

# Policy level engagement for Investment on scaling CSAPs at least one sub-national level government

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**Reporting 2017**

## **Flagship Project on**

Developing, adapting, and targeting portfolios of climate-smart agricultural practices for sustainable intensification of smallholder and vulnerable farming systems in South Asia (P 25)

Report by

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**CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS)**  
**International Maize and Wheat Improvement Center (CIMMYT)**

## 1. Background

There has been growing concern for policy level initiatives and investment priorities required for scaling climate smart agriculture practices (CSAPs). Over a period of 5 years (2013-2017), science based evidence has been generated on key scalable climate smart agriculture under the CCAFS flagship project on CSA in collaboration with CRPs on Wheat, Maize, Rice agri-food systems as well as range of partnerships (NARS, NGOs, Private Sector, Farmer organizations etc). CIMMYT-CCAFS in collaboration with number of sub-national, national and international stakeholders informed the key policy planners, Governments and development agencies on these CSAPs through several consultations, communication materials (policy brief, video, research articles etc), organizing several events (field days, travelling seminars, workshops, policy dialogues, training programs etc) and generated awareness among the different stakeholders. These systematic efforts have led to up scaling of CSAPs through their mainstreaming in investment programs to address the issue of natural resource degradation, environmental pollution and climatic risks. This document provides evidence base on policy level engagement process, partnerships and events for out-scaling CSAPs by the sub-national governments and other key stakeholders.

### 1. Sharing the evidence base with stakeholders/policy planners:

#### 1.1. Stakeholder consultations

Several stakeholder consultation were organized to inform the policy planners and other stakeholders including Government development departments, private sector organizations, farmer organizations, NGOs etc on CCAFS science based evidence on CSAPs. These consultations/stakeholder engagements led to policy level impacts for mainstreaming CSAPs in sustainable development plans. The key events/consultations organized are listed below-

There are workshops organized at multi-level partnerships to generate consensus over the required interventions and means to move forward

- **The Regional Policy Dialogue** organized dated 8-9 September, 2017 at Dhaka, Bangladesh jointly by the Trust for Advancement of Agricultural Sciences (TAAS) and Australian Center for International Agricultural Research (ACIAR) in collaboration with South Asian NARS, International Maize and Wheat Improvement Center (CIMMYT), Borlaug Institute for South Asia (BISA), International Center for Research in the Dry Areas (ICARDA) and Asia Pacific Association of Agricultural Research Institutions (APAARI). The participants (~50) includes senior policy makers, NARS leaders, development officials, researchers, donors, entrepreneurs and some progressive farmer as CA/CSA practitioners, NGOs etc. from across South Asian countries, representatives of CGIAR and advanced research institutions (CIMMYT, BISA, IRRI, ICARDA, ICRISAT, IWMI, IFPRI), research programs (CCAFS), donors (ACIAR, USAID, BMGF, ADB, NABARD, IFAD, World Bank) etc. The CCAFS science based

evidence from CSAPs from climate smart villages were shared through a keynote presentation in the dialogue.

