Supplementary table 1: Overview of research supported by the PIIVeC programme in Burkina Faso, Cameroon, and Malawi

Total research projects at each level (N= 49)	**VBD[1] of focus**	**Policy themes (P) for operational research and the research projects (R)**	**Research type***	**Affiliation**
Burkina Faso (n=12)				
Operational research commissioned by TVCAG[2] (n=4)	Malaria & dengue	**P**: Evaluation of endogenous knowledge and practices in vector control (Contribution of endogenous knowledge in the management of neglected tropical diseases (NTDs), investigation of substances having an impact on NTDs/ impact of bio-pesticides in vector control) **R**: Contribution of endogenous knowledge and practices employed in the Hauts Basins and Cascades regions to the fight against malaria and dengue fever in Burkina Faso: Assessment of the repellence and anti-larval power of odorous plants.	Operational	IRSS[3]
	Dengue	**P**: Community integration/integration system or the involvement of urban communities in the fight against dengue fever and other vector-borne diseases: ownership of the fight by the population **R**: Evidence of commitment and community participation for the control of dengue vectors in urban areas in Burkina Faso.	Operational	CNRFP[4]
	Cross cutting all VBDs[1]	**P**: Assessing the impact of herbicide and disinfectant use on vector resistance **R**: Screening of herbicides used in agriculture and their impact in the selection of resistance of disease vectors in four regions of western Burkina Faso.	Operational	IRSS[3]
	Cross cutting all VBDs[1]	**P**: Take stock of pesticides used in agriculture and health and investigate the flow of insecticides in Burkina Faso **R**: Status of pesticides used in Burkina Faso and risk factors for the development of resistance to insecticides in vector populations.	Operational	IRSS[3]
RCDFs[5] (n=4)	Arboviral infections**	**R**: Peri-domestic ecology and behaviour of *Aedes aegypti*: A West African evidence base for effective control of urban arboviruses	Implementation	CNRFP[4]
	Malaria & filariasis	**R**: Impact of native Wolbachia symbionts in host mosquito *Anopheles gambiae s.l.*	Basic	IRSS[3]
	Cross cutting all VBDs[1]	**R**: Analysis of financing mechanisms for vector-borne diseases control in Burkina Faso	Implementation	CNRFP[4]
	Onchocerciasis	**R**: Development of efficient traps and targets for the xenomonitoring of the population of *Simulium damnosum s.l* in the south-west region of Burkina Faso	Implementation	IRSS[3]
ECRs[6] (n=4)	Arboviral infections**	**R**: Loss of susceptibility to pirimiphos-methyl in *Aedes aegypti* from Burkina Faso	Basic	CNRFP[4]
	Malaria	**R**: Characterization of microbiome of Anopheles *gambiae s.l* in a biological control perspective in Burkina Faso	Basic	IRSS[3]
	Malaria	**R**: Analysis of malaria effect on the performance of the cotton sector: Spill over effects on Industry and Trade in Burkina Faso.	Implementation	CNRFP[4]
	Onchocerciasis	**R**: Characterization and mapping of blackflies breeding sites for geographically targeted vector control perspective to accelerate onchocerciasis elimination in Burkina Faso	Implementation	IRSS[3]
Cameroon (n=21)				
Operational research commissioned by TVCAG[2] first call (n=7)	Malaria	**P**: Assessment of the efficacy of new insecticide-treated nets to be distributed in mass campaign in 2019 against major malaria vectors in Cameroon **R**: Evaluation of the quality control of the LLINs[7] of the 2019 campaign in four zones of Cameroon	Operational	PNLP[8]
	Malaria	**P**: Evaluation of the effectiveness of new control tools against malaria vectors in Cameroon. **R**: Assessing the effectiveness of LLINs[7] against major malaria vectors in Cameroon using experimental huts	Operational	CRID[9]
	Arboviral infections**	**P**: Circulation of arbovirus and behaviour of main vectors. **R**: Arboviruses circulation in rural Cameroon and behaviour of their main vectors	Operational	CRID[9]
