



# Africa LEDS project: achievements & next steps – component 2

Presentation for GHANA

**BY: (Dr. Kyekyeku Opong-Boadi)**



# Background of modeling actions

- ❖ Ghana implementing 20 LED measures to achieve the 45% emission target and the SD benefits.
- ❖ Ghana's modeling was on assessing the multiple impacts of low-emission development measures.
- ❖ Ex-ante climate and socio-economic outcomes.
- ❖ Enhance the analytical basis of Ghana NDCs.

# Background of modeling actions

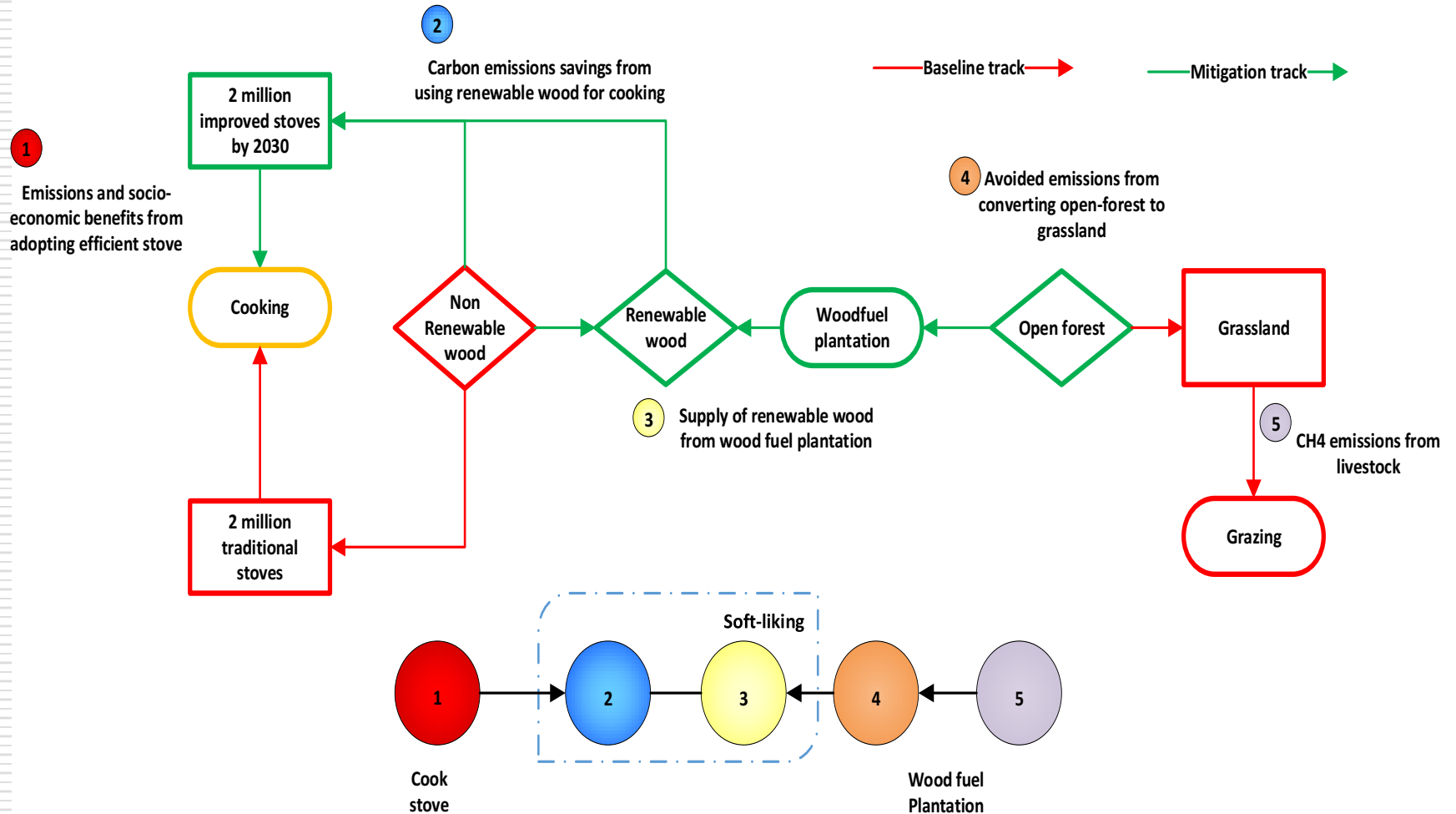
- ❖ Strengthen the capacity of inter-Agency taskforce.
- ❖ Ghana LEDs sectors cover transport, energy, waste, industry and agriculture.
- ❖ LEDs modeling focused on forestry and energy.
- ❖ Various LEDs model are in use in Ghana – LEAP, T21, ALU, GACMO, GJAM, COPERT 3, ABACUS, EXACT, WISDOM, COMAP, RETscreen.