- **Australian High Commission**-in-field dialogue at Ludhiana Australian high Commissioners visit to CIMMYT-BISA CCAFS sites at Ludhiana to see CSVs work specially on residue management and happy seeder on 19th Feb 2018
- **Stakeholder dialogue on sharing key learnings on sustainable and scalable solutions for rice residue management** organized dated 15 March 2018 at ICAR-ATARI, Ludhiana, Punjab jointly by ICAR-Agricultural Technology Application Research Institute (ICARATARI), Ludhiana in collaboration with Punjab Agricultural University (PAU), International Maize and Wheat Improvement Centre (CIMMYT), Borlaug Institute of South Asia (BISA) & supported by ICARNICRA, Government of Punjab, CGIAR Research Programs on Climate Change, Agriculture & Food Security and Wheat Agri-Food Systems. Around 150 key stakeholders including researchers, farm innovators, progressive farmers, manufacturers, senior officials of Governments of Punjab and Haryana; farmer commissions of Punjab and Haryana, , NABARD, Punjab Pollution Control Board (PPBC), ICAR institutes (IIMR, Ludhiana, CIPHET, Ludhiana, CSSRI, Karnal, IIWBR, Karnal, NDRI, Karnal, DMR, Solan, CPRI, Jalandhar), CIMMYT, BISA, Program Coordinators of KVKs, private companies etc. participated in the dialogue and shared their key learnings to make the robust strategies, action plans and implementation for out scaling sustainable residue management solutions. Padma Bhushan Dr R S Paroda, Ex Secretary, DARE and DG, ICAR & Chairman TAAS graced the dialogue as Chief Guest and Dr B S Dhillon, Vice Chancellor, PAU was chair while Dr Ramesh Yadav, Chairman Haryana Farmer Commission and Dr BS Sidhu, Commissioner Agriculture, Punjab were Guests of Honour
- **Round Table Dialogue on Issues, options and investment priorities for conserving natural resources, addressing climate change and air pollution** organized dated 9 April, 2018 at NASC, Pusa, New Delhi jointly by Trust for Advancement of Agricultural Sciences (TAAS), International Maize and Wheat Improvement Center (CIMMYT), Indian Council of Agricultural Research (ICAR) and the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). Around 50 senior policy planners from NITI Ayog, Ministry of Agriculture & Farmers Welfare, Govt of India, Ministry of Environment, Forest & Climate Change, Govt of India, Senior policy planners from the state governments, research leaders from ICAR, State Agriculture Universities, CGIAR Centres, Advanced institutions, NGOs, agricultural experts, and the potential donor organisations are expected to participate in the round table deliberations.

## 1.2. Communication materials

Using the CCAFS science based evidence generated from the Flagship project on CSA/CSVs, several policy briefs, videos, media reports etc (listed below) were developed and shared with key stakeholders specially policy planners, which led to large investments by the national as well as sub-national Government.

- Policy brief on Agricultural Policies and Investment Priorities for Managing Natural Resources, Climate Change and Air Pollution

[https://www.dropbox.com/preview/CCAFS%20reporting%202017/Policy%20Brief\\_Agricultural%20Policies%20and%20Investment%20Priorities.pdf?role=personal](https://www.dropbox.com/preview/CCAFS%20reporting%202017/Policy%20Brief_Agricultural%20Policies%20and%20Investment%20Priorities.pdf?role=personal)

- NAAS Policy brief <http://naasindia.org/CropBurning.pdf>
- TNC-CIMMYT-CCAFS EVERGREEN REVOLUTION <https://www.nature.org/science-in-action/the-evergreen-revolution.pdf>
- IPNI-TAAS-CIMMYT-ICAR Policy Brief on Potassium Nutrition <http://www.taas.in/documents/pub56.pdf>
- TAAS-ACIAR-CIMMYT policy <http://www.taas.in/documents/pub57.pdf>

## Videos

<http://cprindia.org/news/6708>

<https://www.youtube.com/watch?v=vEjtTHyw9Fk&feature=youtu.be>

<https://www.youtube.com/watch?v=VPsNVqBM2K4&feature=youtu.be>

## Blogs

<http://www.cimmyt.org/innovation-leads-south-asias-new-green-revolution/>

<https://www.cimmyt.org/new-publications-adopting-climate-smart-agricultural-practices/>

<http://www.cimmyt.org/better-farmer-access-to-machinery-eases-crop-residue-burning-in-india/>

<http://www.cimmyt.org/advice-for-indias-rice-wheat-farmers-put-aside-the-plow-and-save-straw-to-fight-pollution/>

## 2. Policy level engagement for investments by sub-national/national government:

Agriculture continues to be an engine of inclusive and accelerated economic growth and livelihood opportunities for the millions of smallholder farmers. Agriculture in North-West India (Punjab, Haryana), having made significant strides in food production and contributions in national food pool and Indian economy is now facing enormous challenges. However, the present day agriculture in the food bowl is confronted with daunting problems of hydrological imbalances, soil degradation, labour shortage, inefficient input use, decline in factor productivity, and high production costs, resulting in low returns to farmers. Agriculture has also emerged as a major contributor to air pollution, creating significant health hazards. The adverse effects of climate change and deterioration in quality of resource base (soil, water and biodiversity) as well as environment (especially air and temperature) poses new threats for the long- term sustainability of agriculture. Therefore, despite significant success on all fronts, it is increasingly being realized that the strategies adopted in the past for agricultural growth now need to be adjusted to address the country's emerging development challenges and opportunities in a comprehensive manner.

