



# Pilot Auction Facility for Methane and Climate Change Mitigation



**PILOT  
AUCTION  
FACILITY**



**CLIMATE  
AUCTIONS  
PROGRAM**

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**PILOT  
AUCTION  
FACILITY**

# Overview of the Pilot Auction Facility

# Pilot Auction Facility

## Challenge:

- 2010: Carbon credit prices collapsed, stranding methane abatement projects

## Opportunity:

### Methane Finance Study Group:

- 1,200 new methane mitigation projects were initiated, but not implemented, under carbon offset standards in developing countries, representing at least 850 Mt of CO<sub>2</sub>e in emission reductions over the period 2013 – 2020
- Abatement possible at < \$10/tCO<sub>2</sub>e

## Goal:

- Incentivize cost-effective private sector action to achieve methane abatement through a result-based finance mechanism

## PAF formation:

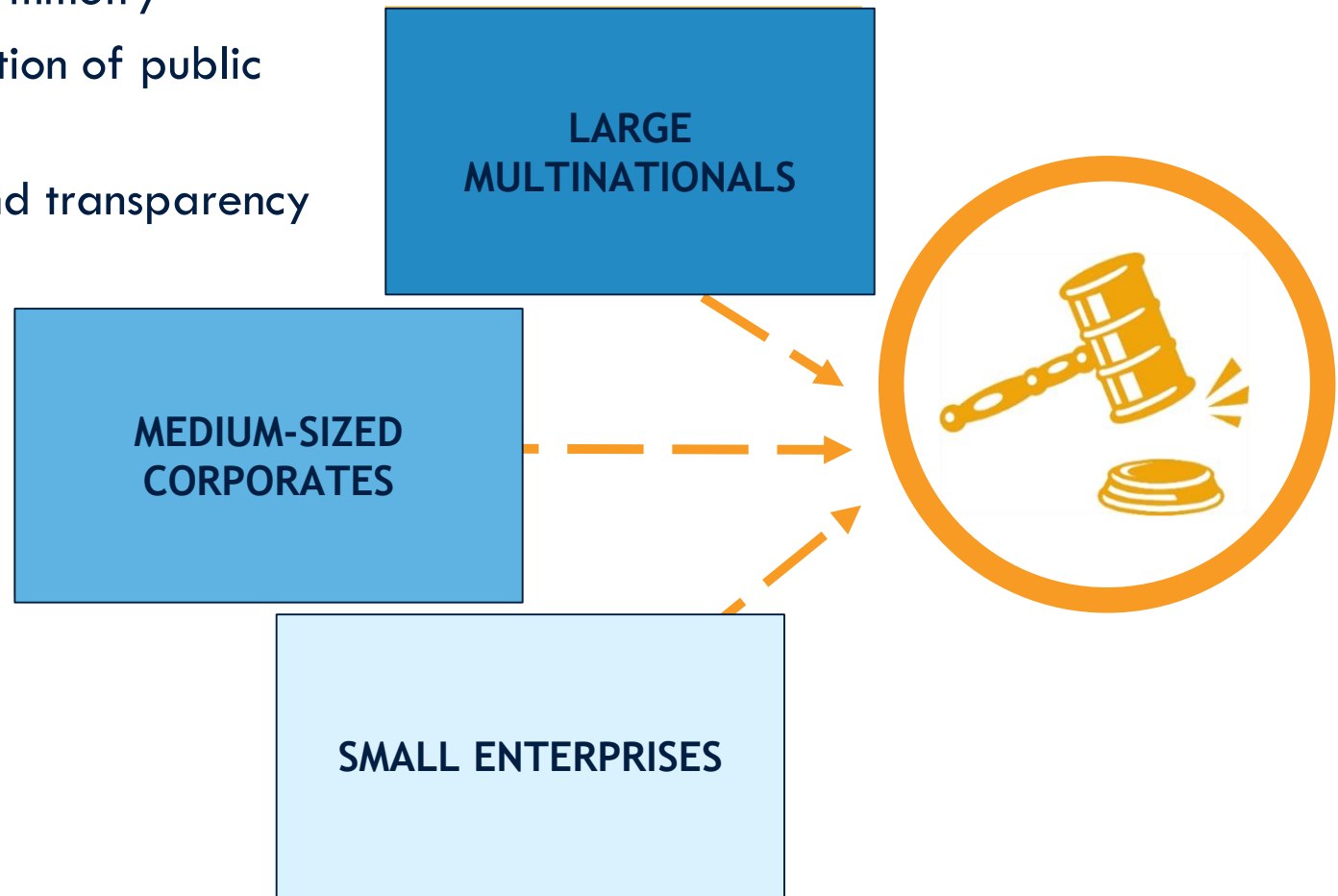
- Germany, Sweden, Switzerland, and the United States, contributed \$53 million in total resources to pilot climate auctions

