reliability and affordability*
    - *Another barrier is the limited number of local market players and manufacturing of eCooking appliances. These remain scarce as demand is still weak.*
- **Demand:** Medium maturity
    - *Awareness campaigns that highlight the comparative economic advantages of clean cooking solutions—including eCooking—have proven effective (for example from experiences in Lesotho and Tanzania) in driving adoption in urban and peri-urban areas, where fuels such as firewood or charcoal are purchased. Strong training and monitoring components remain essential to ensure sustained use.*
    - *Rural schools that collect fuel need additional support to transition, including financial contributions to afford electricity bills (potentially available through carbon finance) and stressing the negative impacts of traditional cooking for school staff and the community.*
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    - *Many false perceptions persist about clean cooking fuels (e.g. taste of food, danger of appliances)*
- **Public/private finance:** Low maturity
    - *There is growing evidence from field partners that financing remains a major bottleneck for clean cooking initiatives. A significant gap exists between available funding and the investment needed to achieve clean cooking goals.*
    - *While emerging business models—such as offering upfront financing to schools that already pay for fuel, thus reducing their costs after a short pay back period —show promise, micro-financing institutions still need to be formed and mobilized to support these approaches at scale.*
    - *Availability of philanthropic financing for technology suppliers across the value chain as well as for energy operators is also crucial.*
    - *Unlocking carbon finance at scale can play a transformative role in accelerating progress. However, delivery models are still being developed and tested.*
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- **Partnerships and collaboration:** High maturity

    - *This is being increasingly elevated with more and more organizations getting involved in electric cooking in schools. There is an Institutional Community of Practice platform led by WFP that brings together partners working in the sector. The GeCCo eCooking community of practice is also including institutional programmes*
    - *These and other initiatives remain siloed, with limited coordination across sectors. There is a pressing need to link key areas (school feeding, environment, education, health, gender equality) around a shared agenda. Greater integration across these sectors would help accelerate progress toward universal access to clean cooking.*
- **Policy & regulatory:** Medium maturity
    - *While a growing number of countries lacking clean cooking access are developing policies and roadmaps to achieve this goal in the residential sector, there are clear gaps in policies targeting clean cooking in institutional settings such as schools specifically.*
    - *Many energy planning efforts on national scales do not account for clean cooking access and those that do, do not treat institutional clean cooking*
    - *Policy coherence need to be fostered between relevant ministries as clean cooking in institutional settings is highly inter-minesterial*
- **Public opinion:** Medium maturity
    - *Political momentum is growing, with more governments advocating for a society-wide shift toward clean cooking, including in school.*
    - *At the same time urban middle class households are transitioning as the drawbacks of traditional cooking methods are becoming increasingly evident, yet key barriers to adoption persist particularly among the less privileged, including affordability and perceived safety and taste concerns. Nonetheless, there seems to be general willingness to adopt clean cooking solutions if these challenges are effectively addressed..*

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Key implementation blockers and expected impact of this plan on the 2030 targets (if any):

Four key implementation blockers are identified: risk-informed decision making, knowledge & capacity building, inclusive decision-making governance and design, and public/private partnerships. Below actions are listed for mitigating each one of these:

Key-blockers	Mitigating strategy
Risk-informed decision making	*To address the current lack of clear data and support evidence-based decision-making, a comprehensive baseline data system should be developed in line with the School Meals Coalition's bi-annual status of school feeding report. This system would serve to collect and standardize data on fuel use and costs, health impacts, energy access in schools, and other relevant indicators.*
	Develop benchmarks and decision-making tools. This can take the form of cost–benefit analyses, health risk assessments, and technology comparison frameworks tailored to schools. This can be built on top of existing data-driven tools in the sector.
	Help integrate school energy assessments into national education/feeding programs to ensure governments include regular evaluations of schools' access to electricity, kitchen infrastructure, and cooking fuels.
Knowledge & capacity building	*Conduct targeted awareness and demonstration campaigns in schools and institutions to showcase the cost and efficiency benefits of clean cooking solutions, both to stakeholders in the schools and the schools' wider communities*
	Partner with academic / research institutes to generate and disseminate evidence on the health and environmental impacts of institutional cooking at global, regional and the local community level
	Support the strengthening of local distribution networks and after sale services ,including on maintenance and repairing skills, spare parts availability etc
	Develop training modules for end users on the appropriate and optimised usage and care of clean cooking appliances. Adapt eCookbooks and manuals to the context.
Inclusive decision-making governance and design	*Establish clear governance frameworks and role definitions across ministries and institutions to avoid overlaps and gaps to ensure coordinated approach towards achieving national targets*
	Create a multi-stakeholder coordination platform that streamlines engagement, aligns priorities and facilitates joint decision-making

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Public/private partnerships	*Design blended finance mechanisms for schools combining public funding with private sector contributions and donor support*
	Pilot and validated scalable carbon finance models. This can be done by testing carbon credit schemes in school cooking transitions to a larger extent and build evidence for their effectiveness

There are a number of short-, intermediate and long-term goals of this initiative. Some of the outcomes that can be expected in the short-term given a successful implementation would be:

- *generate evidence on school cooking and measure the impacts of transitioning to clean cooking solutions (potentially using CO2 emissions as proxi indicator)*
- *develop a proof of concept for institutional clean cooking that demonstrates sustainability and tests innovative, scalable finance models (e.g., carbon finance)*
- *shift schools in low- and middle-income countries to clean cooking and suitable kitchen infrastructure for an improved cooking experience resulting in time savings, reduced reliance on biomass and better health*
- *increase stakeholder commitments and support for clean cooking in schools*

The medium-term goals of the initiative are more ambitious and far-reaching in their societal impact. The key medium-term goals are:

- *establish a replicable and scalable financial model and programme design which incentivizes Government funding in school feeding programmes and transitioning schools to clean cooking appliances. This includes developing and testing and innovative finance solutions and carbon financing*
- *improve socio-economic (health, gender, education, environmental - including the preservation of local forests and natural resources -, nutritional) outcomes in schools and their communities*
- *develop local capacity and employment opportunities for women in the clean cooking value chain*
- *leverage schools role as knowledge hubs to disseminate best practices and drive wider scale adoption of modern cooking solutions within communities (e.g., households and additional schools)*

The envisioned long-term impact is to transform daily cooking practices in schools in low- and middle-income countries, resulting in equitable improvements in health, social, economic, and educational issues.