	Schistosomiasis	**P**: Chemical control of intermediate hosts of schistosomes using niclosamide **R**: Accelerating elimination of schistosomiasis in Cameroon using Niclosamide for snail control	Operational	University of Yaoundé I
	Onchocerciasis	**P**: Vector control pilot study in an onchocerciasis focus using environmentally friendly insecticide such as temephos. **R**: Susceptibility of Simulium damnosum larvae of the Nkam River Basin to Abate (Temephos): Implications to VC[10] for the acceleration of the elimination of onchocerciasis in the area	Operational	University of Buea
	Leishmaniasis	**P**: Establishing evidence of leishmaniasis transmission by sand flies in north Cameroon. **R**: Ecological distribution of phlebotomine sand fly species of Kousseri, visceral leishmaniasis focus in northern Cameroon	Operational	University of Dschang
	HAT[11]	**P**: Measuring the entomological risk of HAT transmission in active foci. **R**: Evaluation of the risk of transmission of sleeping sickness in the Bipindi focus (South Region, Cameroon): an important decision-making tool to move towards elimination	Operational	CRFilMT[12]
Operational research	Malaria	**P**: Assessing the efficacy of new tools in the context of pyrethroid resistance **R**: Investigating the efficacy of Piperonyl butoxide (PBO)-nets and new generation nets in the context of pyrethroid resistance	Operational	CRID[9]
	Arboviral infections**	**P**: Assessing the circulation of tick-borne diseases in Cameroon **R**: Impact of cattle breeder's knowledge of ticks control and prevention: prevalence of tick-borne encephalitis and Crimean Congo viruses	Operational	University of Yaoundé I
	Schistosomiasis	**P**: Assessing the cartography and transmission role of schistosome vectors in one of the three most infected region of Cameroon **R**: Assessing the cartography and transmission role of schistosome vectors in Adamawa region, Cameroon	Operational	University of Yaoundé I

commissioned by TVCAG[2] second call (n=6)	Filariasis	**P**: Conducting a pilot study to reduce *Similium* densities in highly infected sites **R**: Pilot study on the ground larviciding using Temephos to control S. damnosum in the Nkam drainage system at the Solleh health area (Health District) in the Littoral region	Operational	University of Buea
	Leishmaniasis	**P**: Identifying Leshmania species responsible of clinical forms of leishmaniasis in North Cameroon **R**: Prevalence and identification of Leishmania species responsible for Visceral leishmaniasis in Northern Cameroon	Operational	University of Dschang
	HAT[11]	**P**: Assessing risk of resurgence of Human Africa Trypanosomiasis in dormant foci through vector surveillance **R**: Screening of trypanosomes and feeding behaviour of tsetse flies in two dormant sleeping sickness foci of Cameroon: implication for the implementation of vector control	Operational	University of Dschang
RCDFs[5] (n=4)	HAT[11]	**R**: Microgeographic structure, vector control and population dynamics of *Glossina palpalis palpalis*: Impact on human and animal trypanosomiases in the Campo focus, southern Cameroon	Implementation	CRID[9]
	Malaria & filariasis	**R**: Molecular markers of metabolic resistance to pyrethroids in *Anopheles coluzzii*, major malaria vector	Basic	CRID[9]
	Arboviral infections**	**R**: Assessing the epidemiological risk of outbreaks of chikungunya dengue and zika arboviruses in Cameroon	Implementation	CRID[9]
	Malaria & filariasis	**R**: Impact of vector symbionts on malaria transmission and control in Cameroon	Basic	CRID[9]
ECRs[6] (n=4)	HAT[11]	**R**: Genetic diversity of the tsetse fly microbiome: Implication in new strategies to control trypanosomiasis	Basic	CRID[9]
	Malaria	**R**: Genetic diversity of CYP6M2 promoter and its possible association with permethrin resistance pattern in *Anopheles gambiae s.s* populations from Cameroon	Basic	CRID[9]
	Arboviral infections**	**R**: Infestation rate and seasonal distribution of ticks in livestock in Etoudi and ''8^{ième}'' markets, Cameroon	Implementation	CRID[9]