# The Challenge

- **Efficient allocation of public funds to leverage private sector climate investments**
- **Public funders want to incentivize private sector climate activities**
  - Concerns include:
    - Identifying the minimum level of subsidy needed by companies
    - Minimizing the administrative burden of selecting mitigation activities
    - Allocating climate funds to unlock and leverage private investment
    - Paying only for real results
- **Companies make climate investments if they have a favorable risk-return profile**
  - Concerns include:
    - Uncertain revenues and return on investments
    - Perceived high costs of action
    - Opaque, bureaucratic processes for securing public funds

# Why Auctions?

- Price volatility and discovery
- Information asymmetry
- Efficient allocation of public resources
- Competition and transparency



# What does the PAF Sell?

- The PAF offers “put options” to guarantee a price floor for future climate results
- The options offer the right, but not the obligation, to deliver climate results to the facility at a guaranteed future price
- Bidders compete on the price at which they are willing to deliver eligible results to the facility in the future
- The bidders that offer to deliver eligible results at the lowest cost win the auction



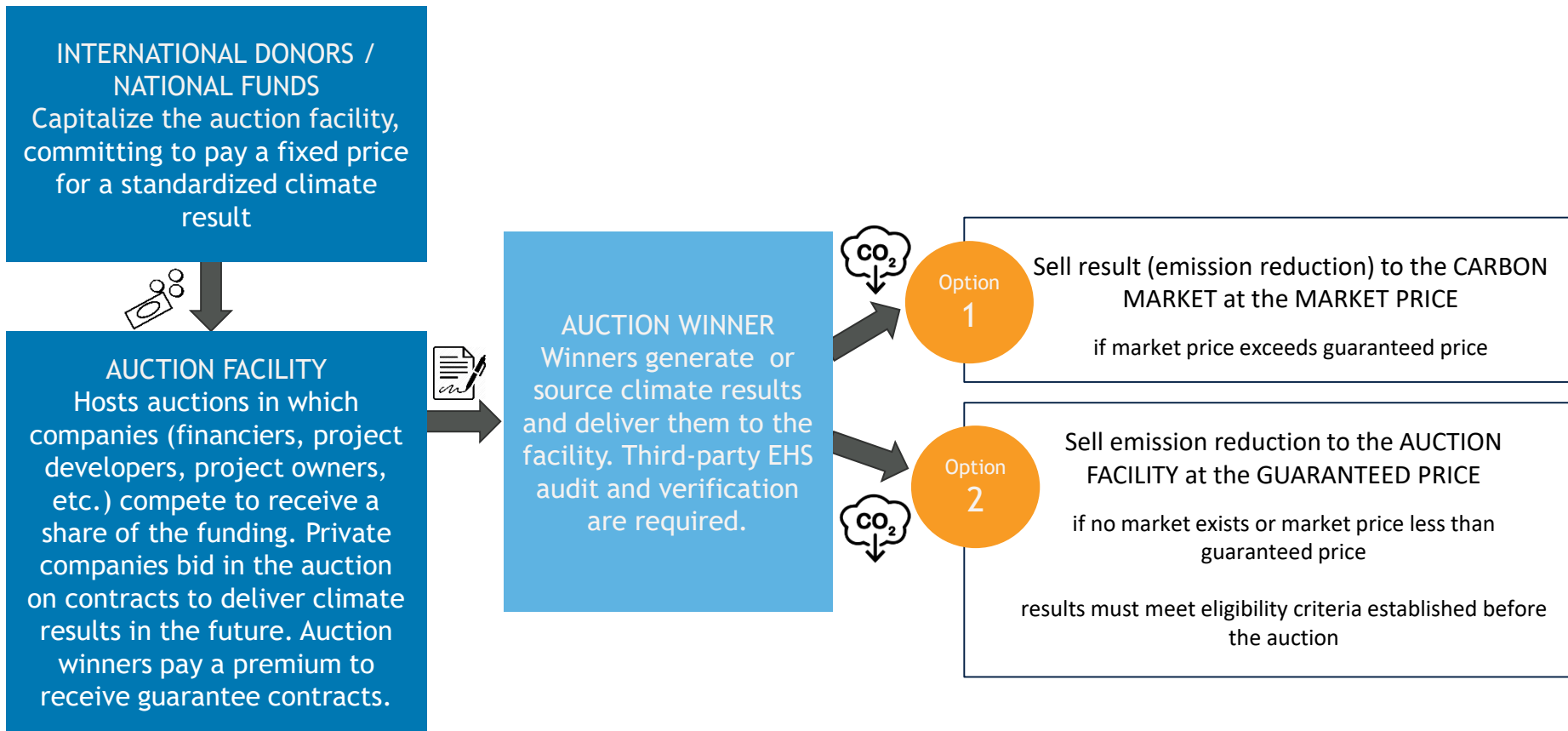
# How are companies paid for results?

