



### LOCUST BULLETIN No. 37



FAO - Plant Production and Protection Division (AGP)

15 July 2015

**Situation level: THREAT due to the Italian Locust (Italian Locust, CIT) in Georgia**

**Situation level - CAUTION in Afghanistan (Moroccan Locust, DMA), Kazakhstan (CIT), Kyrgyzstan (DMA) and Tajikistan (DMA & CIT)**

**Situation level: CALM elsewhere or for the other species**

#### General Situation during June 2015 Forecast until mid-August 2015

In June, Moroccan Locust (DMA) hopper development came to an end and fledging, followed by mating and egg-laying, occurred in all Central Asian countries as well as in Azerbaijan and probably in Georgia; natural disappearance started in some of that countries. Italian Locust (CIT) hopper development was in progress in Georgia and in almost all Central Asian countries but Afghanistan where CIT life cycle was almost completed. Severe infestations were reported in Georgia and Kazakhstan. Asian Migratory Locust (LMI) infestations were reported in Kazakhstan, Uzbekistan and the Russian Federation. Control operations continued in Afghanistan, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Russia, Tajikistan and Uzbekistan and about 2.88 million hectares have been treated in June. Since the beginning of the 2015 anti-locust campaign, locust infestations have been controlled on almost 3.7 million ha in Caucasus and Central Asia (CCA).

Caucasus. DMA fledging occurred and mating started in Azerbaijan, where almost 7 000 ha were treated. CIT hatching started in Armenia, where the situation was

calm, while CIT fledging occurred in Georgia, where the situation was serious and where almost 17 000 ha were treated.

Central Asia. DMA hopper development was coming to an end and fledging, followed by mating and egg-laying, occurred in the whole region; natural disappearance started in the southern CA countries. CIT hopper development was in progress and fledging started in **Kyrgyzstan, Russia, Tajikistan and Uzbekistan** as well as in **Kazakhstan** but the process was slowed down by unsuitable weather conditions in that country. LMI hopper development was in progress in **Kazakhstan, Russia, Tajikistan and Uzbekistan**; beginning of fledging was noted in some areas. Control operations continued in June in all countries, concerning almost 2.86 million ha, of which 80% in Kazakhstan; no significant treatment was carried out in Russia.

#### Weather and Ecological Conditions in June 2015

In Caucasus and Central Asia, the weather was generally warm to hot and dry except in Armenia, where it was still variable and rainy, and in Kazakhstan and Kyrgyzstan where light to medium rains fell locally.



In **Caucasus**, the weather was warm except in Armenia where variable and rainy conditions persisted.

In Armenia, the weather was variable, with cloudy and clear sunny days. There were showers and thunderstorms across the country, sometimes with hail. The highest quantities of rain (95-97 mm) were recorded in the mountainous and foothill areas; elsewhere, they were of 16-25 mm. The average temperature was mostly above normal with small deviations of 1/2°C. Average daily temperatures ranged from 14/18°C to 37/38°C in the lowlands, 5/15°C to 29/33°C at foothills and from 1/4°C to 23/28°C in mountainous areas, which represented an increase of 1 to 12°C as compared to the previous month. The relative humidity was of 65-67% in the Ararat valley and of 80 to 85% elsewhere. In surveyed areas, the natural vegetation was mainly green with a medium to thick cover. The weather conditions were unfavorable both for crop and hopper development, the latter being still delayed. Nevertheless, agricultural activities continued, in particular fruit harvest, while disrupted by rains.

In Azerbaijan, a late report indicated that in May the weather was mostly warm and suitable for hopper development (mainly DMA). In June, the weather continued to be mostly warm and suitable for locust development. It was also dry except on 15-25 June and on 28-29 June, when heavy rains fell. Day temperatures were of 34/38°C with peaks up to 40°C. Prevailing winds were from south-east and north-west at a speed ranging from 3 to 5.7 m/s reaching 18/20 m/s in gusts. Natural vegetation was sparse and dry in all traditional locust habitats, with a thick cover. Agricultural crops were mature; the winter grain ripened and harvest started.

In Georgia, the temperature ranged from a minimum of 23°C to a maximum of 40°C; rain fell during two days only (about 1 mm). The natural vegetation had a medium to dense cover and continued to dry out.

In **Central Asia**, the weather was warm to hot, with some local rains in Kazakhstan and Kyrgyzstan.