# Achievement

- ❖ Sector technology
  - cookstove (energy)
  - woodfuel plantation (forestry)
- ❖ Model scope (emission and socio-economic)
  - carbon emissions
  - job
  - financial benefits
  - health
- ❖ LEAP, ABACUS, Soft-linking
  - 2 million improve cookstove
  - Convert 12,000 ha per annum of degraded area to wood plantation

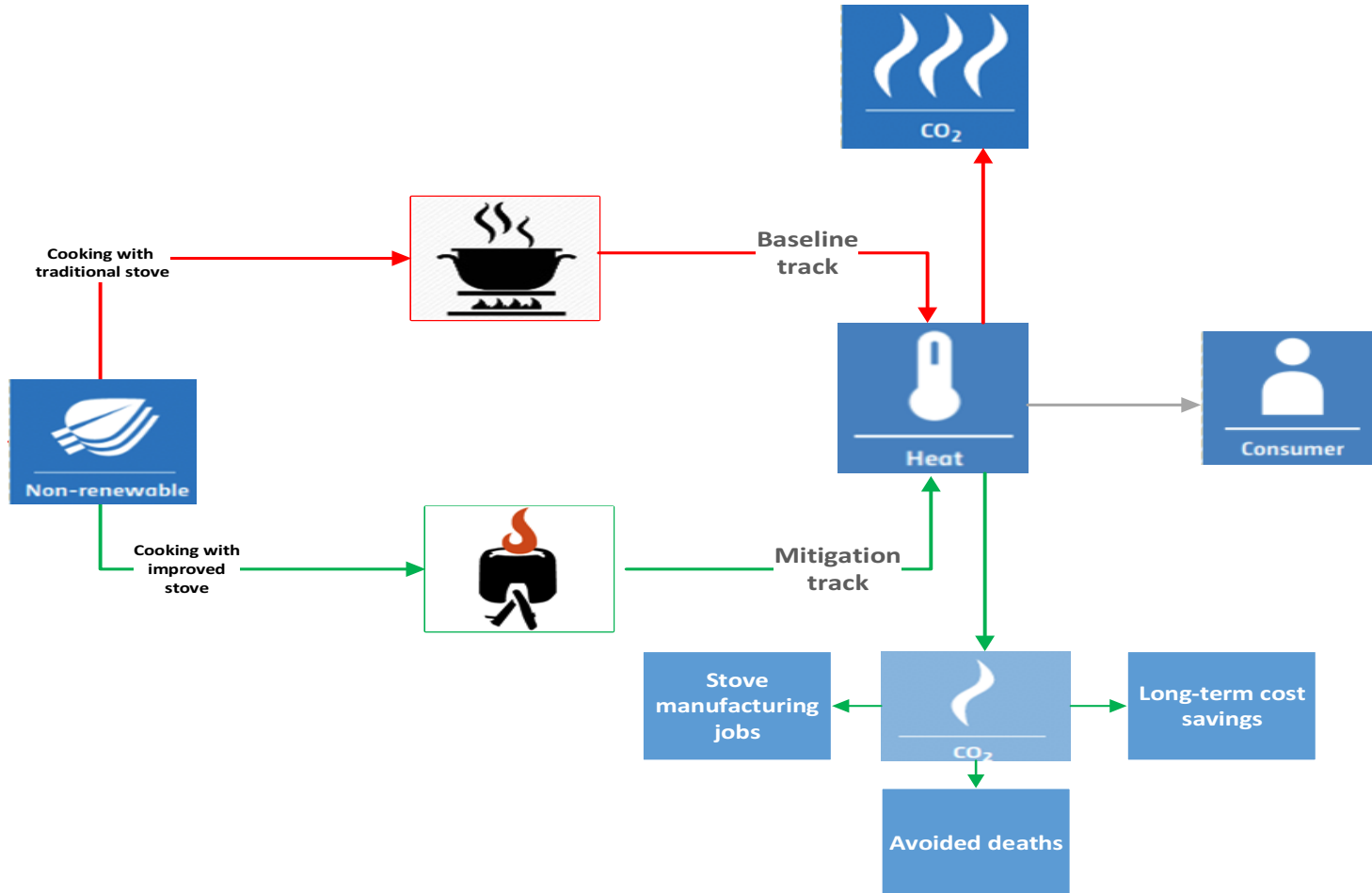
# Achievement

## Model work flow – overall approach



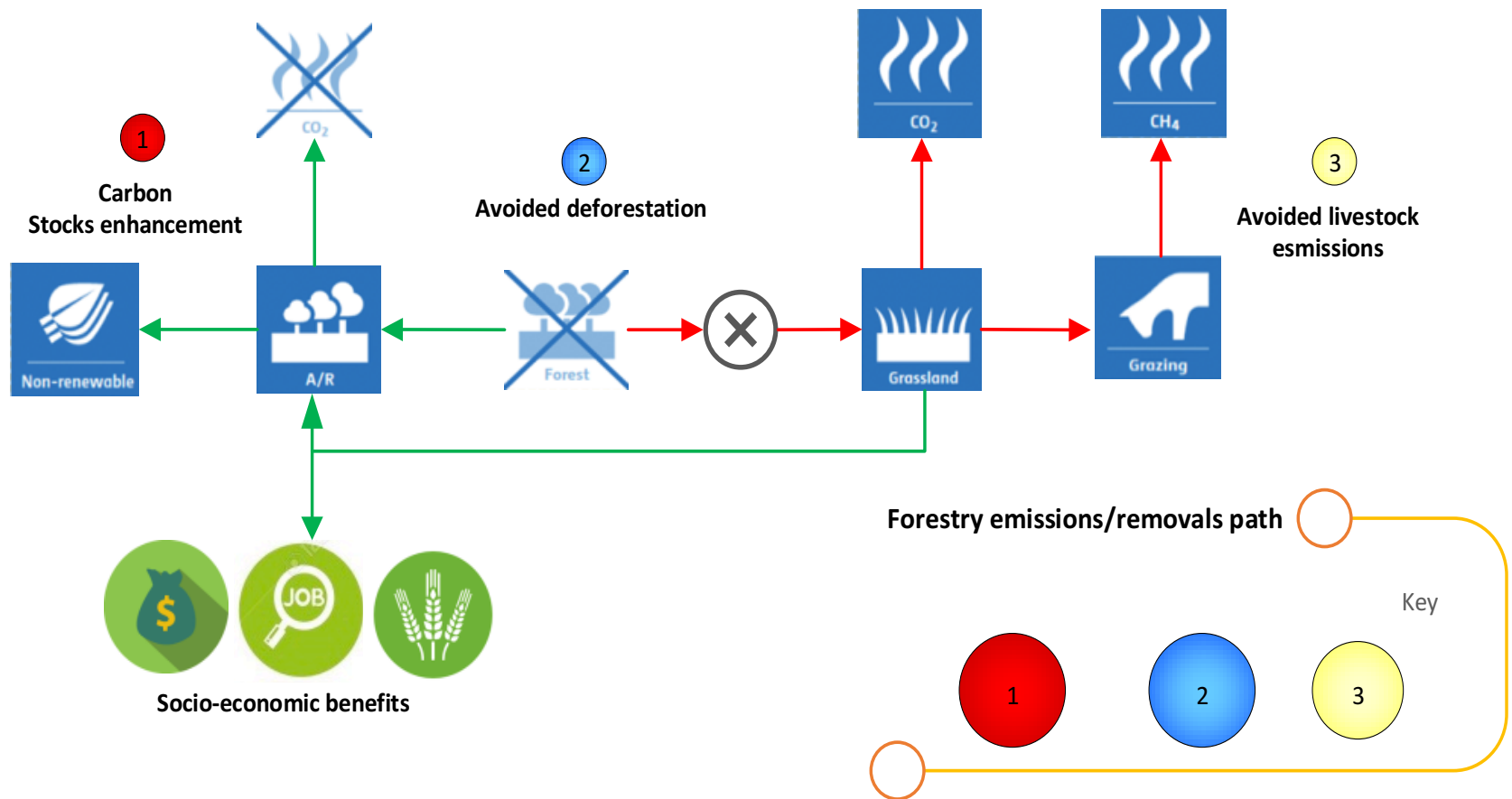
# Achievement

## Model work flow – cookstove



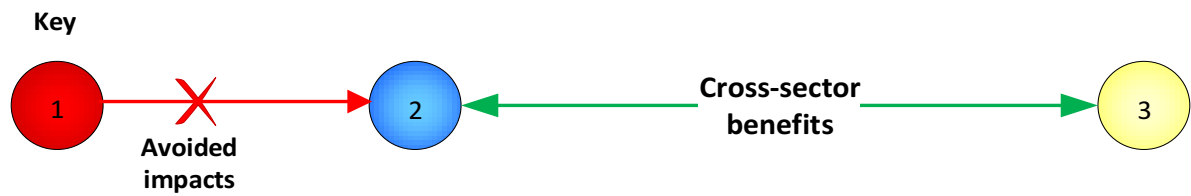
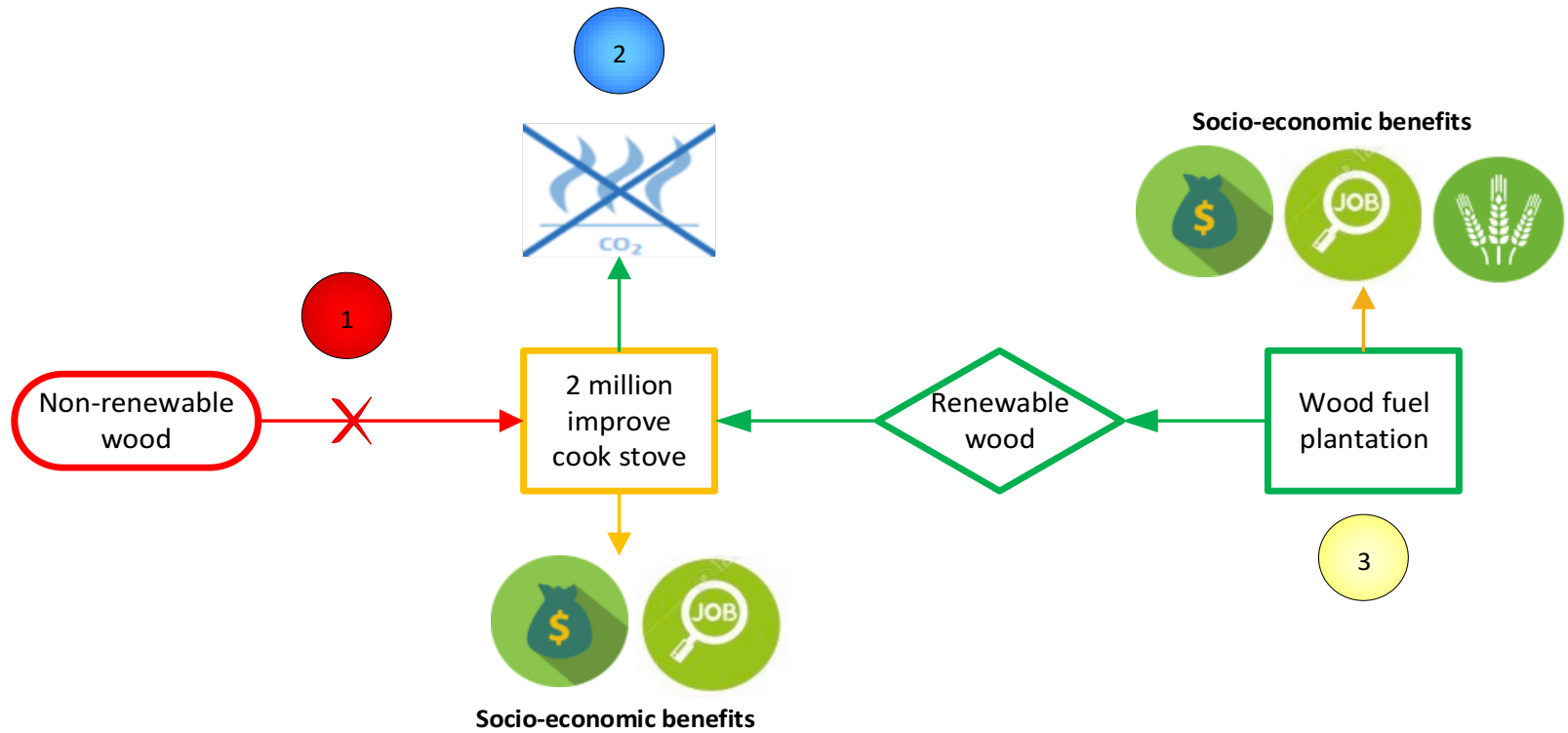
# Achievement