- Option owners are only paid for independently verified results according to eligibility criteria established before the auction
- Auction winners purchase put options by paying an “option premium” price
- The options are tradable; if an option owner cannot deliver eligible results, it can sell its options to another person/company



# How do climate auctions work?

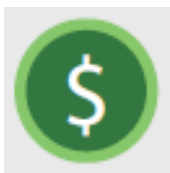
- A new approach, piloted by the World Bank, focuses climate funders on the ends and the private sector on the means



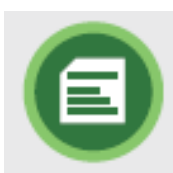


# Step-by-Step Process

## Pre-Auction



**Contributors  
Fund Facility**



**Set  
Criteria**



**Publicize  
Auction**

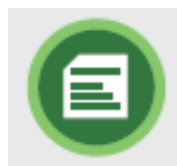


## Example: Bidder Perspective

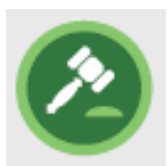
**Apply**



**Qualify for  
Auction**



**Auction**



**Purchase  
Contracts**



**Source  
ERs**



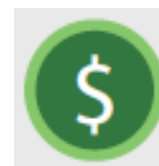
**Audits**



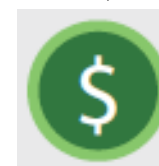
**Deliver  
Credits**



**Payout  
1**



**Payouts  
2 – 4 (or 5)**

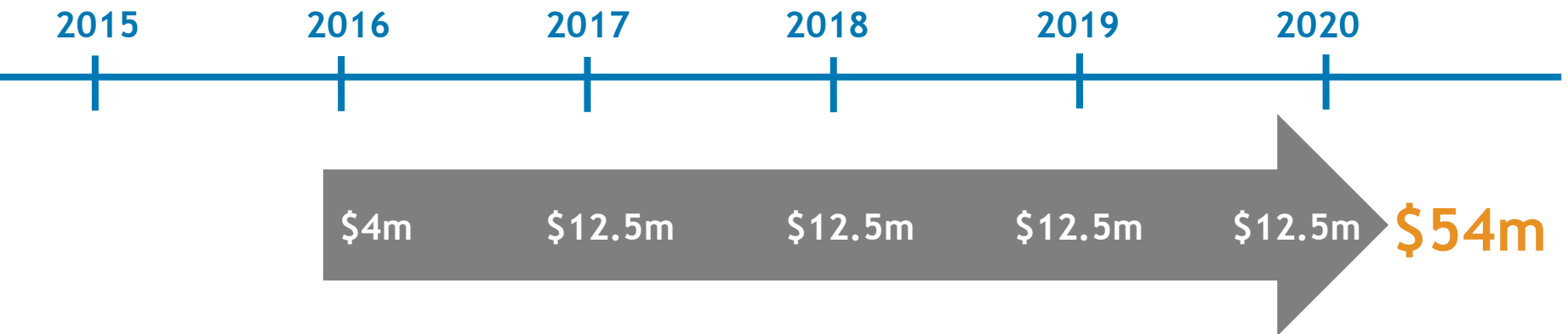


# PAF Auction Results

**Auction 3: Nitrous Oxide  
(January 2017)**

**Auction 2: Methane  
(May 2016)**

**Auction 1: Methane  
(July 2015)**



# PAF Auction Results

*Results of the pilot phase demonstrate low-cost mitigation potential*

	Auction 1 July 2015	Auction 2 May 2016	Auction 3 January 2017	Totals
Strike Price (\$/tCO <sub>2</sub> e)	\$2.40	\$3.50	\$2.10	
Premium Price (\$/tCO <sub>2</sub> e)	\$0.30	\$1.41	\$0.30	
Net Benefit (\$/tCO <sub>2</sub> e)	\$2.10	\$2.09	\$1.80	
Reductions (million tCO <sub>2</sub> e)	8.7	5.7	6.2	20.6
Climate Finance Allocated (USD million)	\$20.9	\$20.0	\$13.0	\$53.9
Premium Funds Raised (USD million)	\$2.6	\$8.0	\$1.9	\$12.5
Budget (USD million)	\$25.0	\$20.0	\$13.0	