To address some of the critical issues related to climatic risks and agricultural air pollution, the evidence on scalable and sustainable solutions generated by CCAFS and partners have led to a major policy impact and large investments by the Governments.

Validating the success of CSAPs farmers were motivated at scale to adopt the technology. Successfully addressing the concerns of the farmers, the evidence base was used to convince policy makers in integrating agricultural development investment in their investment portfolio.

**Government investment plans on in-situ residue management** (primarily driven by the CCAFS science informed policy brief released by NAAS and shared with Prime Minister's office)

<https://economictimes.indiatimes.com/news/politics-and-nation/rs-2000-crore-roadmap-to-end-stubble-burning-submitted-in-sc/articleshow/61865904.cms>

**The Govt of India allocated Rs 1,000 crore in budget to tackle the problem of stubble burning, among other agriculture development initiatives**

<https://economictimes.indiatimes.com/news/politics-and-nation/rs-1000-crore-plan-to-curb-stubble-burning-air-pollution-in-ncr/articleshow/62645643.cms>

[https://timesofindia.indiatimes.com/city/delhi/rs-1k-cr-plan-to-curb-stubble-burning/articleshow/62641633.cms?utm\\_campaign=andapp&utm\\_medium=referral&utm\\_source=whatsapp.com&from=mdr](https://timesofindia.indiatimes.com/city/delhi/rs-1k-cr-plan-to-curb-stubble-burning/articleshow/62641633.cms?utm_campaign=andapp&utm_medium=referral&utm_source=whatsapp.com&from=mdr)

**There are various subsidy provisions made to promote adoption of climate smart technologies and varied models for large scale adoptions and majorly Happy Seeder have suggested**

<https://timesofindia.indiatimes.com/city/delhi/subsidise-purchase-of-agri-equipment-to-curb-stubble-burning-suggests-pmo-appointed-panel/articleshow/62397714.cms?from=mdr>

<https://amp.cnn.com/cnn/2018/02/01/health/india-air-pollution-crop-burning-subsidy-intl/index.html>

<https://www.cimmyt.org/advice-for-indias-rice-wheat-farmers-put-aside-the-plow-and-save-straw-to-fight-pollution>

**Looking at the proactive government interventions, machinery manufacturers are coming ahead offering their comparative advantage in addressing the issue of residue management.**

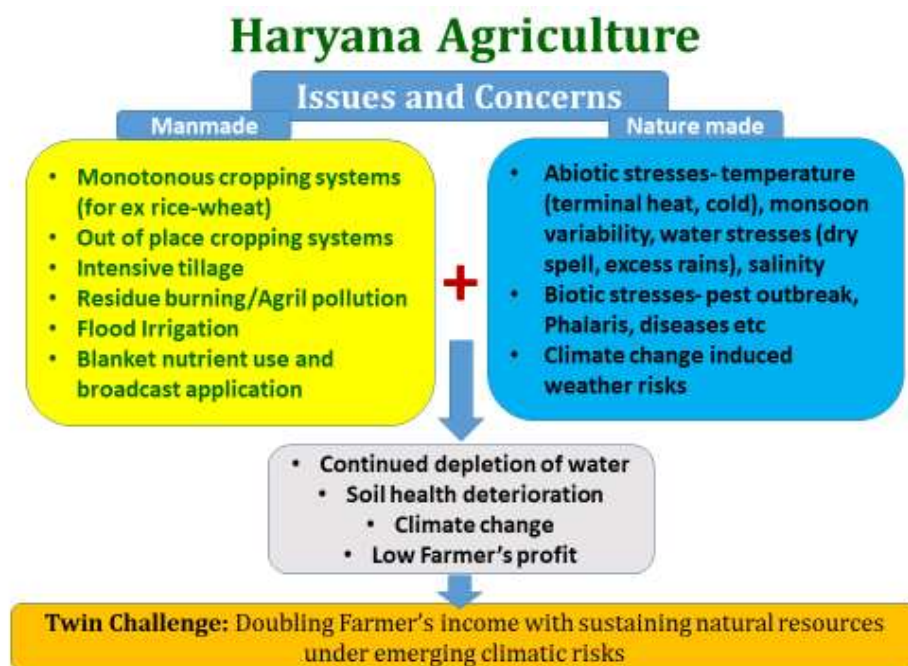
<https://economictimes.indiatimes.com/news/economy/agriculture/new-holland-agri-offers-tech-solutions-to-reduce-crop-burning/articleshow/61852349.cms>