In Afghanistan, the weather was very hot and no rain fell. Average temperatures ranged from 23 to 37°C

reaching a maximum of 41°C. Relative humidity varied from 37 to 94%. According to local weather conditions, natural vegetation was green to dry.

In Kazakhstan, the weather was generally warm with some rains. In the South, the weather was variable with clear, sunny, cloudy and rainy days (monthly rainfall of 38.5-85.8 mm). Average temperature ranged from 15.9 to 33°C with night minimum of 8.5°C and maximum up to 45°C. Relative humidity varied from 17 to 88%. North-westerly, south- and north easterly winds prevailed at a speed of 1-18 m/s. In the East, the weather was variable and hot with clear, sunny and cloudy days. Little rain fell (up to 6.9 mm). Average temperature was of 20.9°C (which represented an increase by 6°C as compared to the previous month) with minimum of 4°C and maximum of 35°C. Average relative humidity was of 62%. North-easterly and south- easterly winds prevailed at a speed of 1-5 m/s. In the West, the weather was clear and sunny with low rains (6.5 to 15.3 mm over the month). The average temperature varied from 15.6 to 38.5°C (an increase by 6-8°C as compared to May) with minimum of 8.8°C and maximum of 45°C. The relative humidity varied from 20 to 90%. The wind direction was erratic but northerly, south-westerly and north-westerly winds prevailed at a speed of 0.4-7 m/s. In the North, the weather was clear, sunny and hot with some rains (monthly rainfall of 11.6-85 mm). The average day temperature varied from 10.2 to 29°C (an increase of up to 6°C as compared to May), with minimum of 5°C and maximum of 36°C. The relative humidity ranged from 32 to 96%. North- and south-westerly and north-easterly winds prevailed at a speed of 1-14 m/s with gusts reaching 43.4 m/s.

In Kyrgyzstan, the weather was hot, with temperatures of 1-2°C above normal and some rains (monthly amounts of 52-56 mm in the South and 42-48 mm in the North). The relative humidity was of 60-75%. The natural vegetation was dry, with a medium cover and a height

ranging from 3 to 9 cm. In the South, the average monthly temperature was of 27-29°C, ranging from 18-23°C at night to 32-37°C during the day (and up to 38-42°C during the 2<sup>nd</sup> fortnight). In the North, the average monthly temperature was of 25-27°C, ranging from 17-22°C at night to 32-37°C during the day (and up to 38-40°C during the 2<sup>nd</sup> fortnight).

In the Russian Federation, weather was generally warm with temperatures higher than normal. In southern regions of Central Federal District (FD), the weather was initially variable with short cooling periods, becoming warm during the second fortnight, sometimes hot with local rainfalls. Average temperatures ranged from 11 to 24°C. In North Caucasus and Southern FDs, the weather was mostly hot with local torrential rainfalls. Average temperature reached 25/35°C. In the Volga FD, the weather was warmer than usual with average monthly temperature of 19/22°C, higher than normal by 2/3°C. Rains of variable intensity fell locally only and drought began in some areas. In the Siberian and Ural FDs, the weather was warm and sunny, with rainfall of variable intensity. Average temperature of 17/21°C was higher than normal by 2/3°C.

In Tajikistan, the weather was warm, with temperatures higher by 6/12°C than in June 2014. At foothills, the minimum temperature was of 36/39°C and of more than 42°C in Khatlon valleys, which was unusual for that period of the year but similar to 2011 weather conditions. Strong winds, sometimes accompanied by little rain, blew from 14 to 26 June in the Hissar Valley, favoring locust movements. Agricultural activities concerned cotton, early harvest of onions and potatoes and harvest of stone fruits and grain.

In Uzbekistan, June was very hot with temperatures of 40/43°C during the day and 24/26°C at night. Natural vegetation dried out totally and the ground was bare.



## Area treated in June 2015

Afghanistan	5 300 ha (incl. grasshoppers)
Azerbaijan	6 200 ha (May)
	6 680 ha (June)
Georgia	16 941 ha
Kazakhstan	2 283 540 ha
Kyrgyzstan	11 453 ha
Russia	394 900 ha
Tajikistan	29 837 ha
Uzbekistan	131 855 ha.