# Pilot Auction Facility Impact

## Impact

- To date, \$24.2 million of climate finance has been paid to companies for verified eligible emission reductions
- 9.1 million tCO<sub>2</sub>e
- Supported landfill gas-to-energy in Brazil, Chile, India, Malaysia, Mexico, Thailand, and Uruguay; wastewater treatment & biogas utilization in Thailand; and nitrous oxide abatement in Egypt

## Risk sharing & leverage



80% climate finance    20% private sector funds

## Independent evaluation (2019)

- Auctions are a viable mechanism to allocate scarce funding for climate change mitigation and have potential for broad applicability
- Positive findings about WBG's role in delivering the auctions and bonds

# Climate Auction Model

Price guarantee for climate assets in the form of tradable options contracts



**MAXIMUM CLIMATE IMPACT PER DOLLAR  
OF PUBLIC RESOURCES**

# Opportunities for Replication and Scale

## ■ Nitric Acid Climate Auctions Program

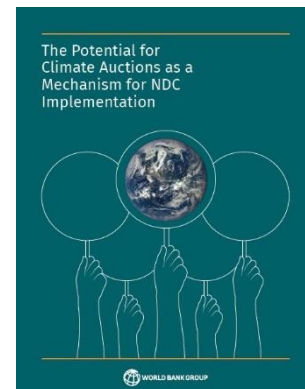
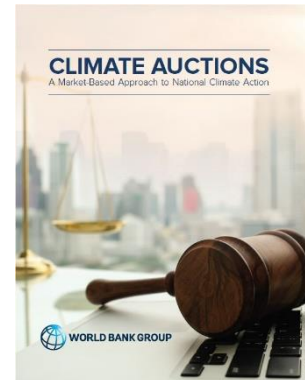
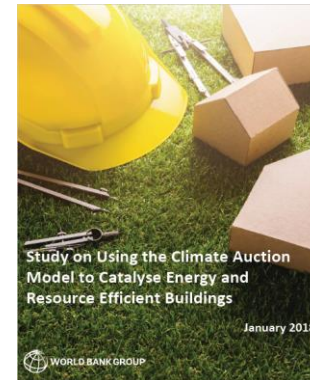
- Collaboration with Nitric Acid Climate Action Group
- Focused on abatement of nitrous oxide from nitric acid production
- Eligible countries TBD by political commitments by governments that agree to continue abatement of N<sub>2</sub>O from nitric acid production post-2024
- Risk sharing & leverage

## ■ Energy efficient green buildings

- Climate assets beyond CO<sub>2</sub>e: certification standards including Excellence in Design for Greater Efficiencies, LEED, etc.
- Current study focusing on affordable housing in Indonesia

## ■ Assisting countries to meet or raise ambition of Paris targets

- Climate auctions on the national or sub-national level



# Pilot Auction Facility: Fourth Auction Plans

# Pilot Auction Facility: Fourth Auction

## ■ Focus

- Methane emissions from landfill, wastewater treatment, and animal waste

## ■ Eligibility Criteria

- Carbon credits will be generated under the Clean Development Mechanism, Gold Standard, or Verified Carbon Standard
- Methodologies are listed on the PAF website
- Eligible countries for host projects are listed on the PAF website
- Emission reductions will be generated in 2020, between the time of the auction and December 31, 2020
- Credits must originate from a project with a passing Environmental, Health, Safety & Social audit report