<https://www.cimmyt.org/better-farmer-access-to-machinery-eases-crop-residue-burning-in-india/>

<https://www.financialexpress.com/india-news/delhi-air-pollution-crisis-miracle-ths-is-the-solution-to-stubble-burning-problem-but-there-is-a-catch/927649/>

### 3.1. Sub-national engagement in Haryana:

CIMMYT-CCAFS is working closely with Govt of Haryana on Climate Smart Agriculture/Climate Smart Villages. For large scale dissemination of CSA/CSV, Director General Agriculture, Department of Agriculture, Govt of Haryana dissemination technical backstopping and capacity development for this CSA/CSV project to CIMMYT.



Considering the alarming pressure/stress on the natural resources (land, water & environment) compounded with climate change induced growing weather risks, the Government of Haryana have initiated an exclusive and focused project on **“Scaling-up Climate Resilient Agriculture Practices towards Climate Smart Villages in Haryana”** funded by NABARD. International maize and Wheat Improvement Center (CIMMYT) having a long history of partnership with Department of Agriculture, Government of Haryana and have been working on the issues of natural resources and climate smart agriculture in addition to introduction of stress tolerant high yielding varieties of wheat and maize through NARS. In the NABARD funded project on climate smart villages, CIMMYT has been involved since the proposal development stage as a technical backstopping partner. Borlaug Institute for South Asia (BISA), a joint initiative of CIMMYT and ICAR being located at Ludhiana, Punjab is proactively working on new science and capacity development on natural resource management, conservation agriculture, residue management, precision water management,



climate smart agriculture. Hence, being strategically situated in the proximity, will add to the efforts for capacity development and new innovations.

### Adoption of Farm Innovations while Ensuring Efficiency and sustainability Agricultural Systems Depends on Complex Interactions



In the review meeting of the project held under the chairmanship of Shri DK Behra, Director Agriculture, Govt of Haryana at Krishi Bhawan, Panchkula on 9<sup>th</sup> February 2018, a decision was taken that CIMMYT will provide all the technical backstopping including training/capacity development/training material etc in implantation of the project. Accordingly, a proposal has been developed for needed funds for the activities/responsibility assigned to CIMMYT-CCAFS/BISA.

From

Addl. Director Agriculture (Extn.),  
Directorate of Agriculture and Farmers Welfare,  
Haryana, Panchkula.

To

Dr. M.L. Jat,  
Principal Scientist/System Agronomist,  
CIMMYT, NASC Complex,  
Pusa, New Delhi.

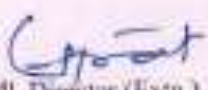
Memo No. 404 /ADA (Extn.)  
Panchkula, Dated : 11.05.2018

**Subject:- Proposal for Technical Support in Implementation of Climate Smart Villages Project in Haryana.**

With reference to your proposal for "Technical Support in Implementation of Climate Smart Villages" submitted to Director Agriculture on 27<sup>th</sup> April 2018, this is for your information that the same has been accepted. The total cost of the Technical Support will be Rs. 403 lac alongwith other details as given under:

Sr. No	Activity	Fund requirement (INR in Laacs)		
		Year-1	Year-2	Total
1	Highly qualifies human resources (03)	40.0	40.0	80.0
2	Targeting and identifying different climate smart interventions in targeted climate vulnerable villages in Haryana as per farmer's socio economic and bio-physical conditions- <i>Village survey data analysis for prioritizing technologies</i>	30.0	-	30.0
3	Training/capacity development/traveling seminars/exposure visit of key stakeholders	35.0	35.0	70.0
4	Contribute to workshops/reporting/training material/communication material	40.0	40.0	80.0
5	Travel costs (mobility to pilot sites and to project implementing teams)	10.0	10.0	20.0
6	Operational cost	35.0	35.0	70.0
	Institutional charges	29.0	24.0	53.0
	<b>TOTAL</b>	<b>219</b>	<b>184</b>	<b>403</b>

You are requested to submit district wise action plan at the earliest for the implementation of various interventions/activities for successful implementation of the project.