## Locust Situation and Forecast

*(see also summary on page 1)*

### CAUCASUS

#### Armenia

##### • SITUATION

Out of 25 000 ha surveyed by the experts from the State Phytosanitary Service, locusts and grasshoppers, at a density not exceeding the economical threshold, were observed on 18 000 ha. Italian Locust (CIT) hoppers were present in some stations, mainly on crops and in orchards, at a maximum density of 3-5 hoppers/m<sup>2</sup>. As local treatments were carried out by farmers, the number of hoppers was reduced and control operations on a larger scale were not required. In case of need, funds and pesticides can be allocated by the Government.

##### • FORECAST

*As a result of rainy and cold weather conditions, no major development of the CIT situation is expected this summer. The two other locust pests should not be present unless they arrive from neighboring countries.*

## Azerbaijan

### • SITUATION

In May, Moroccan Locust (DMA) hopper development, favored by warm weather, was in progress in all traditional habitats in the north-west (Djeiranchel and Eldar steppes) and in particular close to the Georgian border, in the south-east (Garasu and Padar plains) and in the centre-south (Haramin plain): 4<sup>th</sup> and 5<sup>th</sup> instars prevailed and fledgling started. Ground control operations started against hopper infestations in Djeiranchel and Eldar steppes as well as in Garasu and Padar plains and 6 200 ha were treated using pyrethroids.

In June, DMA hopper development was coming to an end (5<sup>th</sup> instar only) and fledging continued in the three above-mentioned areas as well as in Kudirin plain. Mating started in all areas. Ground control operations continued in Djeiranchel and Eldar steppes as well as in Garasu and Padar plains. A total of 6 680 ha of last instar hopper and young adult infestations were treated using pyrethroids at an efficiency of 85-90%.

### • FORECAST

*Good weather conditions will favor the maturation of adults and mass mating and egg-laying will occur during the 2<sup>nd</sup> and 3<sup>rd</sup> decades of July. It is expected that control operations will come to an end during the 1<sup>st</sup> decade of July, upon fledging of all hopper populations.*

## Georgia

### • SITUATION

CIT hopper development continued and fledging started in June; as per results of surveys carried out on 60 000 ha, 3<sup>rd</sup> to 5<sup>th</sup> instar hoppers as well as immature adults were present as follows at the end of the month: 10% of 3<sup>rd</sup> instar, 30% of 4<sup>th</sup> instar, 50% of 5<sup>th</sup> instar and 10% of immature adults. The hopper density was of 15-20 hoppers/m<sup>2</sup>. More severe attacks than in May were recorded on crops and vegetation. Ground control operations continued in Kakheti (in Signani district and extending to Sagarejo, Gurjaani, Dedoplistskaro and Akhmeta districts) and started in Kvemo Kartli (Marneuli,



Gardabani districts); aerial spraying started in Dedoplistskaro. Two pyrethroids (alpha-cypermethrin and deltamethrin), one organophosphate (chlorpyrifos) and one Insect Growth Regulator (diflubenzuron) were used. A total of 16 941 ha were treated of which 13 626 ha by ground, mainly in Signagi (3 833 ha) and Dedoplistskaro (8 463 ha), and 3 315 ha by air in Dedoplistskaro.

### • FORECAST

*CIT hopper development will come to an end and mass fledging will occur during the forecast period. Control operations, including by air, will continue, mainly in Kakheti.*

## CENTRAL ASIA

### Afghanistan

#### • SITUATION

Although life cycle of locusts that survived control operations was coming to an end, DMA hatching was observed during the 1<sup>st</sup> week of June in Badakhshan, in the North-East, where 2<sup>nd</sup> instar hoppers were still present at the end of the month. DMA infestations were also reported in Kandahar, in the South, and Herat, in the North-West, which were new locations for that year. Elsewhere, in eight provinces, namely Baghlan, Balkh, Faryab, Jowzjan, Kunduz, Samangan, Sar-i-Pul and Takhar, 5<sup>th</sup> instar hoppers only as well as adults, from fledglings to mature adults –some of them copulating and laying eggs- were present. In Faryab, the controlled infestations were of both DMA and CIT.