## Model work flow – woodfuel plantation



# Achievement

## Model work flow – soft-linking





# Achievement – key results

Year	GHG emissions				Jobs creation		Investments	Health
	Improved cookstove replacement	Establishment of biomass plantation on grassland	Renewable biomass for cooking	Totals	Cookstove replacement	Establishment of biomass plantation		Cookstove replacement
	CO <sub>2e</sub>	CO <sub>2</sub>	CO <sub>2e</sub>	CO <sub>2e</sub>	Numbers		Savings (\$)	Avoided death
2016	24,061.14	2,769,840.00	151,025.21	2,944,926.35	457.80	53,750	6,375,908	32.40
2017	29,596.77	2,769,840.00	301,290.44	3,100,727.21	560.72	107,500	7,857,259	37.81
2018	30,259.17	2,769,840.00	450,780.47	3,250,879.64	570.81	161,250	8,048,048	43.21
2019	30,934.37	2,769,840.00	599,520.64	3,400,295.01	581.08	215,000	8,242,641	48.61
2020	31,624.28	2,769,840.00	747,500.83	3,548,965.11	591.56	268,750	8,441,758	54.01
2021	32,309.66	2,769,840.00	894,690.63	3,696,840.29	601.83	322,500	8,640,478	66.13
2022	33,006.53	2,769,840.00	1,041,145.77	3,843,992.30	612.27	376,250	8,842,673	78.25
2023	33,716.80	2,769,840.00	1,186,840.92	3,990,397.72	622.88	430,000	9,049,073	90.37
2024	34,442.49	2,769,840.00	1,331,730.48	4,136,012.97	633.65	483,750	9,260,455	102.49
2025	35,180.01	2,769,840.00	1,475,900.58	4,280,920.59	644.59	537,500	9,475,440	114.61
2026	35,918.17	2,769,840.00	1,619,310.69	4,425,068.86	655.46	591,250	9,691,237	126.73
2027	36,671.31	2,769,840.00	1,761,900.02	4,568,411.33	666.48	645,000	9,911,954	138.85
2028	37,435.66	2,769,840.00	1,903,785.08	4,711,060.75	677.66	698,750	10,136,127	150.98
2029	38,213.24	2,769,840.00	2,044,910.16	4,852,963.40	689.00	752,500	10,364,544	163.10
2030	39,012.31	2,769,840.00	2,184,971.25	4,993,823.56	700.49	806,250	10,600,439	175.22

# Achievement



- ❖ The two NDCs mitigation actions when combined had more impacts than the expected emission reductions.
  - **Emission savings:** 59.75 million tonnes CO<sub>2</sub>eq by 2030.
  - **Revenues:** US\$ 134.94 million at US\$ 9 million annual average.
  - **Direct job:** 6,459,266 (manufacture of the improved cookstoves and the establishment woodfuel plantations).
  - **Avoided death :** 1,422.76 deaths due reduced indoor pollution

# Feedback to policy



- ❖ Revealed socio-economic benefits of climate actions beyond emission reductions.
- ❖ soft-linking utility of the model was also a great value addition.
- ❖ The integrated approach will enhance the analytical rigor of the data that will underpin Ghana's revised NDCs.
- ❖ This approach will also enhance communication of climate actions.

# Testimonials



- ❖ “The aim of the project is to establish an analytical framework to facilitate long-term LEDS policy decision making and implementation consistent with Ghana’s climate objectives and socio-economic development priorities as stipulated in the GH-NDCs and other LEDS plans.” **Ag. Executive Director, Environmental Protection Agency**

# Conclusion



- ❖ The LEDs analysis approach was largely insightful and achieved the purpose it was originally intended for in terms of:
  - strengthen capacity and awareness
  - facilitate policy assimilation of LEDs assessments
  - contribute to improving the analytical rigor behind the NDCs.
  
- ❖ The integrated modelling approach and consultation within the in-country team contributed to making the LEDs process a great success

# Next steps



- ❖ Synthesise the key results into key messages for dissemination among the key ministries and the general public.
- ❖ Continue to improve on the data quality for further improvements in the model in future.
- ❖ Use the experience and results from the LEDs to inform revision of Ghana's NDC for submission next year.



# Thank You!

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