  
Addl. Director (Extn.),  
Directorate of Agriculture and Farmers Welfare,  
Haryana, Panchkula



### 3.2. Sub-national government of Punjab investing in residue management

[http://www.business-standard.com/article/economy-policy/-happy-seeder-machines-by-govt-to-tackle-paddy-problem-110062300002\\_1.html](http://www.business-standard.com/article/economy-policy/-happy-seeder-machines-by-govt-to-tackle-paddy-problem-110062300002_1.html)

<https://timesofindia.indiatimes.com/city/chandigarh/agri-varsity-ppcb-discuss-crop-residue/articleshow/61635127.cms>

### 3.3. Sub-national Government Bihar's initiative on scaling CSAPs through CSVs

Bihar government has allocated Rs 68,500 crore for climate change sensitive departments in the current fiscal in September 2016. The state government said that the money spent would protect its people from calamities caused due to the climate change

[https://www.business-standard.com/article/economy-policy/bihar-allocates-rs-68-500-cr-for-climate-chage-sensitive-departments-117092600920\\_1.html](https://www.business-standard.com/article/economy-policy/bihar-allocates-rs-68-500-cr-for-climate-chage-sensitive-departments-117092600920_1.html)

The report also highlights the strong need for the technical capacity building to improve understanding of climate change and the environment, both in technical institutions and in the key line departments. For this building of technical capacity there is proposal submitted on Scaling up Climate Smart Agriculture (CSA) through Mainstreaming Climate Smart Villages (CSVs) in Bihar in which the strategic & technical Support is to be provided by CIMMYT-CCAFS in collaboration with parthers. It is sanctioned by National Adaptation Fund for Climate Change (NAFCC), Ministry of Environment, Forest and Climate Change, Government of India.

<http://bameti.org/wp-content/uploads/2017/08/ractified-DFID-project-proposal-2-dated-10-06-2017.doc>

There are further steps taken for implementation for which National adaptation fund for climate change scaling up climate smart agriculture through mainstreaming CSVs in Bihar, BAMETI partnered with CIMMYT-CCAFS for scaling CSVs



## बिहार कृषि प्रबंधन एवं प्रसार प्रशिक्षण संस्थान (बामेती)

निकट सी.पी.आर.एस., पो.ऑ., बिहार भेटनरी कॉलेज, जगदेव पथ, पटना 800 014  
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पत्रांक: 89/बामेती/2016-17/410

दिनांक 22.02.18

प्रेषक,

गणेश राम  
निदेशक,  
बामेती, बिहार, पटना

सेवा में,

प्रधान सचिव, कृषि, बिहार, पटना  
प्रधान सचिव, पर्यावरण एवं वन विभाग, बिहार, पटना  
कुलपति, डा0 राजेन्द्र प्रसाद केन्द्रीय कृषि विश्वविद्यालय, पूसा, समस्तीपुर  
कुलपति, बिहार कृषि विश्वविद्यालय, सबौर, भागलपुर  
निदेशक कृषि, बिहार, पटना  
निदेशक उद्यान, बिहार, पटना  
प्रबंध निदेशक, बिहार राज्य बीज निगम, बिहार, पटना  
निदेशक, आई0सी0ए0आर0 पूर्वी क्षेत्र, पटना  
निदेशक पी0पी0एम0, बिहार, पटना  
निदेशक मूग्नि संरक्षण, बिहार, पटना  
निदेशक पर्यावरण एवं पारिस्थितिकी, बिहार, पटना (विशेष आमंत्रित सदस्य)  
मुख्य महाप्रबंधक, नाबार्ड, पटना  
डा0 एम0एल0 जाट, वरीय वैज्ञानिक, सिमिट, नई दिल्ली  
उप निदेशक (शस्य), टाल,दियारा एवं चौर-सह- इस परियोजना के नोडल पदाधिकारी  
डा0आर0के0जाट, वरीय वैज्ञानिक, सिमिट-बीसा, पूसा, समस्तीपुर