More than 5 300 ha were treated by ground in 10 northern, north-eastern and central provinces, i.e. Badakhshan (146 ha against DMA hoppers), Baghlan, Balkh, Faryab (CIT and DMA), Ghor (1 200 ha against grasshoppers), Herat (almost 3 950 ha against DMA and grasshoppers), Kunduz, Samangan, Sar-i-Pul and Takhar. The pesticides used were a pyrethroid, an Insect Growth Regulator and a compound of pyrethroid and

carbamate. The control campaign was completed in almost all provinces by the end of June. The situation continued nevertheless to be considered as very serious in the whole northern part of the country.

• **FORECAST**

*Last untreated hoppers will fledge at the beginning of the forecast period while mass mating and egg-laying will occur during the second decade of July. Therefore, very few control operations will be carried out in the provinces where the campaign is not yet over.*

**Kazakhstan**

• **SITUATION**

DMA hopper development came to an end in early June in South-Kazakhstan and Zhambyl oblasts. At that period, among the infested areas, 100 100 ha exceeding the economical threshold were treated. Mass mating and egg-laying were followed by natural disappearance of adults from the beginning of the third decade; mass mortality started by the end of June.

CIT situation varied throughout the country but was characterized by a low presence of adults as compared to June 2014 as rainy and cool weather conditions slowed down the hopper development. In South-Kazakhstan, hopper development was in progress and fledging started at the beginning of the 3<sup>rd</sup> decade of June. On 2<sup>nd</sup> July, 2<sup>nd</sup> to 5<sup>th</sup> instar hoppers (at a maximum density of 12 hoppers/m<sup>2</sup>) and adults were present; 5<sup>th</sup> instar (30%) and adults (35%) prevailed. In Zhambyl, 3<sup>rd</sup> to 5<sup>th</sup> instar hoppers as well as adults were present with prevalence of 5<sup>th</sup> instar and adults (32 and 30% of the locust population respectively). In West-Kazakhstan, 5<sup>th</sup> instar hoppers (at a maximum density of 58 hoppers/m<sup>2</sup> within the bands) and adults were present, with prevalence of the latter (82% of the population). In Aktobe, 3<sup>rd</sup> to 5<sup>th</sup> instar hoppers were present with prevalence of 4<sup>th</sup> instar (60% of the population). In Kostanay, 1<sup>st</sup> to 5<sup>th</sup> instar hoppers (at a maximum density of 50 hoppers/m<sup>2</sup>) were present on 2<sup>nd</sup> July, with prevalence of 3<sup>rd</sup> and 4<sup>th</sup> instars (30% of the population each). In Akmola, 1<sup>st</sup> to 4<sup>th</sup> instar hoppers



were present with prevalence of 3<sup>rd</sup> instar (50% of the population) at a maximum density of 7 hoppers/m<sup>2</sup>. In Pavlodar, mating was first observed on 29<sup>th</sup> June. In East-Kazakhstan, 1<sup>st</sup> to 4<sup>th</sup> instar hoppers were present with prevalence of 2<sup>nd</sup> and 3<sup>rd</sup> instars (30 and 40% respectively). Overall, in June, CIT hopper surveys were carried out on more than 11,1 million ha of which 3,1 million ha were infested at a density up to 5 hoppers/m<sup>2</sup> on 978 900 ha, from 5 to 10 hoppers/m<sup>2</sup> on 1 363 900 ha and of more than 10 hoppers/m<sup>2</sup> on 812 700 ha. The economical threshold was exceeded on 2 176 600 ha of which 1 928 580 ha were treated.

LMI hatching continued, hopper development was in progress and fledging started. In Almaty oblast (Balkhash region), 2<sup>nd</sup> to 5<sup>th</sup> instar hoppers as well as adults were present with prevalence of 4<sup>th</sup> and 5<sup>th</sup> instars (30% of the population each) at a maximum density of 40 hoppers/m<sup>2</sup>. In Zhambyl, 1<sup>st</sup> (prevailing with 56% of the population) to 3<sup>rd</sup> instar hoppers were present on 26 June. In West-Kazakhstan, hatching started on 8 June and mass hatching on 12 June; at the end of the month, 1<sup>st</sup> to 5<sup>th</sup> instar hoppers were present at a density ranging from 0.1 to 12 hoppers/m<sup>2</sup>, with prevalence of 3<sup>rd</sup> instar (34%). In Aktobe, hatching started on 16 June in Irgiz area. In East-Kazakhstan, hatching started on 1<sup>st</sup> June; on 2<sup>nd</sup> July, 1<sup>st</sup> to 4<sup>th</sup> instar hoppers were present with prevalence of 2<sup>nd</sup> and 3<sup>rd</sup> instars (30 and 40% respectively). Hopper surveys were carried out on more than 2.4 million ha in June, of which 421 300 ha were infested; the density was up to 5 hoppers/m<sup>2</sup> on 137 900 ha, from 5 to 10 hoppers/m<sup>2</sup> on 184 100 ha and more than 10 hoppers/m<sup>2</sup> on 99 200 ha. The total area exceeding the economical threshold was of 283 300 ha of which 254 860 ha were treated.