## ■ Auction Timeline

- Auction date: Q1 calendar year 2020
- Payments in 2021

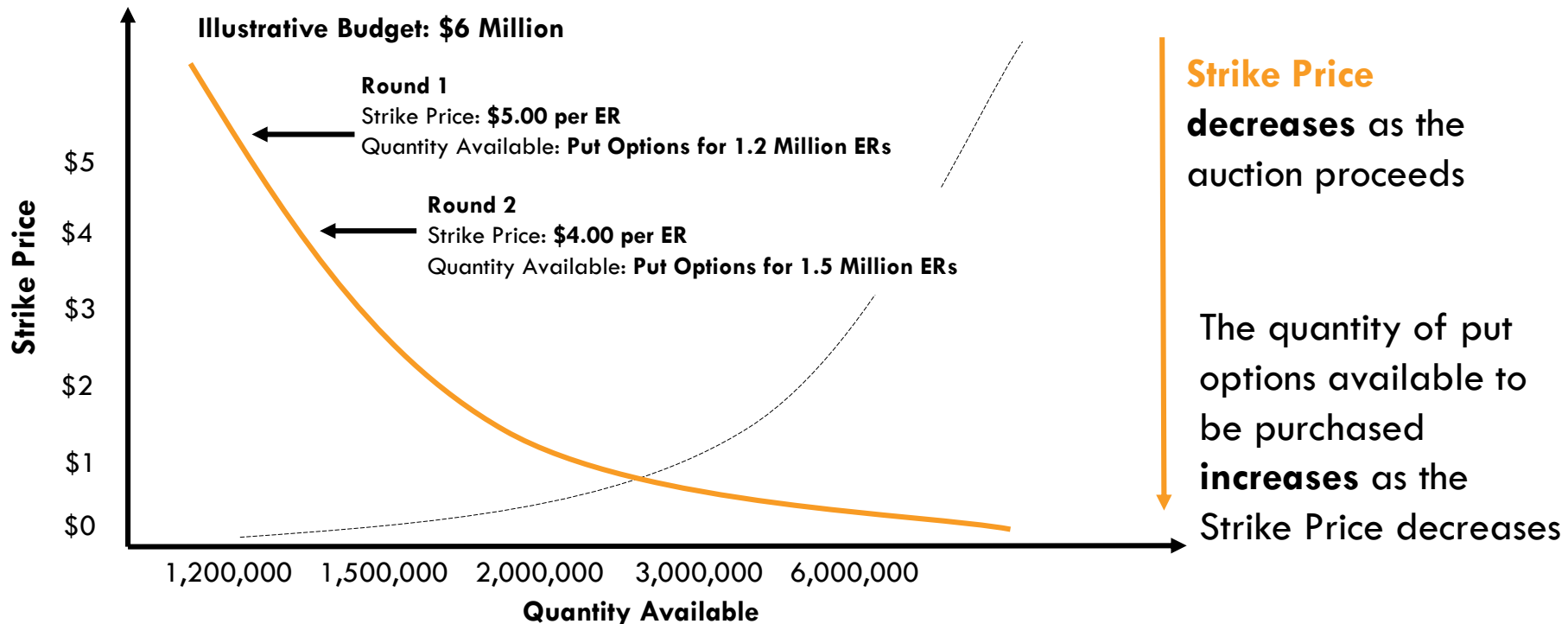
## ■ Auction Budget

- At least USD \$6 million



# Auction Format

- Auction participants will bid on the option's "**Strike Price**," which is the payment (i.e., reward) bidders receive in exchange for ERs on a future date
- The PAF will use a reverse **descending** clock auction where the option's premium (i.e., upfront cost) is fixed and bidders bid **down** the strike price



# Pilot Auction Facility: Application Process

- **Request bidder application package**
  - Participation Agreement
  - Integrity due diligence Questionnaire
  - Option draft final terms
  - Auction rules
- **Qualify to become a bidder in the auction**
  - Submit bidder application package
  - Pay refundable deposit (\$0.30 per ER)
  - Pass integrity due diligence screening
  - Attend auction training
- **Auction day**
  - Prepare bidding strategy (including proxy bids)
  - At each round, bid on a quantity of ERs (in tons) in response to the going price (in \$ per ER)
  - Bids can only be kept at the same level or lowered as the auction progresses

# Pilot Auction Facility: After the auction

## ■ **Successful bidders**

- Bid deposit is applied towards the premium price to purchase the contract
- Successful bidders take hold of the option (Through Citibank)
- Name of winners is published on the PAF website
- Generate or source eligible Emission Reductions (Or trade options)
- Obtain passing EHS audit report from a CDM DOE
- Transfer eligible ERs to the Verification Agent during the redemption period (Sep-Nov 2021)
- Receive payment for eligible ERs (Nov 2021)

## ■ **Unsuccessful bidders**

- Bid deposit is refunded (In US\$)
- Can still purchase options by directly contacting auction winners
- Can provide eligible credits to auction winners

# Next Steps

- **Request bidder application package**
  - Expected December 2019
  - [www.pilotauctionfacility.org](http://www.pilotauctionfacility.org)
- **Updates on PAF Website**
  - Eligibility criteria
  - Auction parameters
- **Upcoming Events**
  - Paris: November 19, 2019
  - London: November 20, 2019
  - Zurich: November 21, 2019
  - Webinars: November 19, 26 (English & Spanish); December 12
- **Contacts**
  - [PAF\\_Secretariat@worldbank.org](mailto:PAF_Secretariat@worldbank.org)
  - Stephanie Rogers
  - Tanguy de Bienassis



# **PILOT AUCTION FACILITY**

**for Methane and Climate Change Mitigation**

**Thank you for attending!**

**We are happy to answer your questions:**

**[PAF\\_Secretariat@worldbank.org](mailto:PAF_Secretariat@worldbank.org)**



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