	Malaria	**R**: Distribution and genetic diversity of *Asaia sp.* in anopheles mosquitoes in Cameroon	Basic	CRID[9]
Malawi (n=10)				
Operational research policy themes	Open	**P:** Innovative vector control interventions in such diseases as malaria, HAT and Schistosomiasis	Operational	
	Open	**P:** Cost and cost-effectiveness of current vector control interventions being implemented alone or in combination	Operational	
	Cross cutting	**P:** Human and social factors that affect VBD control and eventual elimination	Operational	
	Open	**P:** Vector bionomics, distribution, and disease transmission factors	Operational	
RCDFs[5] (n=3)	Malaria & filariasis	**R**: The effect of disengagement on efficacy of VC[10] interventions	Implementation	MAC[13]
	Malaria & filariasis	**R**: Characterising vector behaviours and the risk of malaria infections in communities in southern Malawi	Implementation	MAC[13]
	HAT[11]	**R**: Towards the implementation of a tsetse control operation at the interface of the Vwaza Marsh Wildlife Reserve and Rumphi district, Malawi.	Implementation	MAC[13]
ECRs[6] (n=7)	Malaria	**R**: Evaluation of chlorfenapyr indoor residual spray formulation in reducing host seeking and blood feeding propensity in anopheles mosquitoes	Basic	MAC[13]
	Malaria	**R**: Sumi shield bio-efficacy and sublethal effects on anopheles mosquitoes	Basic	MAC[13]
	Malaria	**R**: Host feeding preference of Anopheles mosquitoes in Chikwawa and Dedza, Malawi	Implementation	MAC[13]
	Malaria	**R**: Assessing resting behaviours of anopheles mosquitoes inside houses in Chikwawa district, Malawi	Implementation	MAC[13]
	Malaria	**R**: Assessing three trapping methods for sampling host seeking malaria vectors in Chikwawa, Malawi	Implementation	MAC[13]
	HAT[11]	**R**: Determination of bloodmeal origins of tsetse from Vwaza Marsh Reserve, Malawi	Implementation	MAC[13]
	HAT[11]	**R**: Determination of trypanosome species and infection rates in tsetse flies from Vwaza and surrounding areas, north Malawi	Implementation	MAC[13]

[1]VBD: Vector Borne Diseases; [2]Technical Vector Control Advisory Group; [3]IRSS: Institut de Recherche en Sciences de la Santé (IRSS) (Institute for Research in Health Sciences); [4]CNRFP: Centre National de Recherche et de Formation sur le Paludisme (National Centre for Research and Training on Malaria); [5]RCDFs: Research Career Development Fellows; [6]ECRs – Early Career Researchers; [7]LLINs: long-lasting Insecticidal Nets; [8]PNLP: Programme National de Lutte contre le Paludisme, (National Program for the Fight Against Malaria); [9]CRID: Centre for Research in Infectious Diseases; [10]VC: Vector Control; [11]HAT: Human African Trypanosomiasis; [12]CRFilMT: Centre for Research on Filariasis and other Tropical Diseases; [13]MAC: Malaria Alert Centre; [14]IRS: Indoor Residual Spraying.
*Research types include Basic research, which is sometimes called fundamental, pure, or curiosity-driven, is experimental and theoretical in nature with the purpose of creating new knowledge. It includes pharmacology, microbiology, biochemistry, physiology, and genetics investigations; Implementation research is a type of research whose findings are mainly used to scale up interventions or complements the rolling out of a new policy. It provides a general strategy of intervention implementation for increased access to the target population. This research promotes an intervention whose efficacy has been proven by other research and explores innovative strategies for wider implementation; Operational research is a type of research that tends to be context-specific and addresses a specific local health problem threatening local disease control programmes. It is characterised by a stern problem-solving emphasis and its significance for rapid uptake of the research findings.
Note: Only policy research themes are listed in the table for Malawi since individual operational research projects were not selected.