विषय- National Adaptation fund for climate change अंतर्गत Scaling up Climate Smart Agriculture (CSA) through mainstreaming Climate Smart Villages (CSV) in Bihar परियोजना के कार्यान्वयन हेतु कृषि उत्पादन आयुक्त, बिहार, पटना की अध्यक्षता में उनके कार्यालय कक्ष में दिनांक 28.02.2018 को 3.00 बजे अपराह्न में आयोजित होने वाली विशेष बैठक में भाग लेने के संबंध में।

महाराज,

उपर्युक्त विषय के संबंध में निदेशानुसार सूचित करना है कि National Adaptation Fund for Climate Change (NAFCC) अंतर्गत कृषि विभाग द्वारा Scaling up Climate Smart Agriculture (CSA) through mainstreaming Climate Smart Villages (CSVs) in Bihar से संबंधित 25 करोड़ ₹ का परियोजना पर्यावरण एवं वन विभाग, बिहार सरकार के माध्यम से पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, जलवायु परिवर्तन सम्भाग भारत सरकार को कृषि विभाग द्वारा भेजा गया था। इसके आलोक में पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार के पत्रांक 16/14/2016-CC दिनांक 27.12.2017 के द्वारा कुल 23,06,62,000 ₹ के परियोजना की स्वीकृति प्रदान की गई है। इस योजना के कार्यान्वयन हेतु प्रथम किस्त के रूप में 11,53,31,300 ₹ भारत सरकार द्वारा नाबार्ड को विमुक्त किया गया है। नाबार्ड द्वारा राशि कृषि विभाग को उपलब्ध कराया जाना है। कृषि विभाग को राशि उपलब्ध कराने हेतु नाबार्ड द्वारा प्रतिवेदन की मांग की जा रही है। इस योजना/परियोजना के कार्यान्वयन हेतु राज्य स्तर पर कृषि उत्पादन आयुक्त, बिहार, पटना की अध्यक्षता में एक स्टेयरिंग कमिटी का गठन किया गया है जिसके आप सदस्य हैं। इस योजना के कार्यान्वयन हेतु संलग्न कार्यवाली पर विचार-विमर्श के लिए कृषि उत्पादन आयुक्त, बिहार, पटना की अध्यक्षता में दिनांक 28.02.2018 को 3.00 बजे अपराह्न कृषि उत्पादन आयुक्त, बिहार, पटना के कार्यालय कक्ष में विशेष बैठक के आयोजन की तिथि निर्धारित है।

1. To widespread CIMMYT-CAAFS initiatives to other locations there are efforts made to widespread policy reach.

[Stakeholder Dialogue on residue management.pdf](#)

<http://abpnews.abplive.in/india-news/highcourt-questions-to-state-government-over-parali-burning-868102>

After long discussions and working on the same platform there is consortium formed addressing the residue management issue. The consortium involves partners from private, national and international sectors bringing in their area of expertise to construct win-win mechanism.

There are studies made in collaboration with partners on more effective research outputs for agricultural development to integrate findings in policy decisions.

<https://www.cimmyt.org/new-publications-adopting-climate-smart-agricultural-practices/>

## 2. Other material

### About Turbo Happy Seeder

[https://www.youtube.com/watch?v=y9EONsolfxg&list=PLjXdzeDP\\_y5Fslzq28xphnLpVhpl1um21&index=3](https://www.youtube.com/watch?v=y9EONsolfxg&list=PLjXdzeDP_y5Fslzq28xphnLpVhpl1um21&index=3)

<http://www.tehelka.com/2017/11/stubble-burning-farmers-not-alone-in-blame/>

<http://www.krishijagran.com/news/innovative-viable-solution-to-rice-residue-burning/>