Overall, 2 283 540 ha were treated in June 2015 against DMA, CIT and LMI hopper infestations, almost 10 fold the area treated in May but almost half of the area treated in June 2014.

•FORECAST

DMA adult natural extinction will occur during the forecast period.

In the South, CIT mass mating and egg-laying will occur followed by natural disappearance during the 3<sup>rd</sup> decade of July. In the West, mating and egg-laying are expected during the 1<sup>st</sup> fortnight of July. In the East, fledging, mating and egg-laying will successively take place during the forecast period. In Kostanay and Akmola, mass fledging may occur on mid-July, followed by beginning of mating and egg-laying. In North-Kazakhstan, fledging may start from the 1<sup>st</sup> decade of July.

LMI adult maturation followed by mating are expected during the 2<sup>nd</sup> and 3<sup>rd</sup> decades of July in the South; egg-laying may occur by the end of the month. In the West, fledging may occur during the 1<sup>st</sup> fortnight of July and mating start during the 2<sup>nd</sup>. In the East, hopper development will continue, with fledging occurring from the 3<sup>rd</sup> decade of July and mating and egg-laying by the end of the month.

**Kyrgyzstan**

•SITUATION

From 5 June to 3 July, DMA surveys were carried out on 6 340 ha, of which 2 166 ha were found infested at an average density of 2-25 hoppers/m<sup>2</sup> (366 ha in Jalal-Abad, 400 ha in Batken and 1 400 ha in Osh). In remote mountainous areas, at the border with Tajikistan, additional DMA 4<sup>th</sup> and 5<sup>th</sup> instar hopper infestations were identified on 900 ha, which posed a serious threat to Tajik crops. CIT surveys concerned 1 452 ha of which 820 ha were infested in Chuy, at a density of 8 to 50 individuals/m<sup>2</sup>. In Naryn, cold temperatures and persistent rains delayed CIT hatching. From 5 June to 3 July, control operations against DMA were carried out on 10 553 ha (3 658 ha in Jalal-Abad, 3 395 ha in Batken and 3 500 ha in Osh) while 900 ha were treated against CIT in Chui.



•FORECAST

DMA life cycle will come to an end during the forecast period. CIT hopper development will continue, in particular in Naryn.

**Russian Federation**

•SITUATION

Overall, hopper development was in progress during June. In the South, DMA fledging followed by mass mating and egg-laying were observed while CIT and LMI fledging started; however, CIT and LMI populations were mostly at hopper stage (from 2<sup>nd</sup> to 5<sup>th</sup> instars). DMA adults were present at a density of 5-19 adults/m<sup>2</sup> in North Caucasus FD. CIT hoppers continued to be observed at a density ranging from 0.6 to 1 000/m<sup>2</sup> in four FDs: Central (0.6-3), Southern (1-50), North Caucasus (4-11) and Volga (4.4-1 000). LMI hopper density ranged from 6.9 to 1 000 hoppers/m<sup>2</sup> in Southern (10-1 000) and North Caucasus (6.9-550) FDs. Grasshopper species were also present at a density ranging from 1.5 to 171 hoppers/m<sup>2</sup> in Central, Southern, North Caucasus, Volga and Ural FDs; in the two latter FDs, fledging occurred and adult density varied from 1.6 to 70/m<sup>2</sup>. Control operations were carried out on 394 900 ha.

In accordance with bilateral agreements, joint border surveys were carried out with Kazakhstan along the common border in Astrakhan, Chelyabinsk, Novosibirsk, Orenburg and Samara oblasts and in Altai territory; in Orenburg oblast, back and forth movements of hopper bands were observed between Kazakhstan and Russia.

•FORECAST

During the forecast period, DMA and grasshoppers will lay eggs and progressively disappear while CIT and LMI fledging followed by breeding will occur.