This initiative strongly links to a large number of the SDGs:

- ***SDG 1 No poverty:** Clean cooking is part of the basic services necessary to lead a healthy and productive life and saves households time and money. Cooking on modern cooking services with higher efficiencies and without collected fuel can reduce costs and time to pursue productive uses.*

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- ***SDG2 Zero hunger:*** *Efficient cookstoves reduce the amount of fuel needed to cook or the cost for alternative fuels, thus reducing the burden on families and institutions who would otherwise have to collect it or buy it. It is known that in cases where parents can not contribute enough money or fuel for school meals their children may have to forego meals*
- ***SDG3 Good health and wellbeing:*** *Reducing or eliminating smoke emissions from cooking decreases the burden of disease associated with household air pollution and improves well-being, especially for women and for children.*
- ***SDG4 Quality education:*** *Children, particularly girls, are often kept out of school so that they can contribute to household tasks, such as cooking and collecting fuel or incur in child pregnancy, and early and forced child marriage. Time dedicated to fuel collection is taken from schools home work and meals gives children the ability to focus at schools*
- ***SDG5 Gender equality:*** *Unpaid work of volunteers, often parents (mainly women), including collecting fuel and cooking, remain a major cause of gender inequality, as well as working conditions of school cooks.*
- ***SDG7 Affordable and clean energy:*** *Clean cooking is essential to addressing energy poverty and ensuring sustainable energy security for billions of people. The indicator 7.1.2 keeps track of the portion of the population without access to clean cooking*
- ***SDG8 Decent work and economic growth:*** *Energy access enables enhanced productivity and inclusive economic growth. The clean cooking sector offers many job opportunities.*
- ***SDG11 Sustainable cities and communities:*** *Clean cooking addresses household and ambient air pollution, resource efficiency, and climate vulnerability.*
- ***SDG13 Climate action and SDG15 Life on land:*** *Carbon emissions from burning solid fuels for energy needs are a considerable contributor to climate change. Schools, due to the high volume of meals prepared daily, are among the largest consumers of biomass energy – second only to households. This contributes to deforestation and greenhouse gas emissions. Up to 34 percent of woodfuel harvested is unsustainable, contributing to forest degradation, deforestation, and climate change.*
- ***SDG17 Partnerships:*** *The cooking agenda involves several stakeholders such as governments and private sector, from a variety different sectors including energy, nutrition, education, finance and environment, requiring coordination across all. Partnerships with partners that have technical expertise, financing resources, or in-country capacity is important and will be actively sought, as well as with governments.*

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Output	Action Scope	Action	Type of action	Implementation Lever	Responsible	Time horizon	Stakeholder engagement[1]	Committed Stakeholders
Integrate clean cooking in schools as a dedicated initiative under the Schools Meals Coalition	Partnerships	Launch the Clean Cooking in Schools initiative at a high-level mainstage event during COP30	Existing a…	Partnerships …	SEforALL, WFP, ESMAP, MECS, Forward7	Novemb…	Multi-stakehol…	SEforALL, WFP, ESMAP, MECS, Forward7
Raising ambition and awareness to propel actions in implementing clean cooking transitions in schools (country specific actions)	Country action	High level advocacy and awareness raising at global and national fora, including COP30 and country specific platforms	Existing a…	Risk-informed…	SEforALL, WFP, ESMAP, MECS, Forward7	June 20…	Multi-stakehol…	SEforALL, WFP, ESMAP, MECS, Forward7
Clean cooking solutions introduced and sustained at school level	Deployment and capacity building	Capacity building and training for end-users and beneficiaries	New action	Knowledge & …	SEforALL, WFP, ESMAP, MECS, Forward7	Novemb…	Multi-stakehol…	SEforALL, WFP, ESMAP, MECS, Forward7
Key findings and lessons learned from the implementation of Clean Cooking Transition in Schools in Tanzania, Rwanda, Uganda, Ghana, Lesotho, El Salvador…	Benchmarking	Develop an implementation model guided by best practices and learnings in the sector	Existing a…	Knowledge & …	SEforALL, WFP, ESMAP, MECS, Forward7	Novemb…	Multi-stakehol…	SEforALL, WFP, ESMAP, MECS, Forward7
Programme of activities developed to enable carbon finance flows for schools across countries	Climate financing	Registration of initiative under voluntary carbon market / compliance market.	Existing a…	Public/private …	SEforALL, WFP, ESMAP, MECS, Forward7	Novemb…	Investors and…	SEforALL, WFP, ESMAP, MECS, Forward7

[1] Such as national governments, local and regional governments, regulators & public agencies, utilities & system providers, large companies, small and medium enterprises, investors and private finance institutions, MDBs, academic and technical institutions, youth, indigenous peoples and women-led groups, multi-stakeholders platform (non-exhaustive)