## Tajikistan

### • SITUATION

In June, almost 30 000 ha were treated, mainly along the Vakhsh and Kafirnigan rivers in the South, where repeated control operations were needed due to arrivals, close to cultivated areas, of DMA adult groups flying from the border neutral and inaccessible areas. In the North, back and forth movements of CIT adult populations were reported between the Sughd province and the neighbouring Kyrgyz oblasts.

### • FORECAST

*In July, locusts will progressively disappear. Highly localized control operations will continue in Sughd province and Region of Republican Subordination, mainly against grasshoppers, and perhaps in the autonomous province of Gorno-Badakhshan.*

## Turkmenistan

### • SITUATION

No bulletin was received for the 4<sup>th</sup> consecutive month. DMA adults may have disappeared.

### • FORECAST

*No further development is expected this year.*

## Uzbekistan

### • SITUATION

In June, DMA mating and egg-laying occurred and natural disappearance started while CIT and LMI hopper development continued and fledging started. Consequently, ground control operations against DMA came to an end while those against CIT and LMI were still in progress. Increased CIT infestations were reported close to crops, mainly in Jizzah, Kashkadarya and Tashkent provinces, where intense control operations took place. Concentrations of grasshoppers were also noted along irrigation ditches and canals. As of 1<sup>st</sup> July, a total of 378 000 ha had been treated (14.5% more than last year at the same period), of which 300 000 ha against DMA, 33 000 ha against CIT and 45 000 ha against LMI.



### • FORECAST

*Control operations against LMI will continue and should be completed by mid-July.*

## Announcements

**Locust warning levels.** A color-coded scheme indicates the seriousness of the current situation for each of the three main locust pests: green for calm, yellow for caution, orange for threat and red for danger. The scheme is applied to the Locust Watch web page dedicated to the current locust situation (“Locust situation now!”) and to the regional monthly bulletin header. The levels indicate the perceived risk or threat of current locust infestations to crops and appropriate actions are suggested for each level.

**Locust reporting.** During calm (green) periods, countries should report at least once/month and send standardized information using the national monthly bulletin template. During caution (yellow), threat (orange) and danger (red) periods, often associated with locust outbreaks and upsurges, updates should be sent at least once/week. Affected countries are also encouraged to prepare decadal bulletins summarizing the situation. All information should be sent by e-mail to [CCA-Bulletins@fao.org](mailto:CCA-Bulletins@fao.org). Monthly information received by the 5<sup>th</sup> of each month will be included in the CCA Locust Bulletin to be issued by mid-month; otherwise, it will not appear until the next bulletin. Reports should be sent even if no locusts were found or if no surveys were conducted.

## June 2015 events and activities

- **Forthcoming workshops: arrangements underway.**
  - Workshop on locust contingency plans in CCA: 21-23 October 2015; and
  - Annual Technical Workshop on Locusts in CCA: 26-30 October 2015, Pushkin, Russian Federation.
- **Fellowships on locust management:** arrangements in progress to organize fellowships during the 2015/2016 academic year.
- **Human Health and Environmental aspects:**
  - Monitoring system on quality control and efficacy of locust treatments to be developed in Kyrgyzstan: visit by Mr Harold van der Valk, FAO International Consultant, Environmental Expert, organized on 23 June-3 July to develop the monitoring system. On-the-job training provided to 5 national technical staff in Naryn. Two Assay kits and monitoring and sampling material were delivered.
  - Videos on the use of biopesticides: under finalization.
- **Resource mobilization:** three-year project to the benefit of Afghanistan, Kyrgyzstan and Tajikistan approved by Japan. Arrangements underway for the signature ceremony.

## Forthcoming events and activities in July 2015

- **Forthcoming Workshop on locust contingency plans and Annual Technical Workshop on Locusts in CCA:** official invitation letters to be issued (deadline for reply: 31<sup>st</sup> August 2015).
- **Fellowships on locust management:** pursuit of arrangements to organize fellowships during academic year 2015/2016.
- **Human Health and Environmental aspects:** preparatory work to start for video on Ultra-low Volume spraying techniques.



- **Resource mobilization:** preparatory activities to start regarding the implementation of the three-year project to the benefit of Afghanistan, Kyrgyzstan and Tajikistan (in particular procurement of equipment).



